

Understanding the Influence of Port Community Relationships on Port  
Community Performance – A Social Capital Perspective

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## **Abstract**

This research investigates the influence of port community relationships on port community performance through the lens of social capital. While port performance research has traditionally focused on the micro or macro level, this study explores port performance at the meso level and suggests the terminology of port community performance in acknowledgement of the contributions and relevance the interactions of port community members have on the focal port's performance. Since this type of investigation is a novel approach within the field of port performance research, this study addresses this gap by employing social capital theory to the context of Scottish trust ports. In detail, this study adopts Nahapiet and Ghoshal's (1998) conceptualisation of social capital and further incorporates more recent findings of Hartmann and Herb (2015) of social capital's influence on performance in triadic relationship settings as the latter allows for the suitable conceptualisation of the triadic port community setting between port authority, cargo owners and port service providers. As their performance is influenced by the quality of their relationships and subsequent interactions, the context of Scottish trust ports lends itself to extend social capital theory to develop an understanding of the formers' influence on the performance of a port.

This project employed a multiple-case study design. Two Scottish trust ports were purposively selected in line with a set of established criteria which are shared across the sample of suitable ports for analysis which allows for the synthesis of cases. As part of the data collection, a total of 30 semi-structured interviews were conducted with 30 representatives of the three port stakeholder groups of port authority, cargo owners and port service providers. The data gathered by the means of interviews is further enriched by participant observations, informal off the record exchanges and field notes. This project is underpinned by an interpretivist perspective. This study contributes to practice by identifying how facets of social capital such as trust, shared values, or norms in port community relationships positively influence port community performance which is of particular value for smaller sized ports with diverse cargo portfolios. The theoretical contribution of this study is twofold as it highlights how the extended setting of focal relationships in the port community can influence the manifestation of the dark side of social capital. Furthermore, it adds to the body of social capital theory by delineating how existing levels of social capital aligned with one of its dimensions can facilitate the accumulation of facets attributed to the other dimensions.

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## **List of Abbreviations**

BSR	Buyer-Supplier Relationship
CO	Cargo Owner
CSC	Cognitive Social Capital
PA	Port Authority
PCM	Port Community Member
PCP	Port Community Performance
PCR	Port Community Relationship
PCT	Port Community Triad
PSP	Port Service Provider
PP	Port Performance
RO	Research Objective
RSC	Relational Social Capital
SC	Social Capital
SCT	Social Capital Theory
SSC	Structural Social Capital

# **1 Introduction**

## **1.1 Introduction to the Thesis**

The aim of this study is to develop an understanding of the influence of social capital in port triads for port community performance in the context of Scottish Trust ports. To arrive at a conclusive answer and pursue the aim, this research investigates how the dimensions of social capital, trust, shared understandings, and network ties are present among port community members and how these facets of relationships affect port performance, consequently port efficiency, and port effectiveness. Furthermore, the study will attempt to achieve a twofold theoretical contribution, first, to social capital theory (Nahapiet and Ghoshal, 1998) and, second, to introduce social capital to the maritime sector. It will also contribute to port performance management practice. This study explores how facets of social capital dimensions intersect and interact in triadic port community relationships in order to advance the earlier research of Hartmann and Herb (2015). Moving beyond the dyad, adopting a triadic perspective, is expected to offer a unique insight into how relationships between the three key stakeholder groups within the port community influence the performance of the latter while also shedding light on the interplay of relationship settings between the three port community member groups.

## **1.2 Background and Relevance of Research**

This research is grounded in two significant areas of business and management research. These are port performance and social capital literature. Following, a brief overview of these two fields, the causal link between the two is discussed. Moreover, the contextual setting of ports in Scotland and their performance is reviewed, providing the rationale of introducing social capital theory into the wider field of port performance research. Having observed the interactions of port community members and the influence their relationships can have on port performance first hand in preceding research consultancy work, this thesis follows-up on these initial observations to explore the influence the varying relationship configurations can have of port community performance. This is understood to be important for trust ports which are constrained by governance structures, funding of investments as well as their geographic location.

### **1.2.1 Port Performance**

Historically, port performance research first and foremost focused on port efficiency factors, investigating performance indicators like annual throughput, terminal efficiency, berth utilisation in relation to an economic function, and considering ports as throughput maximisers (Langenus and Dooms, 2015). There is a multitude of port performance criteria presented in the port performance literature; commonly, the applied criteria depend on the measuring objectives and the context of their application (Schellinck and Brooks, 2016). Furthermore, much of the research attention was focused on quantitative measures of port or terminal efficiency as they allow for a reasonably coherent form of assessment of port performance (Woo, Pettit and Beresford, 2011). Gonzalez and Trujillo (2009) offer an extensive review of port efficiency literature whereas Brooks et al. (2011) similarly provide a capture of port effectiveness measures existing in the extant port performance literature. The latter stresses the existing neglect of incorporating port stakeholder's perceptions of port performance and the factors it should be measured by and finds repeated mention in emerging port performance publications (Brooks and Pallis, 2008; Brooks et al. 2011, Brooks and Schellinck, 2015). Neely, Gregory and Platts's (1995) definition and understanding of performance as consisting of both efficiency and effectiveness received wide recognition and acceptance. Nonetheless, most port performance research retained its focus on aspects of port efficiency rather than incorporating port effectiveness into a more holistic depiction of port performance. Neely, Gregory and Platts (1995) understand efficiency as "doing things the right way" and effectiveness as "doing the right things". Considering port performance and the operations within the port clusters, port efficiency can be determined by how well port authority and port service providers render their services compared to their own established measurement criteria (internal focus). Port effectiveness can be further understood as the degree to which the offered services match the degree of desired respectively required services and the fulfilment of measurement criteria defined by cargo owners utilising these services (external focus).

Consequently, rendering efficient services which are not required or desired by port authority or port service providers should not be treated as improving the performance of any port. Similarly, rendering required services in an ineffective manner will harm the port's performance as well as its reputation.

To allow for the depiction of social capital in the identified triad of port authority, port service provider and cargo owner and their relevance for port performance an understanding of the latter must be developed. Therefore, to allow for a meaningful assessment of port performance and the following linkage of its facets to social capital, the measures must be coherent with the perceptions of port performance by the interviewees. This gap remains unaddressed and more recently has been reemphasised by Bucak, Basaran and Esmer (2020) who based on their systematic review of port performance literature concluded that port performance research needs to incorporate stakeholder perceptions to allow for an adequate depiction and management of port performance criteria.

### **1.2.2 Social Capital**

Social capital (SC) is commonly understood as a form of non-tangible capital that can only be obtained through beneficial social interaction within at least a dyadic relationship setting. (Bourdieu, 1983; Nahapiet and Ghoshal, 1998; Portes, 1998). Port performance (PP), or more precisely port community performance (PCP), is a construct which can be derived from the positive or negative interaction between port community members and port users and their consequential effect on the port's performance (Demirbas, Flint and Bennett, 2014). SC within the port community can, therefore, be understood as existing between port authority (PA), cargo owners (CO) and port service providers (PSP) in a triadic relationship setting. Social capital existing between two members of the triad also affects the third member of the triad, these effects can be of a positive or negative nature and distort envisioned performance increases of the dyad itself (Hartmann and Herb 2015). In line with the view of contemporary port authorities' activities (Van der Lugt and De Langen, 2007; Verhoeven, 2010; Doooms Van der Lugt and De Langen, 2013), social capital generation through building network ties, trust or shared understanding between port community members can be considered a core port authority activity. Furthermore, considering the interdependency of PA and PSP relationships with COs, social capital theory as depicted by Nahapiet and Ghoshal (1998) and applied to the conceptual model of the inter-firm triads of Hartmann and Herb (2015) represents an appropriate theoretical framework.



Following the basis of their framework and the assessed suitability, this research adopts the definition of Nahapiet and Ghoshal (1998, p.243) who describe social capital as:

*"The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network".*

In their seminal work, Nahapiet and Ghoshal (1998) further differentiate three dimensions of social capital. This is of importance as previous conceptualisations of SC only differentiated two dimensions. These, namely, were relational social capital (RSC), commonly depicting the strength of relationships and structural social capital (SSC), which depicts the network position and network ties of individual actors or organisations. Lastly, they introduced the concept of cognitive social capital (CSC), which refers to a shared understanding of systems (beliefs, values, visions).

Even though port performance research pays increasing attention to effectiveness as well as efficiency and the importance of port stakeholder/community member relationships, the influence of the latter on the former, particularly in regards of relevant performance measures has not been explored or understood to a satisfactory extent (Bucak, Basaran and Esmer, 2020). Given the relevance of Hartmann and Herb's (2015) framework for the analysis of social capital's influence on actors' performance in triadic relationships it is adopted by this study as it allows for a suitable depiction of the port community setting. An adequate incorporation of port community member perceptions into port performance management research endeavours remains significantly limited (Bucak, Basaran and Esmer, 2020) with the extension of social capital research beyond dyadic settings as well as an inclusion of more than one actor's perception also persistently being voiced as gap which future research should address (Alghababsheh and Galleary, 2020).

### **1.2.3 Research Problem**

Following the initial observation and experience of port community members' relationships being reported as integral to the effective functioning of a Trust port, the reviewed port performance literature to identify the role port community member relationships play for port performance management at the meso level. As consequence of a lack of identifiable extant literature on the former, social capital literature due to its extensive application to relationship configurations and their influence on the configuration's performance was identified as suitable lens. However, within social capital literature, its application as theoretical lens was predominantly focussed on dyadic relationship settings which further limited themselves to single actor perspectives of the focal relationship. In consideration of the research background and rationale discussed in the previous sections, the following research problem poses itself:

*There is insufficient academic research that investigates ports on the community(meso)-level, analysing the link between port community relationships, inherent social capital, and its influence on port community performance from a triadic perspective, incorporating more than the view of a single actor on the nature and configuration of the relationship setting.*

The literature review, methodology, data collection and data analysis employed, are designed to address the above stated research problem.

### **1.3 Research Aim and Objectives**

#### **Aim**

To develop an understanding and explanation for the influence of social capital within port community relationship configurations and its effects on port community performance in the context of Scottish Trust ports.

#### **Research Objectives (RO)**

1. To identify social capital facets within the port community influencing port community performance.
2. To establish how social capital in port community triads can influence port community performance.

3. To identify how social capital facets and dimensions interact within the port community setting.
4. To extend Hartmann and Herb's (2015) concept of social capital effects to port community triads.

#### **1.4 Research Contribution**

This thesis makes three contributions to knowledge. First, in relation to the “dark side” effects of social capital, this research adds to the understanding of their occurrence and the extent of their impact. Historically, the analysis and subsequent understanding was focussed on the focal relationship itself (Villena, Revilla and Choi, 2011; Hartmann and Herb, 2015; Pillai *et al.*, 2017) whereas the present research extended this scope. Incorporating the wider port community setting. Second, incorporating factors describing the network relationships are embedded in is expected to reduce prevalent ambiguity regarding the occurrence of relational social capital's “dark side” effects, presenting a methodological contribution. Research of dyadic or triadic relationship constellations through the lens of social capital is subsequently encouraged to incorporate data sets depicting the alignment or cohesion of SC facets within the immediate community or network. Alternatively, exploring the perceived consequences of opportunistic behaviour beyond the focal relationship but within the wider network is expected to improve the understanding and offer valuable insights as to how “dark side” effects of excessive relational social capital occur. Thereby, this research extends Hartmann and Herb's (2014,2015) work and conceptualisations of Pillai et al. (2017) as to why dark side effects of relational social capital are not manifesting coherently in relationship settings of similar SC configurations. Third, findings of this research indicate that an answer to “*why*” there is such great inconsistency regarding the interrelation between SC dimensions and their facets might be owed to pre-existing levels of SC of any given or analysed relationship setting. Participants' comments indicate that facilitating growth of less developed but desirable facets of SC's is supported by the mobilisation of existing resources represented by other SC facets or dimensions.

## **1.5 Thesis Structure**

This section provides an outline of the thesis structure. Initially, the introduction chapter frames this research study and elaborates the rationale for undertaking this research. Subsequently, the areas of knowledge contribution of this study are outlined before stating the aims and objectives. Lastly, an overview of the utilised methodological approach is provided, and the structure of this thesis is clarified.

Next, the first of the two-part literature review focuses on the topic of port performance. It begins with positioning research on ports in the wider literature of maritime logistics and an analysis of port performance literature and its antecedents is conducted. This section is then followed by a review of the roles and activities of port authority, cargo owners and logistics service providers in the port community in respect of their contribution to port performance. Regarding port performance this section establishes the concept of port community performance as appropriate terminology when referring to the performance of a port. This constitutes the fact that any given port consists of a multitude of actors which, only together, are able to provide the service offering that allows the port to satisfy port stakeholders and port users alike (Verhoeven, 2010).

The second part of the literature review analyses social capital theory, which is the underpinning theory for this study. Initially, this chapter analyses the varying forms and definitions of social capital and the development of the theory over time. Thereafter, the rationale for selecting social capital as a theoretical lens is justified before reviewing prior research on social capital in dyadic and triadic relationship studies. Consequently, studies that report findings related to topics discussed in the port performance section were selected and closely reviewed. Research on triadic relationships and the effects of social capital existing between individual actors on other triad members is investigated. Lastly, this chapter summarises the gaps in social capital research and identifies appropriate research questions.

The ensuing methodology chapter discusses and outlines the adopted methodological approach which guides this research endeavour in pursuit of the research aim and the completion of the research objectives. First, the research ontological and epistemological stance of this study are elaborated upon. Having identified the interpretivist paradigm as most fitting, the chapter reviews the case study research design and justifies its use.

Then, the forms of data collection and data analysis are discussed in greater detail. To conclude, the ethical considerations related to this research are discussed.

Subsequently, the findings are reported in chapters five and six. Chapter five covers the case study of TP1. Initially, the port community setting is reported on with ensuing subsections focused on the influence of social capital on identified port performance metrics while also discussing the relevance and interaction of individual social capital dimensions in the triadic port community setting. This approach is further mirrored in chapter six which focuses on the case study of TP2.

Cross-case discussion, in chapter seven, covers the contrasting and synthesis of findings reported in chapters five and six. It follows the structure mirroring the research objectives while also incorporating a section on the dark side effects of social capital. The individual findings of both case studies are further explored regarding their relationship to the extant literature.

Conclusions in the form of theoretical and methodological contributions as well as contributions to practice form the main part of this chapter. However, it starts with a review of the research's aim and objectives and finishes with the delineation of the study's limitations and recommendations for future research.

## **2 Literature Review – Port Performance**

### **2.1 Introduction**

The literature of this thesis is covered in two separate chapters. The following chapter provides an extensive review of port performance and related literature whereas the chapter thereafter explores social capital literature as a theoretical lens for this research. As the starting point of this research originated from observing and experiencing the influence port community relationships have on port performance, covering rationales for selecting one port over another as well as the effective and efficient management of the former, the first chapter of the literature review explored port performance literature in a narrative fashion while also incorporating port choice literature since the latter was indicated as being influenced by port community relationships in Scottish Trust ports as well. Reviewing port performance literature, this chapter traces the development of the field, differentiates port performance into two elements, namely port efficiency and port effectiveness (Brooks and Pallis, 2008; Brooks, Schellinck and Pallis, 2011; Langenus and Dooms, 2015; Schellinck and Brooks, 2015), discusses its antecedents, and concludes by analysing port community member roles in respect of the port's performance and its management while also defining port community performance. At first, the research is positioned within the wider field of maritime logistics research.

#### **2.1.1 Ports in Maritime Logistics**

Maritime logistics as a field of academic research originally developed from maritime transportation research which was mainly concerned with the process of moving or handling cargo across the ocean involving transport between at least two ports (Panayides, 2006). The Council of Supply Chain Management Professionals (2013), formerly the Council of Logistics Management Professionals, defines logistics as *“the process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods including services, and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements”* which is widely acknowledged among academics and practitioners. Their definition, encompassing all logistics activities and functions, when applied to the maritime context of logistics management, according to Song and Panayides (2015, p.11) is understood as *“the process of planning, implementing and managing the movement of goods and information involved in the ocean carriage”*. The major differences of the two comprise the exclusion of customer requirements and the

explicit differentiation of efficient and effective movement, respectively, in handling of the goods.

Song and Panayides (2015) reviewing the central functions of maritime logistics argue that at its centre lies the concept of integration which encompasses the different modes of transportation, governance structures, relationships and processes across the interacting organisations to utilise the capabilities of the individual nodes or organisations and generate greater value for shareholders of the maritime logistics chain. While the scope of maritime logistics and the associated activities grow continuously, at its core remains the focus on providing the most efficient and effective transport by ocean carriage from point of origin to destination (Panayides, 2006). With ports representing the nodes of departure and arrival in the maritime supply chain, which in 2015 accounted for the delivery of more than 85 percent of total world merchandise trade (UNCTAD, 2016), ports are of integral importance to maritime logistics and global trade as a whole (Panayides and Polyviou, 2011). Over several decades ports have transitioned from being the point of loading and discharge of cargoes towards becoming logistics- and trade hubs which facilitate intermodal transport, provide value-adding services within their vicinity and thereby generate value for port users, stakeholders and the final customer (Pettit and Beresford, 2009). The integral change that brought this development upon the maritime transport industry was the introduction of the container, containerised cargo shipments and market globalisation which required the means of transporting goods in reasonably safe fashion across the ocean while also significantly reducing ship idle time in ports as loading and unloading now occurred in ever more efficient and standardised ways (Levinson, 2016). The changing cargo handling capabilities port organisations were required to have, alongside the demand for continuous improvement of existing procedures and facilities, brought with it severe shifts of port organisation which will be briefly discussed in the following section.

### **2.1.2 Contemporary Role of Ports**

Ports are complex systems which incorporate a multitude of organisations within their boundaries, resulting from the above-mentioned developments, they have also become one of the most vulnerable nodes in global logistics respectively global supply chains (Woo, Pettit and Beresford, 2011). For ports to remain relevant and effectively compete in these globe-spanning logistics chains, they have to constantly adapt to the needs and expectations of their customers, particularly the vertically integrated shipping lines and

cargo owners (Brooks and Schellinck, 2015). Furthermore, with greater supply chain transparency and availability of information for port users and stakeholders, the traditional power dynamics of ports within the logistics chain moved away from the prevalent internal focus of port management activities (Haugstetter and Cahoon, 2010). Panayides and Song (2009) note that ports should position themselves as facilitators of high quality services for port users through cooperation and integration with other supply chain members. Carbone and Martino (2003) interpret ports as supply chain members consisting of multiple logistics service providers (LSPs) which are involved in generating value for respective customers. Furthermore, they posit that “value-adding” services occur as soon as standardised services are adapted to reflect customer requirements which they, in turn, are willing to pay for. While acknowledging the relevance of LSPs in contemporary port communities they exclude port authorities which provide land, governance models and tariff structures affecting the potential influx of cargo. Additionally, considering only one cargo owner limited the scope of the provided findings, particularly regarding port community dynamics (Carbone and Martino, 2003). Mangan et al. (2008) consider that port/organisation strategy fits as an integral factor for determining which supply chains’ organisations can be catered for in a port community. Depending on port governance structure this fit can be predetermined by port authority-imposed regulations, highlighting their relevance in the ongoing development of a port and its success (Brooks and Pallis, 2008).

Pettit and Beresford (2009) share similar perspectives on port role development over the last four decades and highlight that in the late 20<sup>th</sup> century ports were shifting towards focussing on the provision of value-adding activities. This shift coincided with the introduction of lean and agile concepts for port operations and vertical integration across the supply chain (Pettit and Beresford, 2009). Nonetheless, they challenge the UNCTAD model of first to third generation ports and posit that evolution does not occur in fixed stages or within specific timeframes. Their work, adapting the initial UNCTAD model, introduces the WORKPORT model which investigated the challenges faced by European ports in greater detail after the emergence of containerisation and the key factors and milestones in which the transitional processes ports were involved. Furthermore, the WORKPORT model incorporated aspects like working cultures, health and safety, and environment which the initial UNCTAD model depicting three port generations did not include (Beresford et al., 2004). This transition now sees whole port logistics chains, respectively port communities, competing for cargo and customers amongst each other



(Verhoeven, 2010). Contrastingly, Tongzon et al. (2009), analysing the supply chain orientation of the port industry, find that port organisations are not engaging in collaborative activities or supply chain integration within the port community or wider supply chains. Demirbas, Flint and Bennet, (2014) arrive at similar conclusions and posit that it is seldom the whole port community which is supply chain oriented or integrated but, rather, individual actors within the port vicinity who engage and potentially drive such developments; thereby supporting the earlier findings of Pettit and Beresford (2009) which disagree with the evolutionary model of UNCTAD which considers the port as a whole, developing at the same speed, and within the same timeframe. Nonetheless, their analysis of cargo owner, port authority and LSP relationships lend support to arguments raised by Bichou and Gray (2004) who consider the development of port community relationships as beneficial for enhancing supply chain integration and, consequently, improving the port's performance as a whole. While Tongzon et al. (2009), contrasting to others (De Martino and Morvillo, 2008; Notteboom and Rodrigue, 2008; Rodrigue and Notteboom, 2009), did not identify a significant shift of supply chain orientation, its potential benefits are not contested.

First generation ports were considered to generally operate in isolation, acting solely as point of loading and discharging between land and sea transport (UNCTAD, 1992). They were identified as disconnected from port user views and not necessarily engaging in satisfying port user requirements (Paixao and Bernard Marlow, 2003). Similarly, ports and intra-port organisations are understood to have not engaged in cooperative activities or promoted their commercial activities which mainly revolved around handling breakbulk cargo (Beresford et al., 2004). Second generation ports were recognised as having extended their range of functions transitioning more towards a centre for transport, industrial or commercial services (UNCTAD, 1992). Main cargo types passing through the second generation ports continued to be breakbulk with the addition of bulk cargo shipments (Beresford et al., 2004). Commercial activities increasingly included value-adding services like oil refinement within the boundaries of the port. More importantly though, ports as part of the maritime supply chain no longer operated in isolation but engaged in the development of closer relationships with transport, service and trade partners (Beresford et al., 2004). Third generation ports' emergence is understood as the product of global containerisation and the development of multi-modal transport solutions transform ports, increasingly, into logistics and service hubs (Pettit and Beresford, 2009). The requirements for containerised cargo shipments and its almost seamless integration

into existing transport chains, saw ports further specialising their service provision and a distinct emphasis on information technology and systems integration across major European container ports (UNCTAD, 1992; Trujillo and Tovar, 2007). The necessity of managing an increasing number of port actors while ensuring information quality and integration required third generation ports to engage more strongly in the development of relationships with their customers and port service providers, allowing for information sharing in joint systems (Beresford et al., 2004; Seo, Dinwoodie and Roe, 2016).

As a consequence of these developments over the last century, especially the last thirty years, port organisations are transitioning towards providing the services and covering the activities outlined for third and fourth generation ports (Tang, Low and Lam, 2011).

This on-going transition in many countries further translated into port legislation and port governance changes which saw ports which had previously rendered their services as public/governmental bodies becoming subject to the privatisation of ports and the outsourcing of port operations and services (Baird 2000; Barros 2003; Wang et al. 2013). While this change is generally considered to have considerably enhanced port performance compared to previous performance levels under the sole management of local/government authorities, it also led to a distinct restructuring of the now privatised port organisations, resulting in diversified port communities (Vieira, Kliemann Neto and Amaral, 2014). Consequently, port performance, in the 21<sup>st</sup> century more so than before, can be considered the product of various performance determinants which are connected to a multitude of organisational entities rendering services for or requesting services of the respective port organisation (De Langen, 2008; Verhoeven, 2010).

More recently Lee et al. (2018) in their conceptualisation and subsequent testing of the fifth-generation port model, building on previous work of Lee and Lam (2016), conclude that modern ports of the fifth generation are expected to strongly feature customer-centricity. Thereby making way to an increasing integration of port stakeholders' needs and the port community's diverse business requirements. Even though the multifaceted nature of ports and is acknowledged in the wider maritime logistics and supply chain management literature, the link between a port's performance, its corresponding organisations, and their relationships, has not received wider attention (Seo, Dinwoodie and Roe, 2016). To identify existing and established links between port performance,

affiliated organisations, and their relationships, the following section will review extant port performance literature.

## **2.2 Port Performance**

Up to the emergence of third generation ports around the 1980s, the measurement of performance was generally conducted through the application of financial indicators (Neely, Gregory and Platts, 1995). Its origin lies in double-entry accounting systems which also reportedly remained its sole application until the industrial revolution which saw the developed measurement techniques transferred to the assessment of employee productivity and scientific management of Taylor among others (Bititci et al., 2012). This was followed by a shifting focus towards the application of performance measurement in the fields of quality management and customer satisfaction preceding the evolution of third generation ports (Bourne et al., 2003; Folan and Browne, 2005).

Since the 1980s, though, performance measurement and management has received significantly more attention and experienced a fundamental shift. The predominantly internal focus of applied performance measures saw the incorporation of several additional measurement dimensions of a non-financial nature while also applying external indicators for the assessment of the respective entities' performance (Neely, 1999; Folan and Browne, 2005).

The emergence of these concepts resulted in a growing insight into organisations which, in a perfect scenario, allows to identify to find an optimal 'fit' between the internal organisational activities and the external environment, in the context of strategy formulation and implementation (Neely, 1999). The performance of organisations is then defined based on the degree to which its declared goals/mission statements are achieved through taking strategic decisions while employing required resources in the most efficient way. Bourne et al. (2003) consequently advocate that performance management systems should be developed based on an organisation's strategy to ensure an alignment of measures and goals. While this approach of measure development is considered as yielding a better strategy/performance management fit, the design of the system needs to ensure the developed measures are not self-serving but depict reality in the context of strategy fulfilment as closely as possible. Moreover, Bititci et al. (2012) highlight that those organisations must adapt their performance management to external changes of the

business environment such as globalisation and the rapid development of disruptive technologies.

According to Langenus and Doms (2015) port performance research underwent a similar, although somewhat delayed, shift of focus and attention as they identify an increasing number of studies analysing ports on the micro, meso or macro level based on multi-dimensional and multi-factor measurement. This staggered change of research focus and diversity of applied performance measures strongly intercedes with Neely, Gregory and Platts (1995) seminal publication, distinguishing performance as the product of efficiency and effectiveness. Nonetheless, their review contrastingly posits that most port performance research, particularly on the micro and macro level, utilises one dimensional multi-factor analysis to determine the performance of a single player within the port (PA, CO, LSP or others) or a whole region/country. The lack of meso-level research investigating a port's performance from a systems or community perspective is striking as several studies put emphasis on ports and the players within as integral to logistics/supply chain performance (Pettit and Beresford, 2009; Panayides and Polyviou, 2011; Cheng and Wang, 2016). Exemplarily, Robinson (2002) argues that ports, as an integral part of the value-chain, are characterised by a multitude of organisations working extensively alongside or together within the port environment determining the meso-level performance of the port. The complete measurement of a port's performance, encompassing the performance of individual actors within the vicinity of a port, Langenus and Doms (2015) argue, is a close to insurmountable feat as individual companies differ significantly in size, performance measures, industry and, most commonly, are subject to confidentiality among other reasons. Vaggelas (2019) as well as Duru et al. (2020) endeavour to address this disparity of port performance research by the former developing a framework which captures port user perspectives on port performance and the latter exploring how an information technology enabled digital port community system influences port performance. Both highlight the need for port managing organisations to incorporate stakeholder perspectives and manage their port community relationships effectively but did not investigate the influence of the latter on performance. Of note further are Sunitiyoso et al. (2022), employing systems thinking, exploring the relationship between individual port performance measures from the perspective of multiple stakeholders and their influence on performance of the system. Focus of their work though rests on the relationship between performance factors rather than on the influence of stakeholder relationships on the former.

Despite the emergence of some research investigating port meso-level performance and its respective performance measures, the management of its actual performance, involving the coordination of port stakeholders by the port authority or port management organisation in case of fully privatised ports (Cheon, 2016) is scarce. Management practices of these relationships are dependent on the role of the individual actors, i.e., logistics/port service providers, cargo owners or shipping lines, power dynamics of the relationship setting and the degree of intra-port competition (Notteboom, Parola and Satta, 2015). To identify the individual management practices, as well as the more common dynamics of these relationships between port authorities and their stakeholders, the following sections will review several elements determining the performance of a port and analyse the links which can be drawn between the individual factors and their antecedents.

### **2.2.1 Port Choice**

Port choice is one crucial aspect to review when considering investigating the dynamics of port communities at the meso level and their resulting performance. While port performance research is mainly concerned with measuring and/or improving the efficiency, or more recently the effectiveness, of ports or port operators (Brooks, Schellinck and Pallis, 2011; Brooks and Schellinck, 2015), performance is evaluated under the assumption of ships already frequenting the port, therefore allowing it to utilise its assets and generate throughput (Ng, 2006; Tongzon, 2009). Consequently, even though less acknowledged, the factors determining the port choice of decision-makers precede the possibility of any port realising its performance or achieving any sort of efficiencies in order to distinguish itself from competitors. Regarding the actual decision-makers there is only limited consensus within maritime logistics research (Moya and Valero, 2017). This can mainly be attributed to industry, national or regional differences as well as the differing degrees of supply chain integration which favour specific ports over others (Tongzon, 2009; Tang, Low and Lam, 2011). Magala and Sammons (2008) appropriately highlight that to adequately understand port choice, one needs to identify not only the decision makers but also their rationale for the decisions. Talley and Ng (2013) identify shipping lines as focussing on profit maximisation through liner network design which generates economies of scale whereas freight-forwarders are understood to pursue cost-minimisation while providing value-adding services. Nevertheless, cargo

owners make decisions, if they are empowered to do so, based on their supply chain network alignment (Nir, Lin and Liang, 2003).

The concentration of shipping lines on network design and the possibility to realise the economies of scale are highlighted in Table 1 which sees a strong emphasis put on the location of a port, its efficiency, the incurred charges and the ports infrastructure. All factors, apart from location are dependent on choices made by the responsible port authority regarding its port development strategy and its catering to the needs of port customers.

*Table 1: Port Choice Criteria for Shipping Lines*

*Source: Moya and Valero (2017, p.311)*

	Port location				Port efficiency	Port effectiveness					Port connectivity			Port charges	Port infras.
	Dist.	Transit Time	Cost	Location		Congestion	Reputation	Cargo damage	QRCN <sup>a</sup>	Others <sup>b</sup>	Frequency	Intermodality	Other		
Murphy et al. (1992)								X		X				X	X
Linn et al. (2003)				X						X				X	X
Veldman and Bükmann (2003)		X	X							X	X	X			
Linn et al. (2004)				X						X				X	X
Tai and Hwang (2005)			X	X	X					X	X			X	X
Ng (2006)				X	X		X	X		X				X	X
Acosta et al. (2007)					X							X			X
Tongzon and Sawant (2007)				X	X					X			X	X	X
Chang et al. (2008)				X			X			X		X	X	X	X
Wiegmanns et al. (2008)				X	X		X			X		X	X	X	X
Yeo et al. (2008)	X		X			X			X	X		X			X
Tongzon (2009)				X	X			X	X		X			X	X
Chou (2010)			X		X						X	X		X	X
Caillaux et al. (2011)		X	X		X									X	X
Park and Min (2011)				X						X				X	X
Yeo et al. (2011)	X		X			X			X	X		X		X	X
Tang et al. (2011)					X					X	X	X		X	X
Yuen et al. (2012)				X	X					X	X		X	X	X
da Cruz et al. (2013)				X	X					X	X		X	X	X
Ng et al. (2013)	X		X		X					X				X	

Contrastingly, when reviewing the identified criteria for cargo owners and land-based freight forwarders in Table 2 the results are less concentrated while, similarly, there is a smaller amount of literature discussing the role land-based operators play.

*Table 2: Port Choice Criteria for Land-based Operators*

*Source: Moya and Valero (2017, p.312)*

	Port location				Port efficiency	Port effectiveness					Port connectivity			Port charges	Port infras.
	Dist.	Transit Time	Cost	Location		Congestion	Reputation	Cargo damage	QRCN <sup>a</sup>	Others <sup>b</sup>	Frequency	Intermodality	Other		
Murphy et al. (1992)								X		X					X
Tiwari et al. (2003)	X				X	X					X		X		X
Veldman and Bükmann (2003)		X	X							X	X	X			
Ugboma et al. (2006)				X	X			X	X		X			X	X
De Langen (2007)				X	X					X	X		X		X
Yeo et al. (2008)	X		X			X			X	X		X			X
Tongzon (2009)				X	X			X	X		X			X	X
Caillaux et al. (2011)		X	X		X									X	
Yeo et al. (2011)	X		X			X			X	X		X			X
Steven and Corsi (2012)	X	X	X		X	X				X	X				
Castillo-Manzano et al. (2013)				X						X		X			
Ng et al. (2013)	X		X		X					X				X	
Wu and Peng (2013)		X	X							X				X	

Port efficiency, historically, has been assessed by terminal efficiency cargo throughput (Brooks and Pallis, 2008) and is considerably less important for freight-forwarders and cargo owners as they are not immediately concerned with ship idle times or the asset optimisation of shipping lines (Talley and Ng, 2013). Similarly, port infra- or superstructure is of greater importance to shipping lines as ports need the ability to accommodate ever larger vessels (Liu and Medda, 2009). Lastly, the location of the port is considered of lesser importance as cargo owners either are situated within its proximity already, thus the choice of the specific port or the choice has been made for them (Nir, Lin and Liang, 2003).

While Moya and Valero (2017) differentiate port choice factors which can and cannot be influenced by port authorities, they neglect the role port service providers or logistics service providers in general play for a port. While the port authority provides the governance framework for the port (Vieira et al. 2014) and can facilitate the development of port infrastructure, the service offering is mainly provided by third parties in the port's vicinity (Mangan, Lalwani and Fynes, 2008). Similarly, terminal operators in container ports, while utilising the ports infrastructure, to large degrees finance the required handling equipment themselves (Yeo, 2015); therefore, port efficiency would be rather more dependent on service providers than the port authority actions itself.

Furthermore, port effectiveness as a port choice category encompassing aspects like congestion, reputation, cargo damages, and responsiveness to customer needs, is mainly dependent on a variety of logistics service providers with only congestion directly linked to port authority/harbourmaster decision-making (Panayides and Polyviou, 2011). Reputation is developed through positive interaction between two or multiple parties (Cousins, Handfield and Lawson, 2006), thereby involving the actors rendering services within the port's vicinity under the supervision and governance model of the port authority (Van der Lugt and De Langen, 2007).

Concluding, port choice can be regarded as a precursor to port performance and, while several studies, as highlighted in Table 1 and Table 2, incorporate port efficiency and port effectiveness as actual port choice criteria, the inherent logic appears flawed in certain aspects. Efficiency of any kind when considered as an input-output function can only be calculated and exist if there is, respectively, a theoretical input followed by a predicted

output. If ships do not frequent a port, it is inefficient by default as it cannot utilise its assets. With most maritime logistics research focussing on the container trade this consideration might have been considered as negligible as existing globe-spanning sea trade routes and liner shipping networks predetermine ship loading and discharge locations (Tang, Low and Lam, 2011; Yap and Notteboom, 2011) due to market powers of shipping alliances as well as required and desired economies of scale among others (Gray, 2010; Moya and Valero, 2017). Despite the differing views of the supply chain member (cargo owner or ocean carrier) selecting the port of call, port authorities being capable of influencing the chances of being the chosen port is commonly accepted. Taylor and Jackson (2000), reviewing choice of distribution channels, further posit that while for containerised transport the major shipping lines are the key decision makers, for non-containerised cargo it is commonly the cargo owner or their agent who makes the final decision. The role a port's service offering plays for port choice was not investigated in greater detail from a port's choice perspective. Port efficiency and effectiveness, the two elements representing port performance (Brooks and Pallis, 2008), have been identified as the categories port authorities can heavily influence through the means of port performance management. These will be reviewed in further detail to outline the influence of port authorities and other port community members on a port's performance.

### **2.2.2 Port Efficiency**

Research that investigates the performance of ports from an economic perspective date back as far as to the 1960s. The emergence of these studies can be considered as driven by significant market shifts, particularly the introduction of containerisation by Malcom P. McLean in 1955 (Levinson, 2016). Initial research interests lay on costing mechanisms of ports and the involved organisations, availability of space and capacity as well as regulation of investment and development (Goss, 1967). Increasing global trade and the impact ports had on regional and national economic activity resulted in studies which assessed their contribution to the economy through created cost reductions and generated employment compared to required investments (Waters, 1977). Following this early stage of efficiency measurement in the port industry, a wider range of studies investigated determinants of port productivity/efficiency in respect of port performance (Tongzon, 1993, 1995; Talley, 1994; Fourgeaud, 2000). Another emerging stream of research that investigated port efficiency/performance under changing circumstances was focused on port privatisation and its effects on ports' efficiencies, mainly technical and operational efficiencies (Baird, 1999, 2000; Barros, 2003; Cullinane, Ji and Wang, 2005).



Contemporary research posits port efficiency as one of the key determinants for port choice by container shipping lines and land-based freight forwarders (Moya and Valero, 2017) and is the “doing things the right way” (Brooks and Pallis, 2008) aspect of port performance. Historically, academics have focussed on comparing optimum to actual throughput of container ports or individual terminals (Tongzon, 1995; Pagano et al., 2013) to determine efficiency which was often considered as the ports’ actual performance (Sánchez et al., 2003). The prevalent use of operational or technical efficiency measures to determine a port’s performance can be traced back to the monograph published by UNCTAD (1976) more than forty years ago, outlining performance indicators such as berth utilisation, revenue per cargo ton, equipment expenditure per cargo ton, turn-around times, throughput, and the number of utilised gangs. Tongzon (1995) measured port performance based on the number of containers which moved through a sample of 23 ports. Port performance determinants, though, are more aligned with the above discussed port choice factors. Actual efficiency determinants solely focussed on terminal efficiency such as crane efficiency, container mix, vessel size and, more interestingly, work practices, in the respective ports, thus also limiting its transferability to other sectors. Trebeck (1999), in analysing port privatisation effects in New Zealand, considers port performance close to port productivity/efficiency depending on the number of containers moved per hour. Like Tongzon (1995), though posit that workforce and service provider management yielded substantial performance increases and allowed for greater flexibility in servicing port users.

De and Ghosh (2003), in turn investigating the performance of Indian ports, developed a port performance index, incorporating operational performance, asset performance, berth occupation and throughput rate and financial performance. While offering a more nuanced analysis, they also solely applied port efficiency measures to determine port performance. In line with previous findings (Tongzon, 1995; Trebeck, 1999), though, they outline stevedoring/terminal activities as well as berth management as crucial for port performance management as they translate into efficient use of available infrastructure assets. Steven and Corsi (2012), in their more recent analysis of the US container port industry, evaluated port efficiency by crane productivity, identifying it as being of significant importance to cargo owners. Tiwari, Itoh and Doi (2003), instead of crane productivity, used the number of cranes and moorings to approximate efficiency rather than the actual activity of the cranes or the port.

Brooks (2006) contrasts port performance literature as focussing too strongly on measuring efficiency while other modes of transportation have already experienced a shift of performance management, incorporating external views like customer service perception, availability and reliability of services. Cullinane, Ji and Wang (2004) are of a similar opinion but highlight that the efficiency focus of research is owed to the container industry, specialisation of ports, as well as to the general availability of, or access to, data in some fields of maritime research. Bichou (2006) further adds that port performance measurement or management rarely encompasses both efficiency and effectiveness. Organisational focus appears to be an either/or decision of the responsible parties even though a focus on sole internal efficiency of port management organisations ignores the interests of other port community members. Efficiency increases, therefore, are mainly derived from investments in automation or information technology systems, the modernisation of quays, and warehouse facilities or the extension of the ports vicinity (Heaver, 2006). Nonetheless, caused by the rapid development of the container trade, privatisation of, and competition amongst, ports (Notteboom and Rodrigue, 2008) port operations, services and the required infrastructure in contemporary ports are often provided by a multitude of organisations.

Port performance, respectively port efficiency research focussing on the world's largest and most prominent container ports, affiliated organisations and freight transporting liner shipping companies neglected the limitations of minor and non-container ports (Bergantino, Musso and Porcelli, 2013; Demirbas, Flint and Bennett, 2014; Langenus and Doods, 2015) regarding performance management and the relevant port community members contributing to port efficiency. Similarly, the focus of port efficiency studies remains on terminal operations' efficiency (Blonigen and Wilson, 2008; Brooks, Schellinck and Pallis, 2011; Ogunsiji and Ogunsiji, 2011) which, in turn, is not truly representative of a port's performance but, rather, an abstract approximation considering the multiple supply chain network nodes interacting with each other in the port vicinity. Panayides (2006) supports this notion by suggesting that ports in the era of global supply chains and market concentration around freight routes may utilise measures apart from throughput to better assess and manage a port's performance, particularly the joined performance of the parties involved in the operation of the port.

This neglect, though, was sought to be remedied by port performance studies incorporating both efficiency and effectiveness measures. The following section therefore assesses how far this research gap informed port performance research and how the incorporation of effectiveness measures shaped the resulting port management practices.

### **2.2.3 Port Effectiveness**

Brooks and Pallis (2008), assessing port performance components, employ Neely, Gregory and Platts's (1995) distinction of performance and posit (port) effectiveness as “doing the right things” whereas (port) efficiency is understood as “doing things the right way”. Ports seeking to achieve growth through attracting larger liner shipping companies historically have focussed prevalently on optimising port efficiency, mainly through improved terminal operations or port infrastructure (Tongzon, 1995). More recently Tongzon et al. (2009), in their analysis of supply chain orientation in the port industry, emphasise that even though being an integral part of global supply chains which are characterised by significant degrees of complexity, ports’ operations involving multiple parties are often carried out inefficiently, thereby incurring higher costs which, in turn, result in inadequate customer service satisfaction and suboptimal use of available resources. Furthermore, as highlighted in section 2.1.2 contemporary ports need to rapidly respond to market changes which are driven by external factors outside the control of the port (Panayides and Song, 2006; Woo, Pettit and Beresford, 2011). Subsequently, Marlow and Paixão (2003) stress that the port industry must change its attitude and adapt to the requirements of the 21<sup>st</sup> century, seek cooperation opportunities amongst supply chain members and become the integral logistics node in global supply chains. Carbone and Martino (2003), supporting this notion, highlight that to thrive in the emerging dynamics of maritime supply chains, ports need to reduce the focus on internal activities as the performance of a port is becoming more dependent on its capability to manage and coordinate external units. This strongly coincides with the evolution of third and fourth generation ports which transition away from being sole cargo handlers towards value-adding logistics hubs (Nir, Lin and Liang, 2003; Guy and Urli, 2006; Moya and Valero, 2017).

Thus, to measure and manage port performance, several authors advocate the inclusion of performance indicators which go beyond technical, financial or operational considerations as the latter are limited in their descriptiveness of contemporary port performance (Marlow and Paixão Casaca, 2003; Panayides and Song, 2006; Brooks and

Pallis, 2008; Brooks, Schellinck and Pallis, 2011; Woo, Pettit and Beresford, 2011). Bichou (2006), in the analysis of port performance approaches, highlights that performance itself is a wider concept which encompasses significantly more aspects than efficiency and can cover almost any function from operational management to competitiveness or attractiveness of a company and its activities, emphasising that port performance research has not yet engaged in establishing a link between the operations, strategy and relationships of the involved cross-functional parties within the port environment or the wider supply chain. Demirbas, Flint and Bennett (2014), Brooks and Schellinck (2015), as well as Langenus and Doods (2015) affirm the on-going lack of research regarding these aspects of managing port performance, particularly in sectors other than the container shipping industry. Additionally, to adequately manage performance of a supply chain node port, Bytheway (1995) as long as almost 30 years ago posited that, first, it must meet customer needs (effectiveness) compared to first trying to optimise efficiency which is considered a misguided effort and problem.

Brooks, Schellinck and Pallis (2011), in their seminal work, utilised survey instruments to gather data from three different user groups on the perceived importance of indicators for a port's performance and the actual impact these had on their performance evaluation. In line with the earlier suggestions of Bichou (2006) regarding the link between effectiveness and performance, they employ perceived user satisfaction, competitiveness, and satisfactory fulfilment of services as the main three components of port performance.

*Table 3: Importance Ratings of Port Performance Indicators*

*Source: Brooks et al. (2011, p.325)*

Evaluation criteria <sup>a</sup>	Mean importance all groups	Mean importance supply chain partners	Mean importance shipping lines	Mean importance cargo and agents
Provision of accurate information	6.05	5.75	6.64	6.05
Overall quality of cargo handling	6.04	5.75	6.73	6.13
Overall reliability of the port	5.98	5.60	6.64	6.15
Connectivity/operability to rail/truck/warehousing companies	5.89	5.95	6.18	5.85
Provision of adequate information	5.84	5.70	6.27	5.80
Provision of on-time updates of information	5.84	5.65	6.18	5.90
Port is safe	5.81	5.35	6.36	6.03
Port is secure	5.72	5.10	6.18	5.95
Incidence of cargo damage	5.63	5.40	5.73	5.73
Availability of direct service to the cargo's destination	5.49	5.20	6.27	5.53
Overall reputation of port	5.30	4.75	5.82	5.38
Fulfillment of special requests	5.26	5.25	5.73	5.20
<i>n</i> =	57	20	11	40

Several of the factors mentioned in Table 3 like connectivity (Panayides and Song, 2006), amenability to customers special requests (Ng, 2006) or quality of port services (Marlow and Paixão Casaca, 2003) to name but a few were highlighted in previous studies assessed regarding their importance on a 1-7 Likert scale. Of significance is the disparity of indicator importance ratings and the actual impact the indicator has on the user's evaluation of perceived port performance. While all three user groups jointly considered fulfilment of special requests of lowest importance its actual impact on perceived port performance ranked highest among all three port performance components (Brooks, Schellinck and Pallis, 2011).

*Table 4: Relative influence of indicators on perceived port performance*

*Source: Brooks et al. (2011, p.326)*

General evaluation criteria	Port performance component		
	Overall satisfaction	Competitiveness	Effectiveness in service delivery
Fulfillment of special requests	0.287	0.214	0.280
Overall reliability of the port	0.284	0.174	0.252
Overall reputation of port	0.277	0.214	0.250
Overall quality of cargo handling	0.263	0.192	0.271
Port is secure	0.209	0.238	0.195
Provision of adequate information	0.207	0.163	0.184
Provision of on-time updates of information	0.202	0.219	0.182
Port is safe	0.198	0.162	0.145
Connectivity/operability to rail/truck/warehousing companies	0.197	0.167	0.194
Incidence of cargo damage	0.194	0.132	0.186
Provision of accurate information	0.185	0.146	0.159
Availability of direct service to the cargo's destination	0.100	0.113	0.096

As displayed in Table 4, reliability and reputation are of considerable significance for perceived port performance. Both are factors which have to be built over time and are highly reliant on not simply the port authority or terminal operator but all involved parties within the port community (Panayides and Polyviou, 2011). Similarly, cargo handling, which is considered to be of great impact for overall satisfaction and service fulfilment will, in most instances, be handled by stevedoring companies' terminal operators and not the port managing organisation (Carlan, Sys and Vanelander, 2016).

Nonetheless, the quality of rendered services by others will impact the reputation of the port as well as its reliability which, in turn, impact the ability of, e.g., contemporary port authorities to attract new customers or investment (Verhoeven, 2010).

Along the same lines, perceptions of port security and safety are not factors dependent on the port authority alone but require all port community members to adhere to the same regulatory framework imposed by the port authority or other governing bodies (Vieira, Kliemann Neto and Amaral, 2014).

Yeo (2010) further found that the provision of port services and facilities desired by port customers is significantly positively related to port performance and port competitiveness, highlighting the importance of engaging and understanding a port's user base and their requirements for doing business. Furthermore, analysis of Asian container terminals concluded that infrastructure development compared to service quality improvements do not necessarily yield higher returns or generate more traffic. Consequently, the findings of the study alongside others (Panayides and Polyviou, 2011; Demirbas, Flint and Bennett, 2014; Seo, Dinwoodie and Roe, 2016) highlight the advantages of port authorities transitioning from a landlord to an integrator and facilitator role within the port community.

Ducruet, Koster and Van der Beek (2010), investigating port differences based on serviced commodities, emphasise that only comparing throughput or other port efficiency measures without accounting for differing regional and industry preferences paints an incomplete picture of any port's performance. Brooks and Pallis (2008) voice similar concerns and advocate that there is a distinct lack of incorporating port users' perceptions of the port construct/community as a whole whereas Langenus and Doods (2015) emphasise that port performance research is lacking a more descriptive analysis of ports and their performance dynamics on the meso level and across commodities other than containers. Woo, Pettit and Beresford (2011) also highlight that to meet customers and supply chain actors' expectations and requirements, port authorities need to strike a balance between efficiency and effectiveness in their port management activities.

Robinson (2002), De Martino and Morvillo (2008) as well as Demirbas, Flint and Bennett (2014) found that incorporating port community members' perspectives, building long-term relationships with key-members, and working together on performance improvements is essential for continuous improvement of a port and its ongoing growth in increasingly competitive markets. Demirbas, Flint and Bennett (2014) further highlight that the role of ports and their communities change depending on consumers, geographic location and the enacted port strategy or governance model. Brooks and Schellinck (2013)

building on the work of Brooks, Schellinck and Pallis (2011) reassert their conclusion that research of port performance, particularly port effectiveness needs to incorporate more than one single user dimension to appropriately assess and improve the performance of the respective port. Vaggelas (2019), in establishing a framework for measuring port user perception of port performance, going beyond efficiency measures, finds that the incorporation of these perspectives from the port authority's side still appears to be "taboo" which limits the effectiveness of derived port management approaches. Ho, Yang and Lam (2019) in their investigation of multi-stakeholder perspectives on port performance in South Korean container ports conclude that stakeholder management and engagement is significant for establishing relevant performance measures while also acknowledging the interdependence of operators, particularly port service providers within the port community setting.

In conclusion, port effectiveness measures can be regarded as the external view taken by port management organisations by incorporating measures which are perceived of importance to port users or stakeholders by the measuring body. Furthermore, effectiveness indicators give direction for improvements targeted at raising efficiency levels in operations or processes crucial to the port's customer base. Thus, port performance can be understood as the product of port community members' performances, as individual service providers impact the ability of the port authority to attract cargo and vice versa. There is a certain degree of interdependence, particularly among port authority (PA), port service providers (PSP) and cargo owners (CO) or their agents in settings other than the container industry. Therefore, the following section introduces "port community performance" as fitting terminology for depicting the performance of multiple port community members and, subsequently, activities of the PA/PSP/CO port triad.

### **2.3 Port Community Performance**

Port performance research, as detailed in earlier sections, traditionally focussed on measurement and management of efficiencies; mainly indicators like terminal efficiency, berth utilisation rates and maximum throughput were utilised (Bichou and Gray, 2004; Brooks, Schellinck and Pallis, 2011; Wang, 2011). This form of measurement informed port management which focussed primarily on either the improvement of port infrastructure or terminal operations as these are viewed as significantly raising the attractiveness of a port (Ng, 2006; Moya and Valero, 2017). Consequently, these studies

primarily investigated roles of port authorities or terminal operators within the container shipping industry regarding port efficiency improvements (Marlow and Paixão Casaca, 2003; Brooks and Pallis, 2008).

More recently, with the emergence of port effectiveness research as part of port performance literature, port users and logistics service providers moved towards the centre of attention (Panayides and Song, 2009; Woo, Pettit and Beresford, 2011). Applying port effectiveness indicators for the measurement and management of port performance deals with the incorporation of customer satisfaction, perception of service, and port performance into existing frameworks (Cetin and Cerit, 2010; Brooks and Schellinck, 2013; Pagano et al., 2013). While the rationale for these measures and the relevance of managing port users and logistics service providers alike has been recognised within the maritime logistics literature, research on how to best manage these relationships between port authority, port users and logistics service providers is considerably less developed (Bergantino, Musso and Porcelli, 2013; Vieira, Kliemann Neto and Amaral, 2014; Sunitiyoso et al. 2022). Bucak, Basaran and Esmer (2020) in their review of port performance literature further identified the absence of research at the port community level, incorporating views of multiple stakeholders on port performance measures and their subsequent management.

To distinguish port performance research on the meso (community) level (Langenus and Doooms, 2015) incorporating more than a singular or dyadic view, this study establishes the terminology of “port community performance” (PCP).

*Port community performance captures the output of port community members in respect to the focal port's performance, stemming from the interactions and subsequent inputs generated of at least two of its members.*

The notion of port community member interdependency and the approach of viewing ports as systems while not having been explored in detail has been discussed across a range of port research studies. Brooks and Cullinane (2006) highlight that research focussing on port governance models has recognised the relevance of relationships between port stakeholders for the efficient and effective functioning of a port which points towards the relevance of the port community. Similarly, Van der Lugt and De Langen (2007) acknowledge that port authorities need to engage and develop long-term



relationships with their stakeholders to realise strategic goals and enable port community members to cooperate. Despite their acknowledgement, they posit information and communication technology (ICT) as enablers of such cooperative relationships, neglecting the required willingness of stakeholders to share information or even get involved in the set-up and financing process as well as the alignment of goals beforehand. Establishing ICT systems to facilitate port performance gains has been discussed by Duru et al. (2020), even drawing parallels between an ICT system and the port community, allowing the former to facilitate interactions between the latter's members. However, Demirbas, Flint and Bennett's (2014) results contradict the necessity of shared ICT systems as enablers for cooperation and integration. While they highlight that the scale of operations is a decisive factor, they found that communication via telephone, face-to-face or email is sufficient for the establishment of cooperative long-term relationships which can enhance the performance of the port as they facilitate the development of an open and connected port community. Caldeirinha et al. (2020) exploring the impact of IT enabled cooperation and information platforms, which they coin "*port community system*", on port performance find port managers should focus on developing their networks, establish common goals followed by collaborative relationships thereby growing the links within the port community and subsequently enhancing PCMs information sharing willingness. Their work highlights the importance of the aforementioned factors for port community performance as they acknowledge the interdependence of PA, PSP and CO for port community performance management.

Furthermore, several studies investigating port choice endorse the importance of user perspective approaches (e.g., Van der Lugt and De Langen 2007; Park and Min 2014). At the start of the 21<sup>st</sup> century De Langen (2002) proposed that an analysis of the variance of stakeholder management and relationship configurations in port clusters would further contribute to the understanding of port performance and competition. This understanding of how port stakeholder relationship management approaches translate into greater port performance remains limited which highlights the need for research on port community performance as the latter incorporates these stakeholder relationship configurations within the port community and explores subsequent influences on port community performance. Port clusters are hereby referred to as the various organisations working alongside each other in one port and contributing to its overall performance.

Slack and Wang (2002) further advocated incorporating more social sciences research into port research to reflect the importance of social and cultural variables that affect port performance and governance through the relationships existing between the port authority and other port community members which this study aims to address.

Mangan et al. (2008), as well as Demirbas, Flint and Bennett (2014), emphasise the reliance of port authorities on port service providers as the future of ports heavily involves tailoring services to consumer demands while continuing to support the local and national economy in the best way possible, highlight the benefits of integrated port communities. Demirbas, Flint and Bennett (2014), in their research of supply chain interfaces between port users and port authority, exemplify the relevance of good relationship management and the understanding of port users' needs. They highlight, that port authorities making decisions on business opportunities need to consider the implications these decisions have for the port community. Failing to accommodate existing customers or communicate decision processes can result in damaging the ports reputation (Demirbas, Flint and Bennett 2014) which in turn is expected to negatively influence port community performance. While not investigating the actual relationships but, rather, supply chain orientation and its effect on port performance, Panayides and Song (2006, 2007) conducted a survey with 32 terminal operators and found a positive relationship between the two. They further posit that developing long-term relationships between port authorities and port users is advantageous because these relationships can provide a range of benefits for both sides which could not be obtained without strong bonds that facilitate cooperation. Nonetheless, Zhao et al. (2008) emphasise that long-term strategic relationships and the resulting benefits are comparably hard to realise as information sharing and cooperation requires trust among engaging port community members which also increases opportunism risk (Seo, Dinwoodie and Roe, 2016).

With port performance predominantly being researched in the context of the container shipping industry and its largest ports, the contribution of Ducruet, Koster and Van der Beek (2010) is particularly noteworthy. Their research shows that smaller ports form stronger bonds with their port user and port service provider base, developing a strong port community built around trusting relationships and alignment of vision and goals, particularly as they often pursue cargo diversification strategies allowing them to accommodate a wider range of potential port users.

Hall (2004), while acknowledging the efficacy of such strategies for smaller ports, notes that the notion to diversify commonly stems from limited financial or infrastructural possibilities which represents a limitation Scottish Trust ports are experiencing.

Golicic and Mentzer (2011), investigating the dynamics and performance of transportation relationships between users and service providers which also are an integral part of the port community, consider an understanding of organisational culture as crucial to delivering effective services. Carbone and De Martino (2003) also emphasise that port performance is a construct dependent on all organisations within the port and take the view that port authorities must work with the senders, receivers of goods, and the cargo transporting or handling companies, to meet customer demands and enhance port community performance.

However, Bassan (2007) argues that individual port community members primarily pursue their own interests rather than acting in favour of the port community. Consequently, identifying factors which facilitate cooperation and aid establishing long-term relationships are of great importance for port authorities and other port community members alike. Demirbas, Flint and Bennett (2014) identify six factors which, by both port authority and port users, were considered as integral to building beneficial long-term relationships, forming a port community performance enhancing configuration of relationships. These were: common vision and goals, sharing of information and knowledge, use of cross functional teams and general teamwork, developing knowledge of personnel, and improving understanding of each other's issues. Furthermore, similar to benefits advocated in previous studies (Bichou, 2006; Panayides and Song, 2009; Brooks, Schellinck and Pallis, 2011) they found that changing the nature of the relationship from adversarial to cooperative allowed both companies to improve existing operations which lead to an increased performance of the whole port. Seo, Dinwoodie and Roe (2016), in their research, identify trust and shared goals as essential enablers of collaborative activities between port community members.

## **2.4 Limitations of Port Performance Research**

Despite agreement in the port performance literature that long-term relationships among port community members are beneficial for the performance of a port, the concept of port community performance, namely the influence of port community relationships on the performance of a port is significantly underdeveloped and presents a significant gap which needs further attention.

First, even though there has been an increase of port performance studies incorporating the element of port user perspectives (Tongzon, 2009; Brooks, Schellinck and Pallis, 2011; Woo, Pettit and Beresford, 2011; Schellinck and Brooks, 2014; Brooks and Schellinck, 2015; Schellinck and Brooks, 2016) when considering port effectiveness measures, the actual contribution the individual port community members make to these measures is not explored in sufficient detail, even more so when considering their relationship configurations within the port community at the meso level (Langenus and Dooms, 2015) as existing port performance research does not incorporate or assess port community member contributions to port performance in sufficient detail (Bucak, Basaran and Esmer, 2020). The aforementioned studies generated a range of port effectiveness measures considered relevant to a port's performance and by extension to its port community members as they represent the actors realising said performance. Nonetheless, while contemporary port performance research identifies these indicators of particular importance the port community, research is scarce on how individual port community members can best manage these indicators and how their individual relationships within the community influence the performance of the port community in line with these performance measures (Demirbas, Flint and Bennett, 2014; Seo, Dinwoodie and Roe, 2016). Näslund (2002) emphasises that logistics research needs qualitative research methods to develop a greater understanding of the relationship dynamics underpinning global supply chains and the factors mediating these relationships.

Second, even though more recent port performance research has incorporated perspectives of multiple port community members, most studies limit their analysis to a single actor perspective (Tongzon 2009; Brooks and Schellinck 2013; Schellinck and Brooks 2016; Bucak, Basaran and Esmer, 2020). While the prevalent studies appear to focus on developing models for the assessment of port community member perspectives on performance measures (Vaggelas, 2019), an exploration of how the individual port

community members contribute to these respective measures through the interactions between themselves is considered rather limited. While port complexity, as emphasised by Langenus and Dooms (2015), especially in the commonly analysed major container port, can present itself as considerable barrier keeping researchers from analysing the dynamics of port community relationships and how these influence the formers performance, ports of a smaller size and more diverse cargo portfolios might offer an opportunity for such an explorative study. This is highlighted in their findings, identifying only two studies which partially analysed port community performance, i.e. port performance at the meso level, incorporating the performance of involved organisations. Talley et al. (2014), while acknowledging the complexity of port service chains, similarly argue that an understanding of the separate groups and their interactions within the port community would generate valuable insights for the performance management of port communities.

## **2.5 Port Community Performance and Trust Ports**

The port industry, particularly the container port industry, has experienced significant changes through port privatisation and the evolution/development of ports operating as sole cargo loading and unloading facilities to logistics hubs which aim to generate value for their customer base (Pettit and Beresford, 2009). Port privatisation, or more so the decision on which ports are going to be privatised, had a significant impact on port competitiveness at the national and global level (Baird, 2000; Tongzon and Heng, 2005, Bucak, Basaran and Esmer, 2020). Decisions on port privatisation were dependent on the ports' locations regarding the major sea trade routes, hinterland access, availability of investment and the degree of existing land and infrastructure (Lee and Cho, 2017). Ports subject to privatisation experienced a significant influx of investment, promoting the outsourcing of terminal operations to third parties, often affiliated with the biggest liner shipping companies seeking to secure slots of terminal availability and preferential treatment (Yeo, 2015), this in turn however facilitated the establishment of more adversarial port community relationships, particularly when considering competition for quayside space and terminal availability.

In the UK, this led to Felixstowe becoming the primary container port of choice for liner shipping companies with Southampton operating as second port of call but also servicing a wider range of commodities than Felixstowe (Baird, 1999). With trust ports being

unable to attract similar funding for infrastructure development due to their governance structures, competition on port efficiency for most services appears unfeasible. With increasing market concentration and the establishment of strategically situated privatised ports in the UK, the remaining municipal and trust ports faced intensified competition for cargo and business in general (Baird, 2000) while still being limited by the scope of their potential investments as well as the service offering and experience their port community can offer as a whole.

While all ports are subject to market forces and operate as stand-alone and self-financing enterprises, access to investment as well as the strategic goals and ambitions of the ports vary significantly (Baird, 1999). Trust ports are presently safeguarded by the existing board whose duty it is to hand the port on in the same or better condition to succeeding generations. This remains the primary responsibility of the board, and future generations remain the “ultimate stakeholder” (Transport Scotland, 2012, p. 3) with the primary goal of benefitting its stakeholders which encompass port users, local communities, local and regional economies, employees, related interests groups and others. The list is not exhaustive and only highlights a general set of envisioned trust port beneficiaries. Particular focus and the number of stakeholders can vary significantly depending upon port location and strategy (Transport Scotland, 2012). However, the role of trust ports as facilitator or regional sustainable development as part of its overarching governance structure sets it apart from privatised ports. Port operating organisations of privatised ports, however, are understood to predominantly focus on profit maximisation in line with their shareholders expectations and the organisation’s strategy is understood to be one of the primary concerns (Lee and Cho, 2017). Subsequently, focus on port community relationship management and its resulting influence of the community’s performance is considered to be of significant relevance to trust ports due to constraints they otherwise experience.

Trust ports are required to generate profits for continuous development of the port and its community; any generated surplus has to be reinvested into the ports’ development (Transport Scotland, 2012). As the stated primary mission of trust port managing organisations is the creation of value for their stakeholders, active engagement with the relevant parties and the development of long-term relationships is a key element of trust port governance and management practice (Transport Scotland, 2012). Subsequently, port stakeholder concerns and perceptions are understood to shift into stronger focus in trust

ports as they cannot, to the same extent, compete on operational efficiencies due to their limitations in actual cargo throughput compared to privatised ports realising benefits from economies of scale (Baird, 2000). Stakeholder relationships, particularly between cargo owners, port service providers, and port authority, are believed to in particular impact trust port community performance as effective service delivery requires an understanding of the requirements of the individual parties (Schellinck and Brooks 2016) with the governance model advocating the development of such an understanding in addition to developing the trust port for the benefit of its present and future stakeholders.

The developments mentioned in this section highlight the current landscape of ports in the United Kingdom and the significant reduction of ports able to operate in a commercially viable way in the competitive environment. Considering investment limitations of Trust ports compared to privatised ports or organisations controlling a larger number of privatised ports, competing solely on the premise of cost leadership is unlikely. Port community performance is subsequently considered of greater relevance for Trust ports as driving port performance through infrastructure investments or similar means is unlikely to present itself as feasible possibility. Exemplarily, the implementation and more so adoption of sophisticated IT enabled “port community systems” as advocated by Caldeirinha (2022) despite its impact on performance appears unlikely in most trust ports due to their financial constraints. While Transport Scotland (2012) issues guidelines regarding the management of Scottish trust ports, an investigation of relationship management practices and its influence on the respective port community’s performance has not yet been attempted. Moreover, research that examines the influence of the triadic cargo owner (CO), port service provider (PSP) and port authority (PA) relationship setting on the performance of Scottish trust ports could provide valuable insights for effective and efficient management of trust port communities, in practice as well as theory.

## **2.6 Chapter Conclusion**

This chapter has reviewed the literature on port performance, which mainly focuses on port efficiency and, more recently, port effectiveness. There is consensus in the literature that while existing studies identified relevant port performance measures according to their relevance for different actors in maritime supply chains, findings on how these criteria should best be managed within the port environment, encompassing multiple organisations with varying interests, is rather scarce (Demirbas, Flint and Bennett, 2014; Langenus and Dooms, 2015).

While port performance literature acknowledges the relevance of the individual actors for the appropriate functioning of ports, these are analysed in isolation rather than as part of a port's community or a system of actors which, to certain degrees, can be considered interdependent and governed by the imposed regulations of the port authority and their approach to port management. Port authorities are considered as integral for the efficient and effective management of the port community as they facilitate interaction amongst members and market the port to attract cargo and additional port service providers. Despite port community relationships having been identified as essential to a contemporary port's performance, the majority of studies employ quantitative methods to assess the actual performance rather than to utilise qualitative methods in logistics research as advocated by Näslund (2002) to develop a comprehensive and nuanced understanding of these relationships; thereby answering "why" and "how" they are contributing to port community performance.

Ducruet, Koster and Van der Beek (2010) and, Moya and Valero (2017) have emphasised that commodity, size, governance model, regional, and national differences all have a considerable impact on a port's performance as well as on the means available to the port management organisation to compete in the market and manage the port's performance. Future research, therefore, is encouraged to explore contexts other than the container shipping industry and its, to a large degree, privatised port or terminal operations. (Pallis, Vitsounis and De Langen, 2011; Langenus and Dooms, 2015).

Findings of studies investigating interfaces between port community members have identified substantial benefits for port community performance through the development of long-term mutually beneficial relationships in these settings (Demirbas, Flint and



Bennett, 2014; Seo, Dinwoodie and Roe, 2016). However, further research is needed to develop an increasingly nuanced understanding of the relationship facets which influence the activities of port community members and, subsequently, port community performance. Considering their unique governance model, Scottish Trust ports' general focus on non-containerised cargo and their approach to port community member relationship management is understood as a fitting context to pursue this line of research. The following chapter of this thesis reviews the literature on social capital, which is the theoretical lens through which this study investigates the influence of triadic port relationships on port performance.

*Table 5: Port Performance Definitions Overview*

<b>Term</b>	<b>Definition</b>	<b>Author(s)</b>
<b>Performance</b>	Compound measure of efficiency and effectiveness.	Adapted from Neely, Gregory and Platts (1995)
<b>Efficiency</b>	Efficiency is a measure of how economically the firm's resources are utilised when providing a given level of customer satisfaction.	Neely, Gregory and Platts (1995)
<b>Effectiveness</b>	Effectiveness refers to the extent to which customer requirements are met.	Neely, Gregory and Platts (1995)
<b>Port Performance</b>	Compound measure of port efficiency and port effectiveness.	Adapted from Neely, Gregory and Platts (1995)
<b>Port Efficiency</b>	Port efficiency is a measure of how economically the port's resources are utilised when providing a given level of port user satisfaction or service.	Adapted from Neely, Gregory and Platts (1995)
<b>Port Effectiveness</b>	Port effectiveness refers to the extent to which port user requirements are met at the port in question.	Adapted from Neely, Gregory and Platts (1995)
<b>Port Community Performance</b>	Port community performance captures the output of port community members in respect of the focal port's performance, stemming from the interactions and subsequent inputs generated of at least two of its members.	Self-defined by author

### **3 Literature Review – Social Capital**

The previous chapter reviewed port performance, its relatedness to the performance of the port community, and the relevance of port community relationships for effective port management. Contemporary research highlights that port performance can be significantly improved, particularly the effectiveness of ports, through developing mutually beneficial port community relationships (Seo, Dinwoodie and Roe, 2016). The development of long-term, cooperative or collaborative supply-chain relationships has received wide attention across their respective fields of research, particularly buyer-supplier relationships (Matthews and Marzec, 2012; Kwon and Adler, 2014; Pillai *et al.*, 2017). In contrast, research on this topic remains relatively unexplored in the field of port community relationships and their contribution to port performance (Carlan, Sys and Vanelslander, 2016). While it is undisputed that ports, respectively port communities, need to be effective and efficient in their actions to achieve higher performance and successfully compete for cargo/business with other ports (Talley, Ng and Marsillac, 2014), the relevance of port community members is widely unappreciated. Consequently, there is an insufficient body of knowledge on how relationship facets like trust, social ties and shared understanding of systems among port community members contribute to a port's performance. Therefore, to adequately address this gap in the port performance literature, it is essential to identify and apply a theoretical framework that can guide the process of explaining the interrelatedness of port community members, their relationships and port community performance.

Port communities consist of a multitude of members which occupy different roles and provide various services for the port community (Notteboom, Parola and Sata, 2015). Port authorities transition from their sole landlord function towards fulfilling several internal and external functions such as the monitoring, developing, integrating and facilitating of port community and port activities (Verhoeven, 2010). Port community members competing for business within the ports' boundaries with other providers of identical services can benefit from resource and information sharing activities among members while also being enabled to jointly provide an improved service offering to the wider port user base (Schellinck and Brooks, 2016). Even though social capital was not yet found to have been applied within the field of maritime economics and logistics to explain the relevance of port communities for port performance, it has been widely applied in the research of buyer-supplier relationships (Villena, Revilla and Choi, 2011), intra- and

intergroup relationships (Oh, Labianca and Chung, 2006), as well as intra- and interorganisational relationships (Pillai *et al.*, 2017) and its effects on their performance. Furthermore, the relational dimension of social capital in the form of trust has already, repeatedly, been identified as important for the efficient and effective functioning of port community relationships (Carlan, Sys and Vanelslander, 2016; Seo, Dinwoodie and Roe, 2016). Consequently, as the focus of this study is to identify the relevance of port community relationships on port community performance, social capital theory presents itself as a suitable theoretical framework.

The terminology surrounding social capital theory, respectively social capital research, is ambiguous and various researchers offer varied perspectives regarding its meaning and what it encompasses (Adler and Kwon 2002). To develop a better understanding of the theory itself as well as its definitions and applications, the following review firstly examines the history and varying interpretations of social capital. Concluding this initial review, the guiding definition of social capital for the boundaries of this research is specified. Following the definition of Nahapiet and Ghoshal (1998), the three individual dimensions of social capital are reviewed. To identify facets and effects closest to port (community) performance, social capital research focussing on its effects towards relationship or organisational performance are narratively reviewed. Furthermore, to explore social capital in port community relationships, previously identified potential negative outcomes of social capital accumulation on performance are considered. Then, considering the various actors/organisations in a port community, the influence of social capital in triadic relationships is discussed. Lastly, research gaps and the pertaining research questions are identified.

### **3.1 Development of Social Capital Theory**

According to Nahapiet and Ghoshal (1998), the terminology of “social capital” (SC) first appeared in community studies as a descriptor of strength and structure of relationships that have been developed over time. In respect of communities, SC is seen as a foundation and facilitator of trust, cooperation, collective action, and coherence (Putnam, 1995). Loury (1977), in their research of income inequalities in difference to the analysis of communities and by Jacobs (1965), displays the relevance of “social capital” for the development of an individual. “Social capital” in their work is depicted by the resources stemming from family relations and community networks (Loury, 1977).

While only being of exemplary value to the overall review of SC research, these two studies prior to the actual conceptualisation of SC showcase ongoing existing differences regarding the understanding of SC and its different levels of analysis (Leana and Van Buren, 1999).

The first contemporary conceptualisation of SC was published in French by Pierre Bourdieu (1980) as means to explain the mechanisms of social networks facilitating social inequality. The notion, similar to Loury's (1977), was that SC can facilitate the establishment and maintenance of exclusive elitist societal groups. Reviewing the earliest contributions to SCT, with focus on network linkages and positioning of individuals as the main components of SC and drivers of inequality depicted mainly the structural facets of SC. In the English translation of their work the author defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (Bourdieu, 1985, p. 248). The proposed concept of social capital is centred on the advantages that individuals can obtain from participatory actions in groups, and the purposeful creation of friendships in order to generate social capital (Bourdieu, 1985). Adler and Kwon (2002), in their review of extant social capital literature and conceptualisation of SC generative mechanisms, further critique the social capital theory outlined by Bourdieu (1985). They conclude that the existence of network ties presents an opportunity for the generation of SC but in order to utilise the existing ties, the quality of relationships is the prevalent factor (Adler and Kwon, 2002). Bourdieu, though, delineated two essential aspects of social capital, namely the social relationship itself acting as the gateway to these resources, the structural dimension of social capital, and the diversity, quantity and quality of these relationships, the relational dimension of social capital (Bourdieu, 1985). While the author conceptualised two distinct facets of SC, the majority of contemporary research attributes quantity and diversity of relationships to the structural dimension whereas the quality of relationships is associated with the relational or cognitive dimension (Nahapiet and Ghoshal, 1998).

Bourdieu's work, by comparison, did not attract wider attention at the time, Coleman (1988), however, investigating the role of social capital in the creation of human capital, became one of the most cited authors of the field. Coleman's research can be seen as an advancement of the findings and propositions offered by Loury (1977). Coleman examined SC as a resource in the form of obligations, expectations, information channels

and social norms (Coleman, 1988). More specifically, the author investigated the relationship between SC and high-school dropout rates of sophomores, and established the concept of SC in American sociology (Nahapiet and Ghoshal, 1998; Portes, 1998; Adler and Kwon, 2002). Conclusions were based on a quantitative analysis using a weighted logistic model with a random sample of 4,000 public school students in light of their families' financial, human and social capital (Coleman, 1988). The research shows that absence of SC inhibits the formation of human capital. It also demonstrates that accumulation of social capital within a social relationship informs the potential actions individuals might take in the future. This would depend on the degree of accumulated SC (Coleman, 1988). Differing from Bourdieu (1985), Coleman highlights the potential benefits of SC. The research highlights the benefits stemming from strong relational ties among family members which facilitate the creation of human capital (Coleman, 1988).

Portes (1998) traced the origins of the SC concept and affirms its suitability in explaining how social structures of relationships can constrain, support, or derail the behaviour of individuals under specific circumstances. Portes (1998) delineates four sources of social capital, namely value introjection (Durkheim [1893] 1984), reciprocity transactions (Simmel [1908] 1955), bounded solidarity (Marx and Engels [1848] 1948) and enforceable trust (Weber [1922] 1947). While the author critiques Coleman (1988) for solely focussing on the potential benefits which can be derived from social capital, the author refrains from voicing similar criticism regarding Bourdieu's work (1985) who put considerable emphasis on the negative effects attributable to social capital.

Disregarding this one sided critique, Portes (1998) offers one of the earliest analyses of social capital that accounts for its potential benefits as well as drawbacks. The author refers to Geertz (1963) who, in an ethnographic study of Balinese commercial enterprises, observed successful entrepreneurs being confronted and expected to put the needs of their social groups above their own. Similarly, the research of Nee and Nee (1973), investigating San Francisco's Chinatown, is used to showcase the constraints social capital can put on the freedom of the individual as non-conformity with group norms can lead to group exclusion. Portes (1998) also states levelling pressures stemming from shared feelings of adversity as a negative effect of social capital. In their argument referring to Bourgois (2003) who, in their ethnographic research of Puerto Rican crack dealers, found that social capital, while giving ground to solidarity based on common adversity, also confines the individual and restrains them from progressing further from

their perceived station. Furthermore, Portes (1998) critiques the work of Coleman as obscuring the delineation provided by Bourdieu (1985). The main point of criticism is that Coleman obscures the distinction between generators of social capital (sources) and benefits that can potentially be derived from it (effects) (Portes, 1998). These blurred lines (between cause and effect, respectively the interaction between the social capital dimensions) still presently exist (Villena, Revilla and Choi, 2011; Kwon and Adler, 2014; Portes, 2014). Burt (2009) first published in 1992, as an advocate of a network theory approach, takes a differing point of view and considers social capital to be the range of relationships an individual has.

These bridging wide-cast relationships are seen by him as providing access to the resources an individual desires and otherwise would have no access to (Burt, 1997, 2001, 2009). While Burt acknowledges tie content (relational, cognitive dimension) as contingent factor regarding the value of individual networks, the author considers the network itself as the main generative factor of SC (Burt, 2000). Thereby putting an explicit emphasis on the importance of social network structure. Adler and Kwon (2002), reviewing Burt's approach, note the implausibility of SC being generated or even mobilised through the sole existence of social ties. Tie content in their conceptual model of SC generators is linked to the motivational aspect of actors to grant access to the resources embedded within their own networks (Adler and Kwon, 2002). Burt, in contrast to Bourdieu (1985) or Coleman (1988), argues that a wider net of contacts constitutes larger amounts of social capital. Dense networks, as advocated by Bourdieu (1985) or Coleman (1988), would according to Burt (2009) convey a higher degree of redundant information. Burt (2009) considers "structural holes" (broad networks where individuals with relevant contacts can act as brokers who bridge actor disconnects) as preferable to "closure relationships" (relationships build on continuous repeated exchange that builds a history of mutually beneficial experiences), respectively network density, as it allows the individual to act more freely as one is not constrained by strong relational ties. Although these two distinct views are often considered as exclusive, Leana and Van Buren (1999), as well as Oh, Chung and Labianca (2004), propose a complementary view of both. Their line of argument follows the thought that in order to maximise the benefits derived from social capital an individual or entity needs to have both dense networks as well as access to a wide network of non-redundant information (Leana and Van Buren, 1999; Oh, Chung and Labianca, 2004).

Similarly, Putnam (1995) differentiates between bridging and bonding social capital. The former refers to network linkages that connect individuals of otherwise unconnected networks and the latter to links that connect members of immediate networks like organisations, social groups or families (Putnam, 1995).

A perspective of bridging social capital, therefore, primarily focuses on social capital as a resource that is available through particular social network structures, tying together at least two individuals or entities (Adler and Kwon 2002). Linkages of individuals or entities are seen as the main driver of actions that individuals take within the given social structure (Adler and Kwon, 2002).

The contrasting view to this perspective is the notion of bonding social capital as a resource inherent in the relational ties of an individual within a given organisation, collective or group (Putnam, 1995). These linkages that exist among actors in an organisational setting are considered to be those that facilitate group cohesiveness and lead to an increase of individuals' willingness to pursue collective goals as their own (Putnam, 1995). The "structural hole" (Burt, 2009) and "closure relationships" (Coleman, 1990) or the formulations of Putnam (1995) of "bridging" and "bonding" social capital describe similar views of the matter while being differently worded. Focussing on bonding (closure relationships) or bridging (structural holes) social capital more distinguishes the view and approach the respective researcher takes.

Rost (2011), studying the effects of strong relational ties on the creation of innovations, comes to a similar conclusion. Her findings suggest that benefits stemming from dense networks are enhanced when members strive to bridge existing structural holes. Furthermore, weak network configurations do not offer any value without the existence of strong relational ties (Rost, 2011). Rost's (2011) findings also complement the proposition and stance taken by Adler and Kwon (2002). In their conceptual model of social capital and its generators they conclude that the sole existence of relational ties without the ability to mobilise their inherent resources can be considered to be worthless (Adler and Kwon, 2002).

Even though the concept of social capital incorporates a broad strain of sociological theories, for more than a decade after its first conceptualisation its depiction consisted only of the structural and relational dimension of relationships (Adler and Kwon, 2002).

The notion of “shared culture” encompassing shared values, goals and language had been mentioned as an aspect affecting the relational and structural dimension but had not been conceptualised explicitly (Kogut and Zander, 1992, 1996; Nahapiet and Ghoshal, 1998). Nahapiet and Ghoshal (1998), investigating the role of social capital in the generation of intellectual capital, extended the understanding regarding social capital of that time by conceptualising a third social capital dimension. According to them SC is comprised of the structural, relational and cognitive dimensions of social capital which embodies the shared values, beliefs and goals of individuals within social relationships (Nahapiet and Ghoshal, 1998) as depicted in Figure 1.

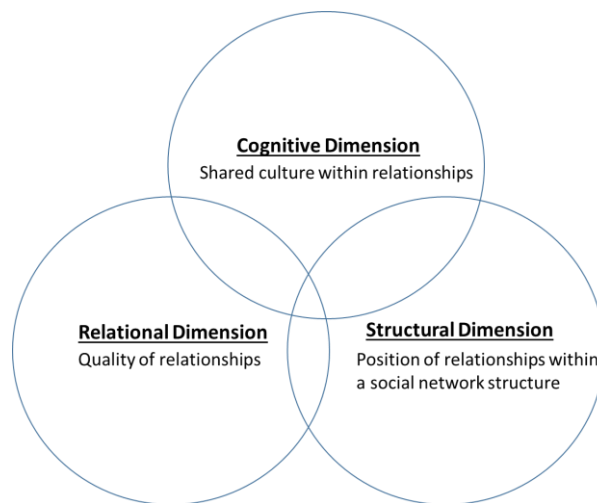


Figure 1: The Three Dimensions of Social Capital

Source: Adapted from Nahapiet and Ghoshal (1998)

Their concept of social capital is widely regarded as a factual depiction of its distinct facets, respectively dimensions (Leana and Van Buren, 1999; Adler and Kwon, 2002; Oh, Chung and Labianca, 2004; Inkpen and Tsang, 2005; Arregle *et al.*, 2007; Villena, Revilla and Choi, 2011; Kwon and Adler, 2014; Pillai *et al.*, 2017).

Nahapiet and Ghoshal (1998) define social capital as “*the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit*” (Nahapiet and Ghoshal, 1998, p. 243). Their definition thereby further extended the earlier work of Granovetter (1985) who regarded social capital as to be mainly concerned with the embeddedness of actors in their environment and how they are affected by it.



The following section will therefore differentiate the individual social capital dimensions as conceptualised by Nahapiet and Ghoshal (1998). Furthermore, it will review the variety of individual SC generative conduits and delineate the effects that are stemming from these.

This distinct categorisation is meant to enable and support the analysis of the causal relationships between the individual SC dimensions in triadic logistics service relationships as emphasised by (Hartmann and Herb, 2014) in the context of triadic port community relationship settings, as detailed in chapter 2.5.

The examined logistics service relationships of Hartmann and Herb (2014) are an extension of previous research on buyer-supplier relationships regarding their performance which have been analysed through the lens of social capital. Subsequently, a review of the extant social capital research of dyadic and triadic buyer-supplier-service provider relationships appears warranted. Furthermore, port communities, particularly trust port communities, can be considered as constructs resembling an organisation with several sub-units with their individual aims and objectives (Vieira, Kliemann Neto and Amaral, 2014) which highlights organisational social capital research as beneficial for exploring the phenomenon of port community performance and its antecedents. While port service providers and cargo owners are only stakeholders and not “members” of the organisation their activities are similarly impacted by the performance of each other and the port community as a whole (Panayides and Song, 2009). Even though the following effects were not observed in regard of the relationship between social capital and port community members (port authority, port service provider and cargo owners) facets of social capital positively influencing the performance of this triad, respectively the resulting port community performance, have been repeatedly mentioned in contemporary research (Demirbas, Flint and Bennett, 2014; Seo, Dinwoodie and Roe, 2016).

### **3.2 Defining Social Capital**

First and foremost, social capital theory posits those relationships (networks of relationships) represent a valuable resource for the conduct of social exchange and its results (Nahapiet and Ghoshal, 1998). Despite the consensus on the relevance of relationships for the theory itself, there are several competing definitions of social capital, highlighting differing perspectives and approaches to its application and nature.

The differences on the taken approaches or the view taken on social capital by the researcher generally depends on whether the piece of research is focused: (1) relations maintained with other actors outside of the focal organisation, (2) relations between actors within a collective or group, or (3) both. As mentioned in the review of social capital theory development, these are often referred to as bonding (internal) or bridging (external) ties. Bonding social capital is depicted by facets like trust, solidarity, shared identity and social norms whereas bridging social capital is more characterised by the network structure of relationships with external actors (Burt, 1992). These relationships are often understood as lower in trust and shared identity as interaction frequency is lower and neither party develops strong bonds or an in-depth understanding of each other's norms and values (Lee, 2009). A selection of social capital definitions is displayed in Table 6, distinguishing the views of authors on the subject.

*Table 6: Selection of prevalent definitions of Social Capital*

*Source: Adler and Kwon (2002, p.20)*

<b>View</b>	<b>Author(s)</b>	<b>Definitions of Social Capital</b>
<b>External</b>	Bourdieu	"the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (1985: 248).
	Burt	"friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital" (1992: 9).
	Portes	"the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (1998: 6).
<b>Internal</b>	Coleman	"Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure" (1990: 302).
	Fukuyama	"the ability of people to work together for common purposes in groups and organizations" (1995: 10).
	Putman	"features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (1995: 67).
<b>Both</b>	Loury	"naturally occurring social relationships among persons which promote or assist the acquisition of skills and traits valued in the marketplace... an asset which may be as significant as financial bequests in accounting for the maintenance of inequality in our society" (1992: 100).
	Nahapiet & Ghoshal	"the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network" (1998: 243).
	Adler & Kwon	"the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence and solidarity it makes available to the actor" (2002: 23).

With port communities being comprised of multiple sub-units which, in turn, affect the performance of the whole community, an incorporation of internal as well as external ties seems appropriate. A prevalent definition which acknowledges the internal and external facets of social capital is provided by Nahapiet and Ghoshal (1998, p. 243), they define the concept as:

*"The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network".*

The authors further differentiate three SC dimensions: structural, relational, and cognitive. Structural social capital (SSC) refers to network ties and basic connections to other individuals or organisations. Relational social capital (RSC) commonly refers to the strength of relationships (i.e., trust and respect). Cognitive social capital (CSC) encompasses shared visions, values, and beliefs (Nahapiet and Ghoshal, 1998).

Nahapiet and Ghoshal's (1998) definition of social capital appears relevant for this study as it incorporates the cognitive dimension. Most other social capital definitions, on the other hand, tend to neglect the cognitive dimension (Bourdieu, 1985; Coleman 1988; Putman, 1995). Previous research shows that features of the cognitive dimension (such as shared values) are important for achieving the effectiveness of organisations, respectively ports (Brooks, Schellinck and Pallis, 2011; Demirbas, Flint and Bennett, 2014). Furthermore, the authors' three three-dimensional model of social capital has been extensively applied to organisational research and is widely considered an effective lens for analysing relationship settings (Adler and Kwon, 2002; Inkpen and Tsang, 2005; Lee, 2009). The following sections review the individual dimensions of social capital proposed by Nahapiet and Ghoshal (1998), and discuss their application to research on the macro, meso or micro level.

### **3.3 Social Capital Dimensions**

Included in the social capital definition of Nahapiet and Ghoshal (1998), as previously mentioned, is the distinction of the three conceptualised social capital dimensions. These dimensions reflect the cognitive, relational, and structural properties of social capital.

Their research on the impact of social capital on the creation of intellectual capital further answered the call of Putnam (1995) for a clearer delineation of social capital into distinct dimensions. The cognitive dimension entails and distinguishes the elements of social capital that provide “shared representations, interpretations, and systems of meaning among parties” (Nahapiet and Ghoshal, 1998, p. 244). The relational dimension delineates the various multi-faceted social relationships between individuals and the nature of these with regard to trust, expectations, obligations, reciprocity, respect, and friendship (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Villena, Revilla and Choi, 2011). The structural dimension refers to the existing social network structures, the various links that individuals or collective entities possess which are mediated by their network position (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Oh, Chung and Labianca, 2004).

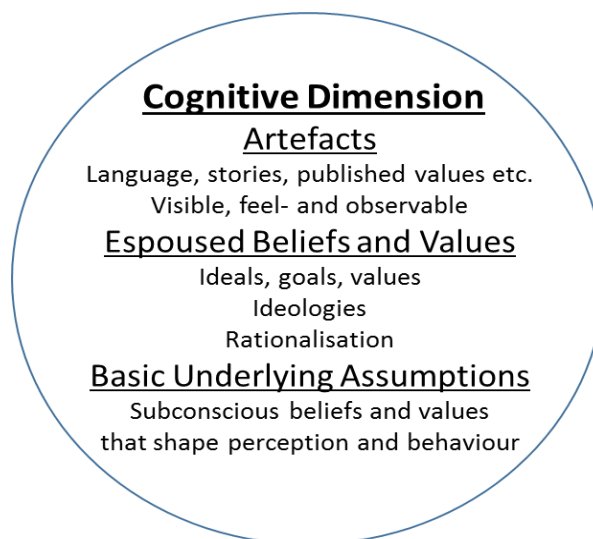
### **3.3.1 Cognitive Dimension**

Touched upon in the earlier overview of the separate dimensions, the cognitive dimension represents systems of shared meanings and shared narratives that exist between individuals, groups, organisations or nations (Fukuyama, 1995; Nahapiet and Ghoshal, 1998; Leana and Van Buren, 1999). Nahapiet and Ghoshal (1998), in their first conceptualisation of the cognitive dimension, did not use the terminology of “shared culture”. Inkpen and Tsang (2005), though, referring to the research of Nahapiet and Ghoshal (1998), use the term and operationalise it as the degree to which internalised norms, mediate the individual’s behaviour and create a uniform set of behavioural standards. Their conceptualisation of shared culture is similar to Zaheer, Gulati and Nohria's (2000, p. 205) formulation of tie modality as “the set of institutionalised rules and norms that govern appropriate behaviour in the network. Considering the interdependency as well as close proximity of port community members in trust ports the existence of informal agreements amongst PCMs can be expected to influence port community performance and relationship configurations themselves.

While these are sometimes spelled out in formal contracts, they are often informal agreements evolving within the dyad and the network. Similarly, Villena, Revilla and Choi (2011) use the terminology of “shared culture” and refer to it as a key dimension of the cognitive SC dimension. While both perceive shared culture as the degree of behavioural norms governing relationships, Inkpen and Tsang (2005) do not refer to it as a key facet of cognitive SC in their publication. They further refer to shared goals as “the

degree to which network members share a common understanding and approach to the achievement of network tasks and outcomes” (Inkpen and Tsang, 2005, p. 153) which transferred to port communities represents congruence of understanding regarding the accomplishment of port community activities as vessel unloading, berthing or other supporting activities. Lee (2009), in the review of social capital research in the field of business management, takes a narrower perspective regarding the aspects of the cognitive social capital dimension.

While Lee (2009) shares the sentiment of cognitive SC being an essential factor for business effectiveness, in contrast to the recent reviews of Kwon and Adler (2014) and Pillai et al. (2017) the author mainly refers to surface level “artefacts” of the cognitive dimension. These explicit and implicit sets of norms, beliefs and values that govern group behaviour as well as the outsider’s observable “artefacts” like language and narratives are represented in Figure 2.



*Figure 2: Cognitive Dimension of Social Capital*

*Source: Adapted from Nahapiet and Ghoshal (1998) and Schein (2010)*

Depending on the level of analysis the definition of culture varies based on the facets that are incorporated in its conceptualisation (Schein, 2010). Notable is that Zaheer, Gulati and Nohria (2000) include the dyad regarding the evolvement of an implicit shared understanding which Schein (2010) refers to as part of the basic underlying assumptions. The generation of cognitive social capital in such a dyadic relational setting entails that both sides increasingly share aspects depicted by the organisational culture model of Schein (2010). On an organisational meso or macro level, individuals can accrue

cognitive social capital among group or organisational members through the adaption of their respective cultures (Leana and Van Buren, 1999). Within the port community this can be differentiated into relationships between actors, organisations, and the wider port community. The extent to which cognitive social capital at any of these three levels influences port community performance through its influence on extant relationships at the meso-level is limited (Langenus and Dooms, 2015). Leana and Van Buren (1999), in their analysis of organisational social capital, refer to this as associability “the willingness and the ability of individuals to define collective goals that are then enacted collectively” (Leana and Van Buren, 1999, p. 542). Associability, in their study, represents the degree of accumulated cognitive social capital on the organisational meso or macro level. It further entails the ability of individuals to socially interact and to subdue their own ambitions to the aspirations of the group (Leana and Van Buren, 1999). While not being considered in most social capital research (Villena, Revilla and Choi, 2011; Matthews and Marzec, 2012; Kwon and Adler, 2014; Pillai *et al.*, 2017), the subconscious basic underlying assumptions are an essential part of the cognitive dimension.

The cognitive dimension disregarding its level of analysis represents the degree of shared ideologies, common goals, norms, values, ambitions, beliefs, aspirations and particular patterns of communication (Tsai and Ghoshal, 1998; Villena, Revilla and Choi, 2011; Kwon and Adler, 2014). Even though the cognitive dimension in its entirety can be perceived as shared culture, the following review of potential benefits stemming from the accruelement of cognitive SC will delineate these based on its individual facets.

Nahapiet and Ghoshal (1998) reviewed the effects of social capital on the creation of intellectual capital. They found that shared patterns of communication and behavioural codes are facilitating information exchange on an intra- and inter-organisational level (Nahapiet and Ghoshal, 1998). While investigating these effects on an organisational level, the interaction of individuals most commonly remains to be a dyadic setting (Edelman *et al.*, 2004) which would only offer a limited depiction of a port community’s requirements regarding the interactions of port community members as those rarely are of a dyadic nature (Bucak, Basaran and Esmer, 2020). Furthermore, shared aspects positively mediate the conversational processes among partners based on aligned perceptions (Nahapiet and Ghoshal, 1998). Similarly, Kim, Hur and Schoenherr (2015) provide evidence that shared verbal communication patterns are critical for the effective functioning of business relationships and through extension port community

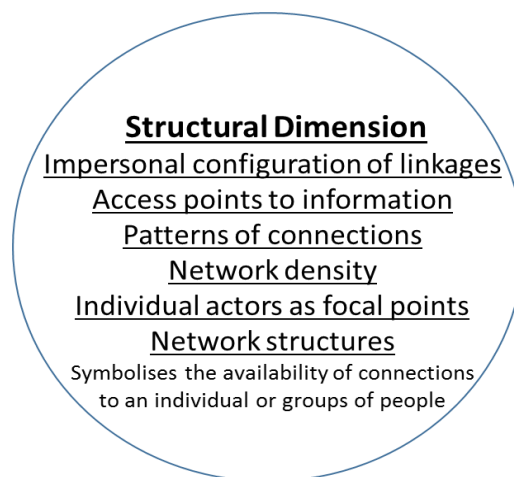
relationships, as they can facilitate efficient information exchange which ranks amongst one of the key performance indicators of port performance (Vaggelas, 2019). Nahapiet and Ghoshal (1998), also reviewing the effects of shared narratives in their research, found that these can support the quality of communication and increase the willingness of individuals to interact with each other. Thereby, similar to the effects of shared language, shared narratives facilitate the exchange of information between actors, respectively their individual groups (Nahapiet and Ghoshal, 1998).

Shared rules and norms existing within groups or organisations limit undesirable behaviour of individuals and function as a conduit for collective action (Coleman, 1988). In port communities, rules and norms can provide a sense of harmony regarding the interests of all parties, respectively the organisations they are conducting business for (Zaheer, Gulati and Nohria, 2000). They also decrease the chance for opportunistic behaviour (Wilkins and Ouchi, 1983) which has been highlighted as a major impediment of cooperation or collaboration in port communities resulting in lower performance outcomes (Demirbas, Flint and Bennett, 2014). This can further facilitate the development of trust (Lawson, Tyler and Cousins, 2008). Similarly, shared values can function as points of reference and provide stability (Schein, 2010). Developing and following shared values also leads to partners being less prone to experience stress and fear regarding potential repercussions of undesirable task outcomes (Alvesson, 2012).

Villena, Revilla and Choi (2011) find that shared goals allow for more altruistic behaviour among partners as parties strive to accomplish the collective's goals rather than pursuing their own individual agenda. Additionally, actors sharing aligned goals display a higher willingness to invest time and effort to achieve these goals (Chow and Chan, 2008; Maurer, Bartsch and Ebers, 2011; Pesämaa *et al.*, 2013). Partners that are committed to a shared goal are more likely to actually achieve said goal because the perception of the relationship is synergetic and, furthermore, the likelihood of conflicts is reduced. (Tsai and Ghoshal, 1998; Krause, Handfield and Tyler, 2007). Furthermore, Jap and Anderson (2003), likewise, find that established congruent goals positively affect the benevolence of individuals regarding their assigned tasks. Cognitive social capital enables the formation of common understanding among business partners and helps to coordinate exchanges and the sharing of individual thought processes (De Carolis and Saporito, 2006). Thus, the literature generally by extension supports the notion that CSC has a range of benefits for port community relationships and their performance.

### 3.3.2 Structural Dimension

In contrast to the cognitive dimension, mainly embodying intangible facets that relate to shared culture (Nahapiet and Ghoshal, 1998), the structural dimension depicts the network position of an individual, expressed through the multitude of network links one has with other actors in the network and their connections (Burt, 1997). Granovetter (1992), in the discussion of relational and structural embeddedness, offers a similar definition and distinguishes the structural dimensions as to be concerned with the impersonal configuration of network linkages between individuals or social units. Additional facets that describe the degree of structural embeddedness have been outlined as the availability of network size, centrality of network actors and network constraints (Scott, 2012). Network centrality depicts the degree of network cohesion (Autry and Griffis, 2008). A high degree of network centrality can be measured and described by the extent to which an individual is connected to other actors of said network (Tsai, 2001). Network constraints refer to the degree of existing structural holes, displaying an unavailability of desirable connections that cannot be created directly by the same individual (Burt, 2009).



*Figure 3: Structural Dimension of Social Capital*

*Source: Adapted from Nahapiet and Ghoshal (1998)*

The existence of structural holes further indicates the potential for brokerage activities of network members that connect otherwise unconnected actors within the wider network structure (Oh, Labianca and Chung, 2006) similar to PSPs or COs granting preferential access to their network to port authorities for business development opportunities. Additional distinctions exist regarding the hierarchical structure of networks and their individual configuration (Gargiulo and Benassi, 2000; Capaldo, 2007).



The majority of studies with particular focus on the structural dimension appear to be based on the early work of Granovetter (1973). Analysis of bonding networks is centred on the strength of existing ties, commonly measured based on the frequency of interaction, proximity of network linkages and interaction history (Gargiulo and Benassi, 2000; Adler and Kwon, 2002). In the case of bridging networks the focus lies rather on the quantity of available network linkages displaying a weaker tie strength (Walker, Kogut and Shan, 1997). Commonly, there is no distinction regarding the availability or the actual utilisation of network connections (Adler and Kwon, 2002). The degree to which these might be willing to partake in resource exchange, substitution or generation is dependent on the tie content, the aspects defining the specific relationship (Autry and Griffis, 2008). As discussed in the previous section, the PA being granted access to COs or PSPs network of contacts initially only represents an increase of opportunities for engagement whereas resource mobilisation and subsequent performance gains for the port community are expected to stem from relational and cognitive social capital. The structural dimension therefore acts as a display of possibilities regarding the vastness and configuration of individual networks (Inkpen and Tsang, 2005; Matthews and Marzec, 2012; Kwon and Adler, 2014).

Adler and Kwon (2002, 2014), in both their works and developed framework, differentiate opportunity, motivation, and ability whereas network linkages provide “opportunities” for actors to engage in social relationships. In line with their view of network linkages solely as “opportunities” of engagement they question Burt's (2000) perception of tie content as merely being a contingent factor influencing outcomes depending on social network structure. Based on Burt's argument (2000) the existence of network links alone can yield substantial SC benefits disregarding the quality of the relationship. Furthermore, Adler and Kwon (2002) distinguish the understanding of the term “network” based on the focus researchers take regarding the nature of social ties. They argue that researchers focussing on internal ties mainly concern themselves with informal and face-to-face interaction within given groups or societies (Adler and Kwon, 2002) whereas this research exploring SCs influence on PCPs explored formal ties between acts as well as informal ones and their subsequent influence.

Uzzi (1997), among others (Dyer and Singh, 1998; Zheng, 2010; Li, Ye and Sheu, 2014), advocates that developing dense networks with key-suppliers can greatly benefit relationship performance due to improved information exchange practices. Information

exchange itself, in the context of buyer-supplier relationships, has predominantly been defined as “the degree to which each party discloses information which may facilitate the other party’s activities” (Heide and Miner, 1992, p. 275). Dense networks, according to Burt (1997), can lead to shortened communication channels and enable members of this networks to access information in a timelier manner. Given the close network proximity of PA and PCMs located in their respective port communities, these actors based on previous findings by social capital researchers could expect increased communication efficiency and responsiveness. Thereby, structural SC can also decrease the reaction time of PCMs linked to a particular dyad while operating in the wider port community. Inkpen and Tsang (2005), found that the formation of informal social ties among partners can increase the willingness of partners to share knowledge.

Tsai and Ghoshal's (1998) earlier work showed similar findings and is supported by the more recent works of Lawson et al. (2009) and Maurer, Bartsch and Ebers (2011) who came to similar conclusions regarding the positive impact that structural social capital can have on information and knowledge exchange.

Dense PCM networks are subsequently expected to commonly display a high degree of mutual dependence and partner reliance which links structural ties closely with the relational and cognitive SC dimensions (Nahapiet and Ghoshal, 1998; Lawson, Tyler and Cousins, 2008). Consequently, a strong reliance on a partner likely transforms arms-length relationships into key strategic partnerships (Cousins *et al.*, 2006). Whereas dense networks display the above-mentioned properties, sparse networks are mainly driven by pricing points of the individual partners (Cousins and Lawson, 2007). Repeated interaction leading to structural embeddedness (dense networks) facilitates the adaptability of partners within relationship settings (Mukherji and Francis, 2008). These adaptive processes thereby potentially increase the effectiveness of both parties as desired outcomes are known to each other and the offered services are expected to reflect the needs voiced by either side of the relationship. This increasing familiarity through higher frequency of interaction is linked to structural SC facilitating the development of cognitive SC, particularly among PCMs in close physical proximity or more so when located on the same quay.

While having been considered as part of the structural dimension of social capital, its effects are strongly linked to the other two dimensions (Adler and Kwon 2002; Roden

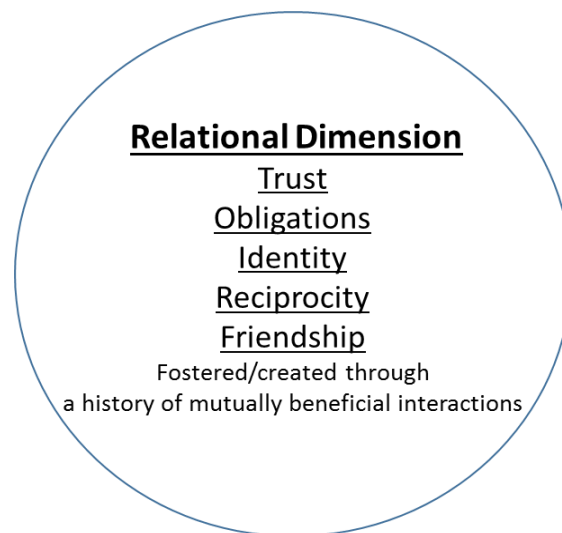
and Lawson 2014; Kim , Hur and Schoenherr 2015). Frequent interaction among individuals commonly occurs when parties desire and need something from the relationship. A large degree of buyer-supplier relationships, especially in the logistics industry, are considered to be of an adversarial nature (Golicic and Mentzer, 2011) as they are lacking in trust and shared goals. Nonetheless, continuous interaction can of PSPs and COs or Pas can generate relational social capital (trust) as partners arrive at an understanding of what to expect from each other (Capaldo and Giannoccaro 2015a).

Similarly, the way actors cast themselves during these interactions develops their identity which is considered to be an integral aspect of the relational SC dimension (Nahapiet and Ghoshal, 1998; Carey and Lawson, 2011). Cognitive social capital (shared culture) is hard to be built by actors that conduct business on an arms-length relational basis (Moran, 2005; Villena, Revilla and Choi, 2011). Hence, in these potential circumstances, individuals that frequently interact with each other are expected to learn more about the beliefs and values of each other (Saffold, 1988). While actors might not begin to adopt beliefs or values of each other (especially in relationships of an adversarial nature) they can come to the realisation that they already share a set of beliefs and values (Moran, 2005; Elfenbein and Zenger, 2013).

Considering the relevance which is placed on frequency of interaction and the nature of network configurations of relationships i.e., proximity of actors, port communities due to their nature of operating in the specified geographic region (Demirbas, Flint and Bennett, 2014) the port environment or its catchment area, structural SC can be mobilised to create opportunities for business development, enhancement of information exchange activities (Maurer, Bartsch and Ebers, 2011; Li, Ye and Sheu, 2014) and the facilitation of relational or cognitive SC accrual (Capaldo and Giannocarro 2015a). Studies show that the structural characteristics of larger networks, strong ties and limited structural holes all facilitate the performance outcomes of the individual organisations through their representatives (Adler and Kwon, 2002; Moran, 2005; Autry and Griffis, 2008; Villena, Revilla and Choi, 2011).

### 3.3.3 Relational Dimension

The relational social capital dimension depicts the quality (strength) of relationships that individuals within a social network create through engagement and continuous interaction (Nahapiet and Ghoshal, 1998). Granovetter (1985), Nahapiet and Ghoshal (1998) as well as Moran (2005) consider degrees of trust, identity, obligations, reciprocity, and friendship as depictions of the relational social capital dimension Figure 4.



*Figure 4: Relational Dimension of Social Capital*

*Source: Adapted from Nahapiet and Ghoshal (1998)*

In line with Coleman (1988), the conceptualisation of these facets is not that they equate the social capital as perceived by Fukuyama (1995) or Lee (2009). Instead, they represent the degree of accumulated relational SC. Nonetheless, having distinguished the individual dimensions, Putnam et al.'s (1994) view of trust being a source of social capital has proven its merit, too. Even though trust should not be considered to breed trust, it has been identified as a conduit for the generation of other facets of social capital (Villena, Revilla and Choi, 2011; Bartsch, Ebers and Maurer, 2013; Eklinder-Frick, Eriksson and Hallén, 2014). Therefore, the view of trust (respectively any element of the SC dimensions) as a source for the generation of SC and as a representation of SC, is not as contradictory as concluded by Adler and Kwon (2002).

This conceptualisation strikes close to the criticism of Portes (1998) regarding Coleman's (1988) self-facilitating circularity of SC sources and the effects stemming from these. Nonetheless, the proposed view of facets like trust, obligations, and respect, representing the degree of existing relational SC as well as being a potential source for the generation of other SC elements, accounts for these differences.

These facets of the relational dimension across the works of Nahapiet and Ghoshal (1998), Adler and Kwon (2002), and Lee (2009), back to the early contributions of Granovetter (1973), are commonly referred to as “relational norms”. Lee (2009), though, in the review of relational SC quoting Adler and Kwon (2002) distorts the nature of these norms. The author reinterprets the SC definition of Adler and Kwon (2002) and projects these norms as depicting social capital as a whole (Lee, 2009). The distinction between norms associated with the relational and cognitive SC dimension depending on the level of analysis and the history of relationships can be considerably blurred (Nahapiet and Ghoshal, 1998; Portes, 1998).

Trust, itself, is established through repeated, mutually beneficial, perceived interactions and is widely regarded as the most researched and distinguished element of the relational SC dimension (Coleman, 1988; Leana and Van Buren, 1999; Adler and Kwon, 2002; Inkpen and Tsang, 2005; Villena, Revilla and Choi, 2011). As indicated in the previous section, the proximity of PCMs within the port environment allows for significantly higher opportunities of interaction and the subsequent development of relational SC. Furthermore, trust also stems from the perception of the other party’s goodwill (Adler and Kwon, 2002), degrees of expressed competence (Krause, Handfield and Tyler, 2007), known history of the other party’s interactions with their partners (Holma, 2012), and the perception of their shared cultural ideals and value (Dyer and Singh, 1998). Thus, trust into another party or individual can exist prior to the actual interaction (Capaldo & Giannoccaro 2015b). The degree of existing relational SC is also referred to “relational embeddedness” which directly contrasts the terminology of “structural embeddedness” that is applied to describe the structural SC dimensions. Relational social capital depicts the strength, quality or durability of relationships that have been built over the process of repeated social interaction (Day *et al.*, 2013). Adler and Kwon (2002) refer to these relational aspects as “tie content” as they describe the nature of existing network ties between individual actors. In their opportunity, motivation, and ability framework of social capital sources, they highlight the strong links of the relational and structural dimension (Adler and Kwon, 2002). The sole existence of ties with others only presents an opportunity to engage in resource exchange but the tie content represents the degree of motivation of actors to mobilise the resources being located in these ties (Adler and Kwon, 2002).

As trust, is most commonly considered the key component depicting the relational SC dimension, the following section aims to delineate the potential benefits stemming from accrued trust as well as to distinguish the various facets of trust itself.

Uzzi (1997), Nahapiet and Ghoshal (1998), as well as more recently Day et al. (2013), find that trust, similar to shared vision, can facilitate joint efforts and enable actors to accomplish tasks beyond what would be possible in the absence of trust. Furthermore, Tsai and Ghoshal (1998) find that increasing levels of trust enhance the effectiveness of resource exchange. Additionally, Zaheer et al. (2000), Fazli et al. (2013) and Autry et al. (2014) identify trust as decreasing the volatility of business relationships, particularly during times of market uncertainty and disruptive change. Granovetter (1973) further find trust acting as an effective mediator regarding behavioural patterns of resource exchange partners while also reducing the risk of opportunistic behaviour. Kim, Hur and Schoenherr (2015) find trusting partners in business relationships allows for the non-reciprocal transfer of resources as the individual actor does not expect an immediate equal exchange thereby allowing for initially altruistic interactions. Amenability of PAs to PSPs or COs requirements as well as PSPs sharing equipment or resources can be facilitated by the development of trust in existing relationship partners (Demirbas, Flint and Bennett, 2014) Trust into partners, groups or organisations facilitates the commitment of individuals that may transcend contractual agreements and can provide sustainable competitive advantages for the focal firm (Kim, Hur and Schoenherr, 2015)

Eklinder-Frick, Eriksson and Hallén (2014) further provide evidence that trust in the capabilities of others during inter-firm collaboration projects increases the effectiveness and likelihood of achieving desired project outcomes. Business relationships displaying high degrees of trust foster the perception of obligation and attachment as actors perceive to be granted strong support from their partners (Thau *et al.*, 2007). Thus, potentially leading to improved inter-firm experiences which, in turn, can increase buyer and supplier performance (Avery, Swafford and Prater, 2014). Also, high levels of trust can help bridge hierarchical and interorganisational divides as information and ideas can be exchanged more freely compared to a low-trust environment (Willem and Buelens, 2007).

High levels of developed trust have been found to positively mediate the development of shared vision, norms, and values which further enhance the probability of achieving the envisioned goals (Nahapiet and Ghoshal, 1998; Leana and Van Buren, 1999; Kwon and

Adler, 2014). This apparent causal relationship between trust and the development of “shared culture” and the existence of a reverse causality where “shared culture” is considered an enabler of trust creation may very well be one of the potential endogeneity root causes of social capital research (Kwon and Adler, 2014; Portes, 2014). Did PCMs develop their degrees of extended because they are sharing similar values or goals for the port community or did the deliberate sharing of beliefs and vision occur because existing levels of trust within the port community enables it? Future research, should therefore pay particularly careful attention to endogeneity, thereby increasing the validity of social capital research’s findings (Kwon and Adler, 2014).

Leana and Van Buren (1999), who consider trust as one of the two main components of organisational social capital, further segmented trust into several individual aspects. Fragile trust is based on the perception of immediate rewards that adequately reflect the required investment (Leana and Van Buren, 1999). This form of trust is commonly present in arms-length business relationships that are not focussed on long-term commitment and mutual development (Wagner and Krause, 2009; Day *et al.*, 2013). Rousseau (1995) refers to this form of relationship as “transacting” as it is mostly governed by formal contracts and requires derived benefits to be perceived as equal. Contrasting this aspect of trust, Ring and Van de Ven (1992) introduced the concept of “resilient trust”. “Resilient trust” is grounded on a history of beneficial interaction between various individuals and is strongly associated with “relational embeddedness” (Ring and Van de Ven, 1992). Fitting the terminology of the relational SC dimension, this form of trust has also been labelled “relational trust” by Kramer and Tyler (1995), and Scully and Preuss (1996). This form of trust can endure non-reciprocal relationship outcomes and does not require immediate rewards for extended services (Ring and Van de Ven, 1992; Kramer and Tyler, 1995). Furthermore, Leana and Van Buren (1999) group the previously mentioned forms of trust as “dyadic” because it is based on the experience and factual knowledge of transactions that exists between two parties. Opposing this perspective, they label forms of trust that are based on beliefs, expectations, or reputation as “generalized” (Leana and Van Buren, 1999). Thereby, they incorporate the cognitive SC dimension, respectively its aspects, which can generate trust into their organisational social capital model (Leana and Van Buren, 1999).

While Leana and Van Buren (1999) propose a model that conceptualises social capital, its generators and effects on an organisational level, an incorporation port community relationship configurations appears to have its merits as PA, COs and PSPs are part of a wider organisation as well as the port community they operate within, ideally they act on behalf of their organisation and conduct their business in alignment with organisational goals, values, and beliefs in addition to adhering to port community wide shared standards or values (Villena, Revilla and Choi, 2011; Holma, 2012; Blonska *et al.*, 2013).

### **3.4 Dark Side of Social Capital**

The existing body of social capital research puts a comparably strong emphasis on benefits that can be derived from accumulating social capital (Adler and Kwon, 2002; Matthews and Marzec, 2012; Pillai *et al.*, 2017). These potential benefits have been observed in a large variety of different contexts ranging from dyadic relationships across industry sectors and countries to benefits of groups, organisations or whole nations (Coleman, 1988; Fukuyama, 1995; Leana and Van Buren, 1999; Kwon and Adler, 2014; Portes, 2014). The erosion of social capital in business relationships, its causes, and the potential negative effects of excess SC, is currently a developing field of research (Matthews and Marzec, 2012; Roden and Lawson, 2014; Pillai *et al.*, 2017).

While there is a wide array of contributions to SCT that investigates the occurrence of these negative effects, the majority of research regarding SC effects continues to focus on its derivable benefits (Matthews and Marzec, 2012; Kwon and Adler, 2014). The following section will review negative SC effects recurring in the extant literature. These identified negative effects will be further delineated by their attributability to the three distinguished SC dimensions. The interdependence of the dimensions (Adler and Kwon, 2002; Villena, Revilla and Choi, 2011; Yan and Dooley, 2014) and an existing neglect to attribute effects to specific facets of each dimension (Villena, Revilla and Choi, 2011; Kwon and Adler, 2014) are limitations of the following review. Furthermore, as highlighted by Matthews and Marzec (2012) as well as Kwon and Adler (2014), a disproportionately large amount of SC research has focused on effects that are attributable to the relational dimension.



### 3.4.1 Cognitive Social Capital

Accumulated cognitive SC has been proven to provide a multitude of benefits regarding the effectiveness of business relationships (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Inkpen and Tsang, 2005; Hartmann and Herb, 2015). Villena, Revilla and Choi (2011), among others (Uzzi, 1997; Anderson and Jap, 2005; Pillai *et al.*, 2017), propose that there are certain thresholds after which generating social capital yields no additional benefits but, rather, has negative effects. Increasing degrees of shared culture can severely limit the variety of approaches that are taken to solve problems (Uzzi, 1997). As certain behavioural and problem solving patterns become established, deviations from these are less welcome and accepted (Schein, 2010). Decreasing acceptance can result in subpar and elongated decision-making processes as well as losses of relationship effectiveness (Uzzi, 1997; Villena, Revilla and Choi, 2011; Pillai *et al.*, 2017). This is considered of particular relevance in regards of new port community members unfamiliar with existing processes and a lack of understanding of “how things are done” whereas existing PCMs can experience difficulties deviating from established practices, improving their own processes while decreasing understanding of the same by other PCMs.

Autry and Griffis (2008), in their research, found that aligned routines and shared process approaches can discourage creativity within business relationships. Consequently, this can harm the effectiveness of the relationship as the application of outdated models to a changing business environment limits the likelihood of its suitability (Autry and Griffis, 2008; Zhou *et al.*, 2014). Furthermore, congruent goals and aligned vision were found to reduce the criticality with which proposed projects and pitched ideas are evaluated (Autry and Griffis, 2008). Villena *et al.* (2011) and Pillai *et al.* (2017) arrive at similar conclusions, highlighting that harmony and commitment stemming from shared goals or beliefs fosters conformity which decreases criticality. PCMs no longer questioning each other’s conduct as long as conformity with shared goals is projected outwardly can increase opportunism risk. Jap and Anderson (2003) also express that the perception of shared values and vision between business partners reduces the likelihood of objective evaluation and makes way for subjective homogenous behaviour. In case of port community wide shared vision, PCMs considered in alignment with the former can be considered as less likely to be objectively assessed regarding their contributions to the port itself.

Additionally they conclude that engagement in knowledge sharing activities might not yield additional benefits when parties perceive this behaviour as part of their shared vision (Anderson and Jap, 2005). While Villena, Revilla and Choi (2011) found cognitive SC to have a positive linear relationship with buyer performance it also facilitates the generation of relational SC which was proven to reduce performance outcomes after certain SC thresholds. These results, though, might be accountable to the nature of the investigated relationships (Villena, Revilla and Choi, 2011). Alghababsheh and Galleary (2020) further highlight that perspectives from both sides of the dyad or even the wider dyad could significantly add to the understanding on how the occurrence of dark side effects of SC is mediated by the nature of the relationship or wider network setting. In the port community, COs are dependant on multiple service providers within the port for the processes of loading or unloading, storage, maintenance or value adding processes. Developing excessive SC in these relationship settings could have detrimental effects on the COs own performance which in turn influences the wider port community.

Another aspect where developed relationships that display high amounts of cognitive SC can harm effectiveness is elaborated by Brito, Brito and Hashiba (2014) who discuss outcomes of shared problem solving approaches with strategic suppliers (Brito, Brito and Hashiba, 2014). They conclude that long-term commitment to shared problem solving can result in suppliers taking advantage of buying companies. The shared vision regarding the importance of problem solving can lead to disproportionate investments from one member of the dyad. In the port community setting, investments made by PSPs or COs are expected to be influenced by the strategic vision they share with the port authority for the ports ongoing development. However, after making such investments, discontinuing the relationship without significant relocation costs is unlikely to be possible (Demirbas, Flint and Bennett, 2014) due to lock-in effects.

In the context of the economic crisis, Krause and Ellram (2014) investigated buyer-supplier relationships regarding their adaptability and responsiveness to economic turmoil. While congruent goals and shared principles were found to provide stability in volatile markets they also limit the adaptability of relationship foci (Cropanzano and Mitchell, 2005; Krause and Ellram, 2014). Relationships that were not driven by cost effectiveness priorities were severely damaged when buyers confronted suppliers with hard price negotiations (Krause and Ellram, 2014). Given the significant price fluctuations and ensuing price negotiations shipping agents, and service providers in

general were exposed following the decline of the oil price and the effect said decline had on offshore oil supporting activities, this can be considered of particular importance to PSPs and COs within port communities. While relationship partners already sharing similar visions regarding cost effectiveness experienced an enhanced adaptability during the economic crisis, relationships with a focus on innovation saw their adaptability significantly reduced. Therefore, negative effects are not only linked to the level of accumulated cognitive SC but, further, to the relationship setting they are developed in as well as the context in which these relationships exist.

In conclusion, social capital theory (SCT) research regarding the cognitive SC dimension suggests that its potential negative effects are closely linked to the relational dimension (Krause, Handfield and Tyler, 2007; Villena, Revilla and Choi, 2011; Roden and Lawson, 2014). Cognitive SC in BSRs, besides some exceptions, was found to mediate the severity of relational SC effects. These findings regarding the negative effects clearly distinguish organisational SCT from the buyer-supplier relationship SCT. Pillai et al. (2017), in their recent review of negative SC effects occurring in organisational settings, emphasise that most negative effects stem from the cognitive and relational dimension. As organisations, organisational groups and employees commonly display a higher degree of social interaction within their setting, an alignment of individual and group or corporate culture can be considered more likely (Leana and Van Buren, 1999; Kotter, 2008; Alvesson, 2012).

### **3.4.2 Structural Social Capital**

Structural social capital, in line with Adler and Kwon's (2002) argumentation, represents the opportunity for building social connections depicted by network configuration, network position, and network density. Advantages as well as disadvantages of structural SC, therefore, are linked to the “opportunities” that individuals provide or prohibit by engaging in a relationship (Coleman, 1988; Nahapiet and Ghoshal, 1998).

Koka and Prescott (2002), in their research of strategic alliances, find that dense networks, where actors share a significant amount of identical network connections, reduce the perceived value of information exchange. As a high degree of relationship members share the same sources and have access to the same information, repeated exchange of redundant information does not yield any additional value but increases information processing and selection costs (Koka and Prescott, 2002). While dense networks can

provide access to timely information and initially reduce transaction costs, continued investments experience diminishing returns after a certain point (Cheng and Fu, 2013; Li, Ye and Sheu, 2014). Additionally, the early work of Grover, Lim and Ayyagari (2006) highlights that in order to benefit from dense networks, recipients need to possess sufficient information processing capacities to make use of the various information streams. Consequently, higher capacity requirements might be met by investment into further personnel which increases relationship commitment and increases the risk of structural and relational lock-ins (Grover, Lim and Ayyagari, 2006; Autry and Griffis, 2008; Villena, Revilla and Choi, 2011). Furthermore, refraining from investments that improve workload distribution were found to increase levels of stress thereby reducing the effectiveness of the relationship itself (Grover, Lim and Ayyagari, 2006).

Villena, Revilla and Choi (2011) stress that the sole access to a large set of information (data), itself, does not necessarily provide any advantages. Quality of information, respectively its relevance, can only be assessed after it has been captured. Building dense information networks (structural SC) with key suppliers may yield no benefits at all if the desired outcomes are not assessed regarding their achievability (Inkpen and Tsang, 2005; Villena, Revilla and Choi, 2011).

Narayanan, Narasimhan and Schoenherr (2014) investigated the contingency effects between collaboration practices and agility performance in BSRs. They conclude that high degrees of supplier asset specificity are closely linked to the risk of supplier opportunism in BSRs (Narayanan, Narasimhan and Schoenherr, 2014). Asset specificity can be related to as the range of services that are only offered by a limited amount of transportation service providers. Whereas relationship-specific investments (related to the relational SC dimension) convey specific levels of buyer or supplier commitment (Yan and Dooley, 2014), asset specificity can translate into buyer or supplier bargaining power. While engaging in these relationships can generate substantial amounts of structural capital (new network connections) it also leaves the less contributing individual at the peril of their business partner (Wathne and Heide, 2000; Wang et al., 2013; Yan and Dooley, 2014).

While several negative effects related to structural SC have been identified, not all occur because network density increases but, also, because denser networks facilitate the generation of relational and cognitive SC and vice versa (Inkpen and Tsang, 2005; Moran, 2005; Autry and Griffis, 2008; Villena, Revilla and Choi, 2011). Besides some

exceptions, similar to their benefits, social ties between actors are not considered to cause negative effects in isolation of the other SC dimensions (Adler and Kwon, 2002; Cousins, Handfield and Lawson, 2006; Kwon and Adler, 2014). While the commitment to frequent interaction with suppliers requires a workload investment and is a cost factor, the relational or cognitive contingencies regarding SC development need to be considered as well (Adler and Kwon, 2002; Kwon and Adler, 2014). Even though there are differences regarding the contingencies between formal and informal socialisation ties, and social capital generation, all three dimensions display forms of interdependence (Oh, Chung and Labianca, 2004; Cousins, Handfield and Lawson, 2006; Wagner and Krause, 2009).

### **3.4.3 Relational Social Capital**

While accumulated relational capital can provide stability and facilitate trust among partners, these positive effects may decline or even have a negative impact on existing relationships; thus causing companies that are heavily embedded in relational ties to experience non-beneficial obligations towards their suppliers respectively transportation service providers (Villena, Revilla and Choi, 2011; Day *et al.*, 2013; Krause and Ellram, 2014).

Consequently, these perceived obligations can facilitate continuous investment and commitment in order to not damage existing strategic relationships (Lechner, Frankenberger and Floyd, 2010; Villena, Revilla and Choi, 2011; Elfenbein and Zenger, 2013).

Furthermore, an extensive degree of relational embeddedness can generate pressures towards buyers with regard to pleasing suppliers (Day *et al.*, 2013; Avery, Swafford and Prater, 2014). Thereby distracting from the best outcome for the firm they represent (Stuart *et al.* 2012). This negative outcome and its severity are strongly dependent on market structures and buyer or supplier power (Lumineau and Henderson, 2012). Saturated, transparent markets with a multitude of competitors offering similar services allow buyers to choose more freely and be less prone to these negative effects (Golicic and Mentzer, 2011; Matthews and Marzec, 2012). Monopolistic or oligopolistic markets, on the other hand, to some degree, can force buyers to commit to one of the few available suppliers (Autry and Griffis, 2008; Capaldo and Giannoccaro, 2015b). Market concentration depicted as a facet of the structural SC dimension can, therefore, be theorised as a strong mediator regarding the effects stemming from relational embeddedness (Moran, 2005; Fazli, Hooshangi and Hosseini, 2013).

Zhou et al.'s (2014) work supports the earlier findings of Holma (2012) whose research implied that social capital in the context of travel purchasing may lead to lock-in effects originating from the supplier base. Analysing a set of case studies in the travel purchasing sector, Holma (2012) finds that repeated transactions between the same transaction partners increases the willingness of the buyer to put supplier interests first. Furthermore, Zhou et al. (2014) express that when trust into a supplier reaches a certain threshold, it can inhibit the acquisition of specific knowledge due to an increased risk of factors like collective blindness, supplier opportunism or disproportionate obligations. Further, their research findings show that certain levels of trust are best suited for obtaining specific knowledge, facilitating information exchange and to increase the overall effectiveness of communication.

Continuous transactions and information exchange were found to lead to forms of collectivism which, further, can result in collective blindness that strongly impedes information acquisition effectiveness (Nahapiet and Ghoshal, 1998). Collective blindness describes the phenomena when both parties believe to know the information, product, or service requirements of each other. Actors experiencing collective blindness might, therefore, unintentionally stop disclosing potentially relevant information based on the existing information exchange patterns and history; thus, limiting the knowledge exchange even further and giving way to misconceptions due to incomplete communication (Wagner and Krause, 2009; Villena, Revilla and Choi, 2011). The occurrence of this effect is further supported by the work of Koka and Prescott (2002) and Lechner, Frankenberger and Floyd (2010). Likewise, they concluded that individuals within BSRs who become too optimistic and asserted regarding their understanding of relationship-specific information exchange experience these negative effects (Koka and Prescott, 2002; Lechner, Frankenberger and Floyd, 2010).

On a similar note, Kim, Choi and Skilton (2015) find evidence that trust created through continuous beneficial interaction and investment into an existing relationship can also act as a detrimental factor for supplier performance development. Suppliers who share strong relational ties with their buyers experience high degrees of trust which can create a false sense of relational security (Villena, Revilla and Choi, 2011; Holma, 2012; Gao, Xie and Zhou, 2014).

Consequently, high levels of trust can lead to a decrease of relationship-specific investment because neither party is able to immediately replace the other with an adequate substitute (Krause, Handfield and Tyler, 2007; Blonska *et al.*, 2013).

Yan and Dooley (2014), in contrast to the common belief that relationship-specific investments improve relationship effectiveness (Dyer and Singh, 1998; Jap, 1999), highlight potential negative outcomes of these practices. They review investments like capital intensive equipment, dedicated human resources, or unique information exchange systems which can all strengthen relational embeddedness (Yan and Dooley, 2014). While this commitment can generate substantial amounts of relational SC it also fosters relational lock-in effects (Uzzi, 1997; Day *et al.*, 2013; Yan and Dooley, 2014). The ties that bind and are meant to assure cooperation among partners turn into chains that constrain the possibilities of terminating relationships without substantial trade-offs (Granovetter, 1985; Day *et al.*, 2013; Elfenbein and Zenger, 2013).

Closely related to the perceived familiarity with suppliers and the degree of trust extended to them is the potential for opportunistic behaviour and malfeasance (Granovetter 1985; Stuart *et al.* 2012). Even though trust can decrease the perceived need of monitoring (Villena, Revilla and Choi, 2011), this benefit can transform into a problem when reduced control gives rise to opportunism (Villena, Revilla and Choi, 2011; Elfenbein and Zenger, 2013). Strong relational embeddedness is likely to prevent an ad hoc change of suppliers and further reduces the chance of discovering said opportunistic behaviour (Cousins and Lawson, 2007; Praharsi, Dioquino and Wee, 2013; Hartmann and Herb, 2014). The acquisition of new (especially strategic) suppliers is time intensive and leaves the company with a supply gap and nullifies already invested efforts to develop the existing relationship (Villena, Revilla and Choi, 2011; Avery, Swafford and Prater, 2014). In these cases, suppliers may start devising ways to systematically exploit the buyer to maximise their own benefits without further consideration for the existing relationship (Anderson and Jap 2005). This behaviour is nurtured by the reluctance of buyers to switch suppliers because working with well-known partners in long-term, established relationships seems preferable for the majority (Gargiulo and Benassi, 2000).

Hawkins, Pohlen and Prybutok (2013), investigating drivers of opportunism in business exchanges, point out that while relational SC can prevent some forms of opportunism it potentially fosters more severe opportunistic behaviour. Furthermore, negative effects are

strongly linked to shared values of transaction partners and their respective superiors (Hawkins, Pohlen and Prybutok, 2013). Disapproval of opportunistic behaviour as either part of the relationship or organisational values was found to be a strong mediator regarding the likelihood of individuals acting opportunistically (Anderson and Jap, 2005; Hawkins, Pohlen and Prybutok, 2013).

Lumineau and Henderson (2012) suggest that long-term cooperative relationships may cause relational lock-in effects which negatively affect negotiation strategies. They further conclude that while transitioning from an arms-length to a cooperative relationship might yield substantial benefits, the reversed transition could severely damage the relationship's effectiveness (Lumineau and Henderson, 2012). Competitive relational experience, on the other hand, also enables both sides to engage in even more competitive negotiation strategies; thus, supporting the fact that the existence of a prior relationship alone has no significant impact on future transactions but is more dependent on the established relational quality (Dyer and Singh, 1998).

While this review aimed at delineating the relationship between individual negative effects and the various facets of relational SC, the majority of SC literature does not clearly distinguish these facets (Kwon and Adler, 2014; Pillai *et al.*, 2017). Holma (2012) promotes the application of more qualitative methods to social capital research to provide a clearer delineation regarding the drivers of positive and negative effects.

### **3.5 Conclusion: Social Capital in Performance Research**

The studies reviewed in the previous sections assess social capital in business relationships in general, disregarding the relationships existing on the micro, meso or macro level between individuals, groups or organisations. However, with the growth in popularity of social capital theory, researchers have continued to apply the concept to more focused contexts (Kwon and Adler, 2014). This includes the research on buyer-supplier relationships in dyadic settings and, more recently, research on buyer-supplier-service provider relationships in triadic settings (Villena, Revilla and Choi, 2011; Hartmann and Herb, 2014; Roden and Lawson, 2014). Generally, studies in this area, similar to those reviewed above, propose that relationships displaying high degrees of social capital are beneficial to both parties and improve relationship performance which, in turn, facilitates the performance of their respective organisations (Matthews and Marzec, 2012).



Regarding CSC, Kim, Hur and Schoenherr (2015), analysing buyer-driven knowledge transfer activities utilising the motivation–opportunity–ability framework of Kwon and Adler (2014), provide evidence that developing shared oral communication patterns is positively related to the knowledge exchange performance of the buyer. Primarily, this is due to both parties establishing a shared understanding of meaning which they can refer to when communicating or requesting information. Further, CSC in the form of shared values between buyer and supplier is found to moderate opportunism risk (Wathne & Heide 2000; Wang et al. 2013) from the supplier side as buyers experience higher degrees of supplier commitment. Similar effects have been identified regarding the development of shared goals (Li, Ye and Sheu, 2014). Studies focussing on the relational dimension of social capital closely link the generation of RSC to the ability of establishing shared goals as the supplier develops degrees of trust with the buyer, enabling him to obtain more information about the supplier, facilitating shared understanding (Day et al., 2013).

Hawkins, Pohlen and Prybutok (2013) carried out a study to identify the circumstances under which a (sourcing professional) buyer engages in opportunistic activities using structural equation modelling to analyse 328 procurement transactions. Their findings show that RSC between buyer and supplier do mitigate certain degrees of opportunism risk but found the actual decision of engaging in opportunism to be moderated by their perception of power, shared ethical values (CSC) and honesty in the dyad. Another study evaluates the role of RSC regarding its relevance for collaborative activities between buyer and supplier and finds that trust developed over an extended period of beneficial interactions is one the most important aspects for successful collaboration or cooperation (Cousins, Handfield and Lawson, 2006). Furthermore, the research of Fazli, Hooshangi and Hosseini (2013) emphasises that buyers developing RSC with their suppliers increases the chance of suppliers engaging in open communication, disclosing otherwise withheld information from the buyer.

All the discussed studies which are positioned within the field of business management, indicate that social capital has an initially positive influence on relationship performance which, in turn, predominantly translates into improved organisational performance. Despite the extensive account of research on social capital in buyer-supplier relationships and its influence on their performance, there is a prevalent focus on the buyer's perspective when assessing beneficially affected activities and resulting performance improvements.

The study of dyadic relationships from a singular perspective represents a key gap in social capital literature. The next section of this chapter will discuss the literature focussing on the influence of social capital in triadic relationship settings.

### **3.5.1 Effects of Social Capital in Triadic Relationships**

Thus far, this chapter has discussed the meaning of social capital, its three dimensions, its potential dark side, and its influence on buyer-supplier relationship performance. Generally, literature suggests that the three social capital dimensions are beneficial in relation to a wide range of activities and envisioned goals (Matthews and Marzec, 2012). Nevertheless, research on social capital has mainly focussed on dyadic relationships or the intra-organisational dynamics influenced by it (Hartmann and Herb, 2014). Inter-firm relationships, though, not only in their dyadic nature are of importance for the respective organisation but also their wider network of suppliers, partners, and customers are integral for the focal organisations performance (Choi and Kim, 2008).

Research on triadic relationship settings and how the effects of social capital in the individual dyadic relationships affect each other remain at an early stage and are considerably scarce (Choi and Wu, 2009; Hartmann and Herb, 2014). The past work of Smith and Laage-Hellman (1992) presented three triadic network examples: (1) a buyer interacting with two suppliers; (2) a supplier interacting with an intermediary and an end user; and, (3) a supplier interacting with two buyers. Triadic relationship settings of port authority, cargo owner, and port service provider can be categorised in line with the mentioned option (1) but also touch upon option (2). Port authorities and port service providers offer services to cargo owners but, differing from the early conceptualisation of Smith and Laage-Hellman (1992) and later settings reviewed in a multiple case study approach by Hartmann and Herb (2014), the port authority is also the supplier of land and potentially infrastructure, making the PSP and port-centric COs to its buyers whereas COs also purchase services of the PSP when handling, processing, or storing cargo within the port's boundaries. Consequently, this triadic setting of interconnected supply chain members presents a gap in social capital research which has not been researched but, more so, it is a novel approach to analysing the interaction of port community members and the resulting performance.

### 3.5.2 Formulation of Research Focus

So far, this chapter has discussed the theoretical underpinning of the present study. The chapter began by reviewing the extensive history of social capital theory and its origins, followed by introducing Nahapiet and Ghoshal's (1998) theory of social capital, which is considered an appropriate framework to apply to research port triads, closely resembling previous research on triadic service relationships (Hartmann and Herb, 2014). Despite the earlier discussed widely established and accepted benefits, an emerging stream of research posits that social capital and its beneficial effects are subject to thresholds after which additionally accumulated social capital has detrimental effects on relationship performance (Villena, Revilla and Choi, 2011; Pillai *et al.*, 2017). Subsequently, this study seeks to further contribute to social capital theory by extending its mainly dyadic research focus to a triadic relationship setting akin to work by Hartmann and Herb (2014), in the context of Scottish trust ports, analysing its influence on the activities of port authority, port service providers, and cargo owners, i.e., the port triad.

Furthermore, as previous research has highlighted the singular incorporation of buyer perspectives (Matthews and Marzec, 2012), future research is encouraged to explore the influence of social capital from the perspective of suppliers or potential intermediaries. Therefore, the following four objectives addressing this study's aim *to develop an understanding and explanation for the influence of social capital within port community relationship configurations and its effects on port community performance in the context of Scottish Trust ports* were formulated.

- Identify social capital facets within the port community influencing port community performance.
- Establish how social capital in port community triads (port authority, port service provider, cargo owner) can influence port community performance.
- Identify how social capital facets and dimensions interact within the port community setting.
- Extend Hartmann and Herb's (2015) concept of social capital effects to port community triads (port authority, port service provider, cargo owner).

The ensuing chapter describes the methods used to address and achieve the study's aim.

## 4 Methodology

In chapters two and three, this thesis reviewed the extant literature of port performance and social capital, thereby highlighting the envisioned contributions of this study to the individual fields. This chapter restates the research aim and objectives and following explores existing research paradigms and philosophical stances, identifying those guiding this research. Furthermore, the research design is discussed, and the selection of the multiple case study approach is justified considering the underpinning aims and objectives. The data collection and analysis techniques are then described. Last, ethical concerns of the undertaken research are discussed and reflected upon.

### 4.1 Introduction to Research Paradigms

Research paradigms guide and underpin the researcher's undertaking of knowledge creation within the field of business management research (Corbin and Strauss, 2014). These paradigms are three-dimensional, consisting of ontology, epistemology, and methodology (Creswell, 2013).

Ontology concerns itself with the notion of reality, the study of existence and being, shaping the understanding or perception of it (Denzin and Lincoln, 2008). The character and origin of knowledge, its creation, and validation are the essence of epistemological concerns, epistemology frames the means through which knowledge can reliably be obtained and created (Myers, 2013). Research methodology describes and outlines the methods the researcher employs to uncover and make sense of reality (Corbin and Strauss, 2014). Bryman and Bell (2015, p.35), therefore, adequately define a research paradigm as:

*“A cluster of beliefs and dictates which, for scientists in a particular discipline, influence what should be studied, how research should be done and how results should be interpreted”.*

Guba (1990, p.17), in a somewhat shorter fashion, shared this notion of a paradigm and understands it as a “basic set of beliefs that guide action”. Consequently, the research paradigms reviewed in the following sections are the beliefs which guide the research process to create a valid contribution to the existing body of knowledge. Ontological and epistemological assumptions that underpin this research endeavour are intrinsically linked and also considerably influence the choice of suitable methodologies (Easterby-

Smith, Thorpe and Jackson, 2012). To adequately explore and discuss the ontological and epistemological stance of this research, it is essential to also reflect on the researcher's self and deduce the choices having been made for suitability (Hammersley and Atkinson, 2007). The concepts of ontology and epistemology and the reflections on oneself are discussed in the following sections.

#### **4.1.1 Ontology**

As mentioned earlier, ontology concerns itself with the notion of reality, the researcher's belief of what constitutes reality and how it can be uncovered or investigated (Bryman and Bell, 2015). These notions of reality can considerably influence any research endeavour the researcher undertakes. Ontology is a crucial element of any research that seeks to contribute to existing knowledge as it acts as a basis for knowledge creation (Neuman, 2005). Ontology is further delineated into two essential and opposing views, namely objectivism and constructionism (Denzin and Lincoln, 2008).

Taking an objectivistic ontological stance alludes to the existence of one objective "truthful" reality which considers social phenomena as detached from the influence of its actors (Lyon, Møllering and Saunders, 2015). Through the collection and analysis of data, this reality can be better understood and approximated; ultimately assuming that all information in existence is available to the researcher, resulting in an accurate depiction of reality which is true for any other individual as well (King and Brooks, 2016). Contrastingly, subjectivism (constructionism) holds the notion that there is no singular objective reality, rather it is constructed by individual actors who, on their own or as a group, make sense of experiences and thereby create their own unique reality (Neuman, 2005). First and foremost, presented objectives, envisioned contributions and chosen methodologies in the study are required to be coherent with the ontological stance with which the developed research questions resonate strongest. Saunders, Lewis and Thornhill (2011) emphasise that neglecting to do so can considerably diminish the value of the research and thereby the sought-after contribution itself. Consequently, achieving coherence through reflection and reiteration of the work and the researcher's own ontological position is of significance.

Objectivism and constructionism are widely considered as the two "original" ontological perspectives in management research (Easterby-Smith, Thorpe and Jackson, 2012). Burrell and Morgan (2017), though, stress that the sole differentiation of these two is by

far too generic for an appropriate reflection of any works' or authors' perspectives. Researchers, rather, tend to move on a scale between absolute objectivism or absolute constructionism on which they position their work and themselves. Their chosen position on the spectrum between the two extremes will further generate substantial implications for the connected epistemological considerations.

Reviewing the ontological considerations, this research is subject to the constructionist perspective. Reality is constructed by the individual making sense of experiences in a subjective world. The essence of this investigation are social phenomena, the interactions of individual port community members in a triadic setting, explored through the eyes of the individual which echoes the constructionist considerations (Corbin and Strauss, 2014).

#### **4.1.2 Epistemology**

Epistemology, concerns itself with the issues of what constitutes knowledge, how knowledge is created and how certain kinds of knowledge are to be valued or assessed (Bryman and Bell, 2015). Kuhn (1996) posits that social sciences are fundamentally different from the natural sciences regarding their predisposition of what constitutes knowledge and the ways of uncovering new knowledge. Social scientists, not unlike natural scientists, commonly share accepted paradigms; research approaches, though, are heavily fragmented which lead to a substantial amount of possible combinations forming a paradigm for undertaking management research. Thereby, discussing all of them at length is beyond the possibility of this research. The two originally prevalent and opposing perspectives of positivism and interpretivism are reviewed at first, deliberately contrasting the two. Following, additional research paradigms which have been heavily employed in social science research are touched upon. Like the argument of ontological considerations being more than just two extremes, epistemological segments exist in bordering spectrums rather than in one finite definition.

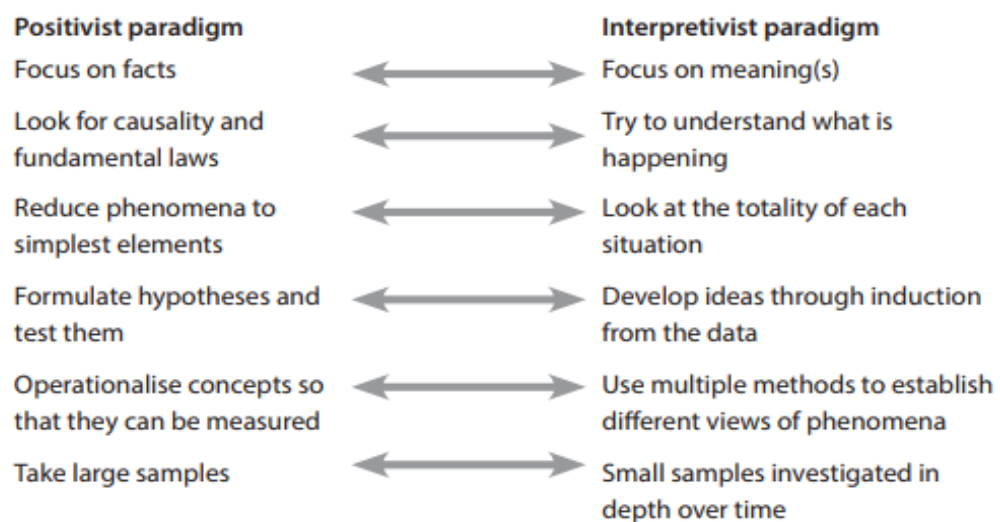
**Positivism** in social sciences like to the natural sciences shares the belief that phenomena can be causally explained and are following fundamental laws which must be uncovered (Neuman, 2005). A positivist seeks to arrive at knowledge through the conduction of objective repeatable methods which allow the researcher to develop uniform laws depicting reality. This generally includes the formulation of a hypothesis which is sought to be tested by a research design that distances the researcher from the investigated

phenomenon and thereby preserves objectivity. If a researcher adopts a positivist stance, the research methods most commonly employed are of a quantitative nature which aim to predict the social world rather than developing an understanding of its dynamics (Creswell, 2013).

Bryman and Bell (2015, p. 28) outline five key principles of positivism:

- Knowledge can only be considered genuine if it is confirmed by the senses.
- The role of theory is to generate hypotheses that can be tested and that will allow explanations of laws to be assessed.
- Knowledge is created by gathering facts that provide the basis for laws.
- Science must (and can) be conducted in a way that is value-free and objective.
- There is a clear distinction between scientific statements and normative statements, and the former are the true domain of scientists.

As positivists consider knowledge only as valuable if it is empirical or logical, it can only focus on facts, thereby neglecting facets of the social world as human behaviour, shared values or culture, as these are believed to impede the process of knowledge creation (Blumberg, Cooper and Schindler, 2014). The positivist approach, is critiqued mainly on the position that the natural world (sciences) and the social world (sciences) are incomparably different (Bryman and Bell, 2015).



*Figure 5: Epistemologies with Positive and Interpretivist influence*

*Source: MacIntosh & O’Gorman (2015, p.60)*

Creswell (2013) emphasises that a positivist approach might be ill suited for the pursuit of uncovering the precedents and antecedents of human behaviour as humans follow certain values and beliefs while making sense of their own and others' behaviour. Consequently, as the difference of social sciences lies in the manifold nuances of human behaviour and how social interaction comes to pass, it is suggested that the epistemological assumptions guiding the research design should differ from those applied to the natural sciences (MacIntosh and O'Gorman 2015; Corbin and Strauss 2014).

**Interpretivism**, when considering the full spectrum of epistemological stances, is the antonymic stance to positivism. It focusses on the development of an understanding of social interaction, respectively human behaviour, rather than trying to predict or explain an outcome as the physical sciences are doing (Giddens, 1979). Checkland (1981) further asserts that because humans as research objects react to predictions having been made about their behaviour as well as potentially being influenced by the observer collecting the data, the arms-length analysis of causality between action and reaction of the physical sciences is not applicable. Having been developed in reaction to the prevalence of positivism in the 19<sup>th</sup> and 20<sup>th</sup> centuries, interpretivism, acknowledging the significant differences of physical and social sciences, asserts that knowledge can never be truly objective (MacIntosh and O'Gorman, 2015). Furthermore, interpretivism considers social reality as relative, the phenomena under investigation is intrinsically linked to the researcher, respectively the observer as they are interacting with the social world (Creswell, 2013). Within the interpretive paradigm the researcher accepts that knowledge is subjective and aims to develop an understanding for the social world through subjective observations, respectively data.

**Post-positivism** imagined on a linear scale would be positioned some margin off the original positivist epistemological stance. The fundamental assumption being that knowledge, respectively the world itself, can be objectively analysed but the innate bias of any social being taints the uncovered information through the process of interpreting, respectively, describing it in its own understanding, words or language (Groff, 2004). Knowledge, therefore, is not only valuable if derived from infallible and objective methods but is accepted to be dependent on the individual creating the knowledge. While the post-positivist does not assume there is only one "true" reality, the ambition underlying this epistemological paradigm remains to arrive at an objective truth (Guba



and Lincoln, 1994). Nonetheless, the researcher must reflect on their own observer bias and how participation in the research impacts determining that truth (Wise, 2013).

**Critical realism**, positions itself as a fairly centric philosophical paradigm; when pictured on a scale it, to certain degree, incorporates notions of interpretivism and positivism (Archer, Lawson and Norrie, 2013). Echoing considerations of positivism, it advocates that for created knowledge to be valid a rigorous approach is required which should aim to be replicable in some fashion in alternate settings to verify and enrich existing knowledge (Groff, 2004). While critical realist research, similarly to positivism, assumes the existence of a singular reality, the critical realist considers obtained information as only a sub-set of perception of this singular reality whereas a positivist considers there to be only one valid and truthful reality which is applicable to anyone (Collier, 1994). Furthermore, critical realists assume the existence of unobservable actions which are causally linked to the actions the researcher actually observes (Easton, 2010). Consequently, if one is to uncover the one singular reality which governs the social world, the research would need to know and understand the vast spectrum of moderating underlying factors which cause specific patterns of behaviour. Consequently, despite critical realists and positivists sharing similar ontological assumptions, critical realists display a distinct appreciation of the complexity and incomprehensiveness of social realities (Groff, 2004). This results in critical realists accepting the knowledge of reality as it is experienced as an approximation of the singular reality which researchers do not possess the means to uncover (Easton, 2010). Thereby, they posit that knowledge is created through the constant approximation of this singular reality through various means while also acknowledging that the findings of one study, even though being similar regarding methodology and context, can yield differing results. Nonetheless, any of these processes aid the ongoing approximation of reality and the development of knowledge which can be transferred from one established contextual scenario to another less explored field of study.

#### **4.1.3 Reflections on Self and Research**

Reflecting upon the research and the researcher's own understanding of reality, Goldfield (2009) argues that specific ways of thought and perception are intricately linked to the character of the researcher itself. Considering the data collection through semi-structured interviews is significantly enriched through observation and embedded scholarship. Coffey (1999) highlights that participants' perceptions of the researcher's character can severely

impact participant behaviour, induce response bias and, therefore, harm response reliability. While observations, respectively ethnography, is often critiqued for its subjective nature, it encourages greater reflexivity than other methodologies (Bryman and Bell, 2015). It allows for the collection of rich data (Narayan, 2012) which further complements the findings of the semi-structured interviews and locates them in a more descriptive context. As the “self” and the perception of it by others influences the process of data collection, particularly the interaction between individuals (Coffey, 1999), an elongated reflexion of personal views, values, and beliefs seems appropriate. Considering the choice of social capital theory as a way of explaining the collected data, this appears of even greater importance as values, beliefs, and shared understanding are integral elements of two social capital dimensions (Nahapiet and Ghoshal, 1998).

Coffey (1999, p.18) states that, *“there is by no means a taken for granted consensus over the appropriate amount of self-revelation and reflexivity that should appear in the ethnographic monograph proper”*, like the later discussed ethical concerns regarding the research, adhering to expected standards complemented by one’s own considerations of the matter. Further suggesting that to allow for an understanding of the researcher’s interpretations and observations of some form of biographical analysis is warranted which aids the assessment of validity (Coffey, 1999). Coherent with the epistemological and ontological considerations and their implications, qualitative research of social relationships is perceived as inseparable from the self. While strength of influence may vary based on the applied methods of data collection and analysis, the social interaction with or between participants is impacted by the researchers’ “self” (Bryman and Bell, 2015). Consequently, the following paragraphs will review the rationale of beliefs and values the researcher holds. Therefore, English is not the author’s mother tongue nor is there an acute awareness of customs or culture in the region where the research is conducted. This is of importance, as the researcher makes sense of port community members’ actions through their own perceptions of reality, utilising the lens of social capital theory. Furthermore, not having worked in a port environment before or being as knowledgeable as case study participants on terminology and industry customs, as well as being from a different country, might affect interview responses and participant interaction (Narayan, 2012).

Drawing on observations from self and others, the researcher must be described as reflective and critical regarding any information presented or obtained. The researcher

has the strong belief of there always being multiple perspectives as soon as entering any form of relationship setting. Furthermore, this translates into the understanding of it being essential to not only obtain information on how port community members see themselves but also how other members perceive them and their actions. In the researcher's personal life, this reflexive approach created values and beliefs which became manifest to him. Consequently, understanding why humans act in certain situations, especially if actions taken are undesirable or self-damaging became a topic that followed the researcher throughout their life. Having moved through various social identities in several educational institutes, as well as professional occupations, strengthened the beliefs of the researcher that perceptions of others and oneself mediate relationship dynamics. Thus, to provide a close approximation of reality, satisfying personal standards and offering a valid contribution to knowledge, the rationale for undertaking this research must be explored as well. As, social reality by the researcher is understood to be perceived differently by actors, utilising some ethnographic methods is considerably less limiting in describing complex encounters and reality itself (Bryman and Bell, 2015). Considering the setting of actors in the port community which might share an understanding of certain topics but vary considerably in other aspects, thereby moderating their individual relationships, employing a descriptive approach aids the understanding of the actual setting (Hunt, 1990). Furthermore, each actor operates as an individual, as a representative of their organisation or, even, the port increases the complexity, which observations can help to delineate (Kalou and Sadler-Smith, 2015).

Considering the apparent prevalence of quantitative research in the port performance literature (Vieira, Kliemann Neto and Amaral, 2014; Moya and Valero, 2017) and the strong focus on surveys in the social capital literature (Matthews and Marzec, 2012; Kwon and Adler, 2014; Pillai *et al.*, 2017), a generic applicability of their findings and models appears incomplete. When investigating a social phenomenon, and trying to develop an understanding for the relationships, the sole application of quantitative models appears misplaced (Bryman and Bell, 2015). Consequently, to ensure suitability of selected methods, the following section reviews individual methodological approaches and the respective rationale for choosing one over another.

#### **4.1.4 Adopted Research Philosophy**

The previous three sections of this chapter discussed research philosophy and the researcher's own reflections, thereby acknowledging the significance of philosophical assumptions and their role as the foundation for any social research endeavour. Any assumption the researcher adopts will guide the further research process, inform the development of research questions and be reflected in the choice of appropriate methodologies (Bryman and Bell, 2015). Consequently, to ensure coherence and a valuable contribution to the existing body of knowledge, it is essential for the researcher to identify and appreciate their respective philosophical stance. Lacking these considerations and the awareness of their implications can severely impede the research process as well as decrease the value of sought knowledge contributions (Creswell, 2013).

Having reviewed various philosophical perspectives while also being reflective on the 'self' of the researcher, a constructionist/interpretivist perspective is viewed and chosen as the most fitting paradigm to guide this research.

Primarily, interpretivism is considered appropriate for this study due to the nature of the research aim. The purpose of this study is to develop an understanding of the influence of social capital in port community triads for port performance in the context of a Scottish trust port. Thereby placing an emphasis on exploring how port community members interact with each other and how the outcome of these interactions, mediated by social capital, impacts the port's performance. This focus resonates strongest with the interpretivist assumption that knowledge is gained by identifying the meaning that individuals attach to their and others' actions (Burrell and Morgan, 2017). Thus, this research goes beyond the practice of determining cause and effect, which is the essence of positivism (Guba and Lincoln, 1994). Further, this study is suited to the interpretivist paradigm's constructionist ontology due to its focus on the subjective experiences of individual social actors.

## **4.2 Methodologies**

This study aims to develop an understanding of the relevance of social capital in port community triads for port performance rather than to test hypotheses of certain causalities between port community members. This research approach is considered to be of an inductive nature which is coherent with the researcher's own interpretive perception of reality (Bryman and Bell, 2015). An inductive process aims to develop theory from the

observations of specific occurrences from which the researcher derives conclusions (Saunders, Lewis and Thornhill, 2011). Consequently, as mentioned earlier, not all available methodologies are particularly well suited for an interpretivist’s inductive approach towards research (MacIntosh and O’Gorman, 2015). Therefore, to identify a suitable approach for accomplishing the envisioned aim and answering the research questions in the appropriate timeframe, methodologies aligned with an interpretivist stance are discussed, in turn, as displayed in Table 7.

*Table 7: Methodologies aligned with an Interpretivist Stance*

*Source: Adapted from MacIntosh and O’Gorman (2015)*

<b>Methodology</b>	<b>Philosophical Stance</b>
Ethnography	Interpretivist
Grounded Theory	Interpretivist
Action Research	Interpretivist/Critical Realism
Case Study	Interpretivist/Critical Realism

#### **4.2.1 Ethnography**

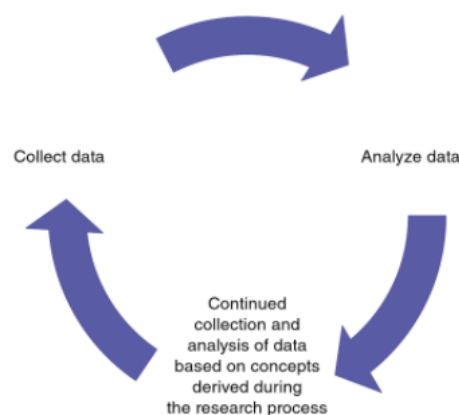
The origin of ethnography and its most extensive application can be found in anthropological research and is well documented. Denzin and Lincoln (2008) find ethnography being employed at an increasing rate in business management-related research. Bryman and Bell (2015, p. 443) define ethnography as “the extended involvement of the researcher in the social life of those the author studies”. Mainly these applications are linked to the uncovering of patterns that could not have been understood using other methods. The aim of the ethnographer is to experience and understand the social world in the closest approximation of the research subjects’ own realities (Kalou and Sadler-Smith, 2015). Observation, which can be done in a multitude of ways, is the main form of data collection related to an ethnographic approach trying to uncover behavioural patterns of life subjects (Hammersley and Atkinson, 2007). Ethnography involves unstructured or semi-structured fieldwork, and can range from the complete participant to the complete observer role, distinguishing the degree of the researcher’s detachment from the research subjects (Bryman and Bell, 2015). Ethnography is,

therefore, suggested to be a suitable strategy for developing an extensive depiction of a social setting which aids the understanding of complex human behaviour (Ybema, 2009).

Considering the possibilities an ethnographic approach could offer to achieve the aim and objectives of this research, it appears suitable at first. Nonetheless, achieving holistic access to all port community members, especially considering the triadic perspective, appeared unrealistic. Immersing oneself in the individual organisations for a meaningful period to uncover their underlying patterns of thought and behaviour was considered unfeasible. Furthermore, as some port community members are actively competing against each other, confidential information is guarded intensely. Therefore, the opportunity for an in-depth ethnographic study according to the phases described by Coffey (1999) was not possible for this research. Hence the limitation regarding an extensive ethnographic study, ethnographic methods were utilised during the interview process and the time the researcher spent on port community members' premises interacting with the individual research subjects.

#### 4.2.2 Grounded Theory

Grounded theory is defined as a methodology in which “theory is derived from the data, systematically gathered, and analysed throughout the research process” (Corbin and Strauss, 2014). In this method, data collection, analysis, and the eventual theory stand in close relationship to one another.



*Figure 6: Interrelation between Data Collection and Analysis for Grounded Theory*

*Source: Corbin and Strauss (2014, p.8)*

As Figure 6 displays, the grounded theory research process is of a continuous reiterative nature. The process is targeted at generating theory at several stages of data collection, the activity of collection and analysis are happening almost simultaneously, and the

process is viewed as a repetitive cycle, feeding itself while becoming more precise and distinctive (Saunders, Lewis and Thornhill, 2011). This method of research represents the opposite of positivist studies where the researcher first develops a framework outlining the thoughts and theories underpinning the study and then seeks to assert the pre-emptively made assumptions. Grounded theory is often considered “the” inductive approach and generally utilises in-depth interviews (Corbin and Strauss, 2014). Like an ethnography, it offers an in-depth approach allowing the researcher to gather detailed information on the subjects being researched.

Grounded theory, however, is not as suitable to this study because the research questions have been identified through an extensive review of the extant literature and a theoretical lens has already been identified. Furthermore, as data collection required the researcher to intensively research the ports in question, developed theory would not necessarily be grounded in the gathered data but, rather, be biased by the information obtained prior to data collection. Consequently, as highlighted by Corbin and Strauss (2014) a grounded theory approach under the given circumstances does not appear suitable.

#### **4.2.3 Action Research**

Bryman and Bell (2015, p.418) understand action research as “an approach in which the researcher and a client collaborate in the diagnosis of a problem, and in the development of a solution based on the diagnosis”. Contrastingly to other methodologies the action researcher acknowledges the role as an interactive one, taking part in the actual processes studied and aiming to achieve a change of the status quo (Kemmis, McTaggart and Nixon, 2013). Reasonably often, the researcher participates in a collaborative project with another organisation, implementing change or analysing the cause-effect scenario after change has been achieved in the respective organisation (Stringer, 2013).

Considering the above-mentioned factors, action research cannot be considered as suitable for this research. The present study seeks to develop an understanding of how social capital in port community triads is relevant for port performance, not to change the existing port community dynamics and their consequences.

#### 4.2.4 Case Study

Yin (2013, p.16) defines a case study as an approach which “investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between the phenomenon and context may not be clearly evident”. Eisenhardt (1989, p. 534), similarly in earlier works, describes case study research as a methodological approach which “focuses on understanding the dynamics present within single settings”. The actual research focus of a case study can range from multiple organisations, departments, individual or event (multiple-case study) to the singular instance where only one specific case is reviewed in greater detail (single-case study) (Bryman and Bell, 2015). Furthermore, disregarding the actual type, case studies focus on an organisation, community or event within explicit boundaries of the respective entity (Yin, 2013).

Even though most commonly employed in conjunction with qualitative approaches, case study designs are suitable for research endeavours seeking to engage in a quantitative comparative analysis of the focus units (Myers, 2013). However, it is argued that qualitative methods such as interviews and observations are more suited to this approach due to their ability to form an intensive and detailed understanding of situations (Eisenhardt, 1989). Differing from grounded theory or ethnographic approaches where specific knowledge of the field or existing theories is often viewed as biased and obstructing the research process, case study research is not opposed to theories guiding the process (Baxter and Jack, 2008).

Bryman and Bell (2015) point out that case study research, like the other three earlier mentioned approaches, has been critiqued for its lack of methodological rigour and the ability to derive generalisations from its findings. Guba and Lincoln (1994), though, argue that generalisability should be viewed as transferability which is determined by the similarity of two or multiple cases, or the similarity of embedded units within the research boundaries. Dinwoodie and Xu (2008) further argue that case study research trying to attempt wider generalisation ceases to represent an idiographic approach and thereby shifts towards the research strategy that allows for these generalisations. The analysis of multiple embedded units in a single-case study can also be used to compare the observations. Consequently, this enables the researcher to distinguish shared factors and further potentially attribute differences to the degree of sub-unit similarity which aids the reflective process and supports theory development (Donmoyer, 2000).



Considering the philosophical stance and research questions of this study, the case study approach presents itself as most suitable. Bryman and Bell (2015) highlight the case study method as reliable in collecting rich and descriptive data from complex social and organisational settings. Scottish Trust Port communities represent such a setting as they have a unique governance structure which allows for different approaches for port management and the improvement of a port's performance. Furthermore, this approach allows getting close to the unit of analysis whilst maintaining a theoretical focus, especially when incorporating observations of the field (Yin, 2013). Ellram (1996) further suggests that the case study method is particularly well suited to answer 'how' or 'why' research questions due to its emphasis on understanding complex social phenomena.

Therefore, the case study is deemed an appropriate method as the researcher aims to develop an understanding of the influence of social capital in port community triads for port community performance.

### **4.3 Research Design: The Case Study**

The previous section reviewed various research approaches and identified the case study method as best suitable for the envisioned research. Differing from other research designs, there is no number of pre-set requirements for conducting a case study (Donmoyer, 2000). Consequently, depending on the research's adopted philosophical stance and the questions having to be answered, the chosen case study approaches can vary significantly from researcher to researcher (Baxter and Jack, 2008).

#### **4.3.1 Research Design Overview**

Ellram (1996), reviewing and articulating the use of case study research in logistics, highlights that the case study method is one of the most misunderstood and, consequently, misapplied research designs. Some of the most common misconceptions according to Ellram (1996, p.94) are:

- The case study method is only a qualitative research tool.
- The case study method is an exploratory tool that is appropriate only for the exploratory phase of investigation.
- Each case study represents the equivalent of one research observation. Thus, extremely large numbers of case studies are required to produce any meaningful results.

- Case studies do not use rigorous design methodology.
- Results based on the case study methodology are not generalisable.

Therefore, to ensure a rigorous process, this section will delineate individual approaches and the origin of the rise of case study research. Eisenhardt (1989) and Yin (2013) are viewed as the main theorists in having developed case study research processes and applications. Their individual approaches can be distinguished by their appreciated level of induction. While Yin (2013) proposes that case study research can deviate from a solely inductive approach, incorporating a priori established theoretical foci, Eisenhardt (1989) opposes this notion and positions case study research designs closer to a grounded theory approach. Considering that this study utilises a preliminary literature review to establish a theoretical focus, Yin's (2013) interpretation of the case study approach is understood as appropriate. Table 8 outlines the five proposed stages of Yin's (2013) approach.

*Table 8: Components of Case Study Research Design*

*Source: Yin (2013)*

<b>Stage</b>	<b>Element</b>	<b>Explanation</b>
<b>1.</b>	Posed Questions	... Established through literature and previous studies.
<b>2.</b>	Propositions	... Direct focus and scope of the study. Exploratory research may not have propositions.
<b>3.</b>	Unit of Analysis	... Is to be investigated entity in the case study. It can be an organisation, event, individual or location.
<b>4.</b>	Link between Data and Propositions	... Established through the matching of patterns, explanation building, logic models, and cross-case synthesis.
<b>5.</b>	Rationale for Interpretations	... Determines how data will inform the findings. This involves identifying and addressing rival explanations.

Stage one, in combination with stage two of Yin's (2013) research design, sees the establishment of research questions which guide the focus and determine the scope of the research which complements the aim and objectives of this study. Stage three covers the selection of the unit of analysis which will be discussed in a later section after the appropriate type of case study has been identified. Stage four analyses methods for data analysis which allow for an adequate interpretation of the research findings and the drawing of links between individual findings across cases or units of analysis. Concluding, stage five concerns itself with the discussion of findings and the justification of rival explanations.

Figure 7 outlines the research design of this research, which has been adapted from the five stages proposed by Yin (2013). Several components have been added which had not explicitly been mentioned in the original depiction of the process.

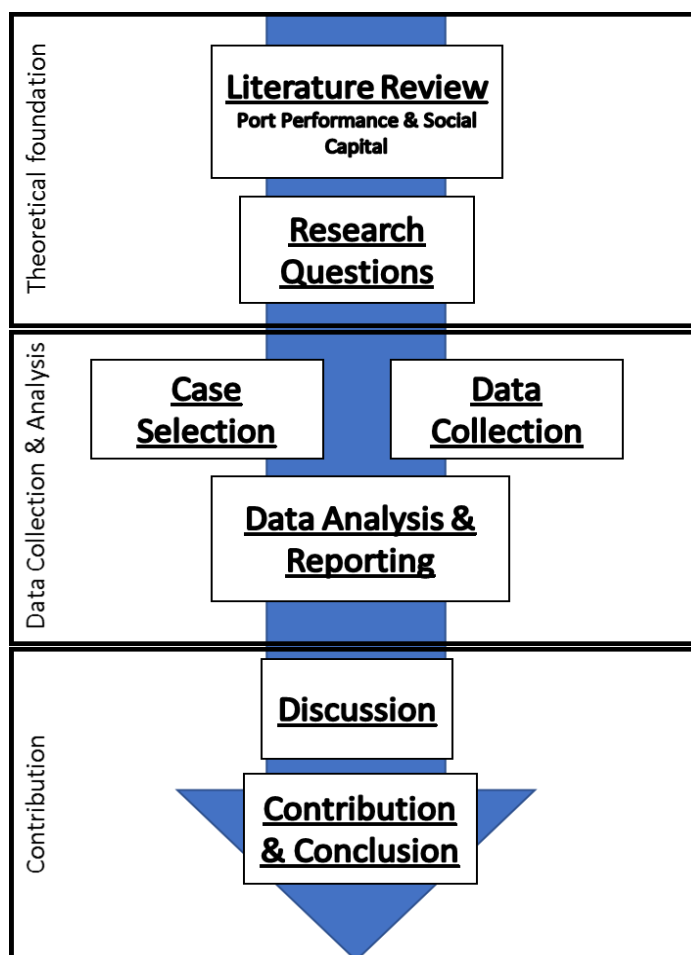


Figure 7: Research Design Overview

Source: Adapted from Yin (2013)

As Figure 7 shows, Yin's (2013) case study approach has been adapted and broken down into three stages. The theoretical foundation stage is comprised of the literature reviews of port performance and social capital literature which frame and underpin this research. Gaps were identified in the extant literature and research questions were posed. Following the formulation of the research questions, a range of paradigms and potentially appropriate data collection methods were analysed. The selection of a case study design also involves the identification of most suitable units of analysis in line with the research aim and objectives. Suitable instruments for gathering data were selected. Discussion and selection of methods for data analysis and the reporting of research findings formed the second part of stage two. The reporting of findings informed the discussion of part three while contributions of theoretical and managerial nature were outlined as well.

#### 4.3.2 Selection of Case Study Type

Yin (2013) emphasises that within the case study research design, the selection of the best suitable case study type depends on several factors. Namely, what kind of questions and aims the study envisions to answer, the exposure of the researcher to the field and their control over the occurring events or behaviour and, finally, the question of whether the research focuses on historical or the analysis of present events. Table 9 presents a summary of the several types of case studies identified in the literature.

*Table 9: Case Study Types*

*Source: Adapted from Ellram (1996) and, Baxter and Jack (2008)*

<b>Type</b>	<b>Application</b>
<b>Explorative</b>	The purpose is to explore a situation where there is no clear, single set outcome (Yin 2013). Characteristic focus on processes, asking “why” and “how” they are coming to pass (Ellram 1996).
<b>Explanatory</b>	Explain complex real-life settings of different units within the single-case a survey or experimental research strategy would otherwise not capture (Dinwoodie and Xu, 2008). Goes beyond correlations and frequencies to consider operational links (Yin, 2013).
<b>Descriptive</b>	The purpose is to describe an occurring phenomenon in its real-world context (Yin, 2013).

<b>Intrinsic</b>	Gaining a better understanding of a case. The purpose is not necessarily theory-building but is, rather, pursued when the case itself represents the main interest (Stake, 1995).
<b>Instrumental</b>	Facilitate the understanding of phenomena. The case solely provides the real life context but the investigated social mechanisms are of prime interest to allow for generalisation (Stake, 1995).

The aim of this research is to develop an understanding how social capital existing in port community relationships influences the performance of ports. This suggests that this research fits the definition of an exploratory case study. Their purpose, as displayed in Table 9, is to explore the processes/activities of port community members through which social capital influences port performance. Nonetheless, the case study categories are not exclusive but may occasionally overlap and function as a guiding outline for the researcher (Ellram, 1996; Yin, 2013).

#### **4.3.3 Single-Case or Multiple-Case Study**

Ellram (1996), in line with Yin (2013) among others, emphasises that deciding between a single or multiple case study design has considerable consequences regarding the conduction process and the contribution the research design can achieve. Single-case studies are most suited when investigating a specific case in greater detail, is more probable to answer the research questions, or contribute to theory. Ports, respectively port communities, are exceedingly different; size, cargo types, governance structure, history, location, infrastructure and members create a complex unique setting (Langenus and Doms, 2015). Wanting to develop an understanding of port community relationships' influence on port community performance, this uniqueness of a situation or setting makes a multiple-case study more plausible. The researcher, from the outset with this study, does not attempt to arrive at generalisable rules for ports, trust ports or even Scottish trust ports.

Furthermore, while every port community triad of port authority, cargo owners and logistics service providers can differ significantly, all three represent a 'common case' relational setting which is integral to any port (Notteboom, Parola and Satta, 2015). While Yin (2013) in this regard suggests that the single-case can also be suitable to investigate a "common case" phenomenon, comparing and contrasting the findings of at least two

trust ports can allow for a more robust approach in addition to offering insights if social capital in port community relationships has a comparable influence on port community performance. Studies in the maritime literature have repeatedly employed multiple-case study research designs to establish commonalities across performance, infrastructure, or governance models of ports on a macro/meso level (Moya and Valero, 2017). Even though these studies offer comparative data of multiple port cases, and this study does not directly aim to establish distinct rules on how relationship settings or their nature influence port community performance, the comparison and ensuing cross-case discussion can, however, support the conclusiveness of findings.

Yin (2013) further argues that an advantage of multiple-case studies is the comparative ease of their potential replication. To allow for future replication of this research design, at least two cases need to be selected which share enough commonalities. In the case of this research, shared governance structure, overlap of stakeholder organisations, identical PCM groups and a generally mirrored approach to data collection is employed to increase said future opportunity. Yin further outlines that conducting the same approach in at least two or more cases increases the robustness of the findings and the potential theoretical implications which are based on causal explanations derived from different findings across cases (Yin, 2013).

For the reasons discussed in this section, a multiple-case study design is judged the most appropriate strategy to develop an understanding for how social capital in port community relationships influences port community performance in the context of two Scottish trust ports. The complexity of any port community can limit the immediate comparability of multiple cases. Nonetheless, identified and observed commonalties, despite these differences with no port being like another (Langenus and Dooms, 2015), can allow for meaningful contributions on a theoretical and practitioner level. Like the replication logic applied to the multiple-case study research design, studying the differences and similarities between port community members in both ports will yield insights into how social capital in port community relationships influence port community performance. Furthermore, as research focussing on these PCM relationships is extremely scarce, this research is closely positioned to a revelatory case, as these relationship triads are integral to any port.

#### 4.3.4 Unit of Analysis

Defining the unit of analysis is an integral part when designing a case study (Bryman and Bell, 2015). Case and unit of analysis have to be clarified as they are not necessarily the same in any case study and guide the research focus (Ellram, 1996). A “case” is distinguished from the unit of analysis by having established parameters, e.g., an organisation, event or, in this case, the port’s boundaries, which separate it from the wider social world (Dinwoodie and Xu, 2008; Yin, 2013; Bryman and Bell, 2015).

When the focus of a study is on a single-case or social entity (e.g., a community, company, or group), this is known as “holistic case study design”; if attention is given to multiple subunits within a case (e.g., different member categories within the ports boundaries), this is referred to as an ‘embedded case study design’ (Yin, 2013). This distinction applies to both single and multiple-case study designs. Figure 8 illustrates these distinctions developed by Yin (2013).

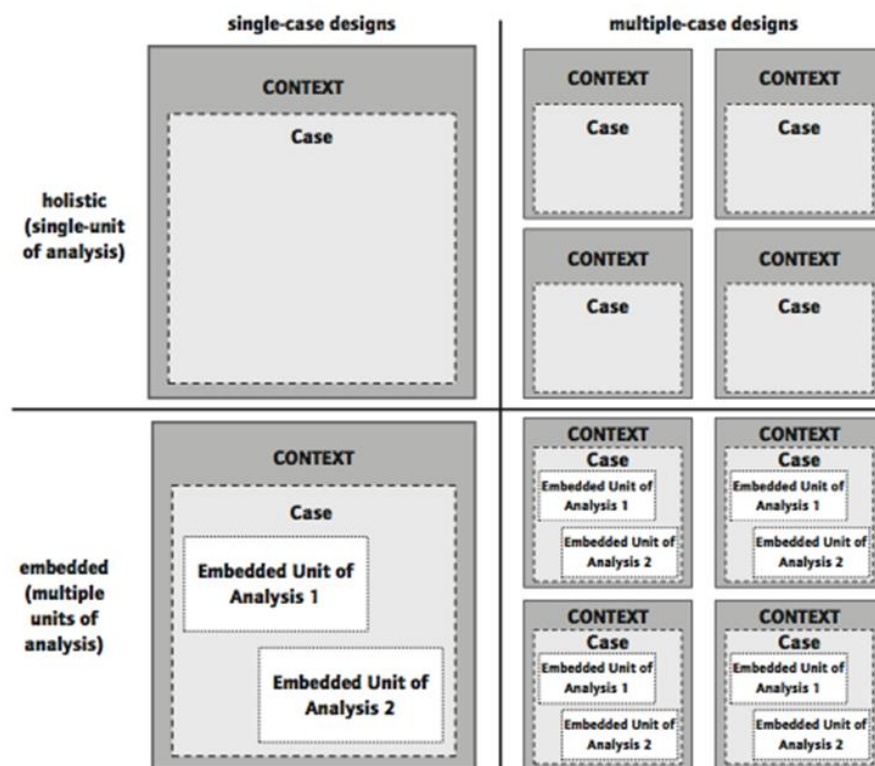


Figure 8: Basic Types of Case Study Design

Source: Yin (2013)

The present study is of an embedded nature and investigates the case of two Scottish trust ports, respectively their communities. Consequently, this study incorporates multiple units of analysis in this embedded multiple-case study design. Trust ports represent the case whereas the individual categories of port community members are the subunits of the cases which represent the embedded units of analysis within the boundaries of the Scottish Trust port.

#### **4.3.5 Selection of the Cases**

As identified in the port performance section of the literature review, Scottish Trust ports present a unique opportunity for analysing the influence of social capital in port community relationships on port community performance. This is strongly related to the governance structure of Scottish trust ports which, in theory, put the development of stakeholder relationships and the continued contribution to the local economy in the focus of the port authority's management strategy (Transport Scotland, 2012). Furthermore, the size and therefore potential growth of any trust port in Scotland, until recently, was subject to government legislation as Scottish Trust ports with an annual turnover of more than nine million GBP could be required to prepare proposals for privatisation of the port (Scottish Parliament, 2015). Additionally, Scottish trust ports from a governance perspective are encouraged to engage with the surrounding communities as they are considered stakeholders of the port (Transport Scotland, 2012).

For these reasons, trust port authorities and the affiliated port community members are expected to provide access to their organisations and share their experience within the port community as the competitive pressures in the vicinity of a trust port is less extreme. Nonetheless, while there is a substantial number of trust ports in Scotland, not all might be suitable for the in-depth analysis of the influence of social capital in port community relationships on port community performance. Initially the researcher identified a complete list of all 47 trust ports within Scotland which are displayed in Table 11.



Table 11: Full List of Scottish Trust Ports

Source: Transport Scotland (2015)

Aberdeen Harbour	Eyemouth Harbour	Rosehearty Harbour
Annan Harbour	Fraserburgh Harbour	Scrabster Harbour
Auchmithie Harbour	Gardenstown Harbour	Skerry Harbour
Avoch Harbour	Inverness Harbour	St Abbs Harbour (Coldingham Shore)
Brownies Taing (Lerwick)	Lerwick Harbour	St Andrews Harbour
Burnmouth Harbour	Mallaig Harbour	St Margaret's Hope Pier (Sth Ronaldsay)
Collieston Harbour	Montrose Port	Stornoway Port
Cromarty Firth	North Berwick Harbour	Tarbert (Loch Fyne) Harbour
Cromarty Harbour	Pennan Harbour	Ullapool Harbour
Cruden Bay Harbour	Peterhead Port	Urr Navigation
Dunbar Harbour	Port Seton Harbour	Whitehills Harbour
	River Nith Navigation	Wick Harbour

Following this initial step potentially suitable ports were further narrowed down based on their commercial activity within the last fiscal year. This step was taken to ensure the ports are of adequate size and would allow for the collection of data from a sufficient number of port community members. The threshold was set at an annual throughput of >300 thousand tonnes which narrowed the previous 47 down to seven remaining ports as displayed in Table 10.

Table 10: List of Scottish Trust Ports > 300 thousand t Throughput

Source: Adapted from Department for Transport (2017)

Port	Region	Throughput in thousand tonnes
Ayr	Scotland West Coast	305,6
Inverness	Scotland East Coast	663,5
Lerwick	Scotland East Coast	628,7
Montrose	Scotland East Coast	504,1
Aberdeen	Scotland East Coast	3770,3
Cromarty Firth	Scotland East Coast	395,2
Peterhead	Scotland East Coast	1148,0

Given that most cargo moving through these ports is non-containerised and throughput is measured in tonnes rather than containers, employing annual tonnage is considered a suitable metric for comparison and identification of potential case study candidates. As the phenomenon was first observed at a trust port with annual throughput of more than >500 thousand tonnes and the number of PSPs rendering integral services as stevedoring already was already limited to two local providers, conducting the case studies in trust port settings of less than half the size of the initial case study candidate appeared insufficient for data collection and triangulation purposes.

The port authority, generally rather protective of their stakeholders, respectively the port community, operated as gatekeepers (Hammersley and Atkinson, 2007) and provided the buy-in for the researcher to get in touch with other port community members in the case of TP1.

After identifying the ports displayed in table 11, these were further analysed regarding their deviation from each other in terms of annual throughput in order to select two cases which are not only suitable based on size but might also allow for the assessment of coherence regarding established findings as advocated by Dinwoodie and Xu (2008). Reviewing geographic locations of identified ports, it was deemed most suitable to select and engage with subsequent case study participants based on their proximity to trust port 1. Given the significant relevance which proximity of actors has for the development of relationships within the shared wider network, selecting the second case study in close proximity to TP1 is considered to facilitate the collection of richer data. While this conclusion initially was drawn from comments made by TP1s participants as well as the authors' observation during their initial research consultancy project, they were validated by the references some of the participants of both case studies made when comparing and contrasting their experiences at both trust ports. Following this selection, existing connections and relationships within the industry were used to approach ports as the chance of being granted access based on an existing bond is greater due to already established degrees of trust and positive experiences in the past (Bryman and Bell, 2015). Despite two potential case study candidates having been identified for the second round of data collection at TP2 or indeed TP3, access was only granted to one of the two ports by way of initial introductions being made by actors and organisations the researcher had worked with or interviewed during the data collection cycle at TP1.

#### **4.3.6 Sampling of Embedded Units**

Considering the two case studies are of an embedded and not holistic type it becomes essential to decide upon the number of embedded units to be analysed (Scholz and Tietje, 2002). As identified in previous sections integral actors within the port community namely, the port authority, cargo owners and port service providers represent the embedded units of analysis for the case studies. To allow for a saturation of findings, the embedded units of analysis are comprised of several organisations. Following the decision upon the subunit categories, considerations regarding sampling methods are discussed.

In exploratory case studies, the most commonly utilised approaches for sampling are either of a theoretical or purposive nature (Bryman and Bell, 2015). Theoretical sampling which, according to Eisenhardt and Graebner (2007, p.27), entails *“that cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs”*, they are chosen *“for the likelihood that they will offer theoretical insight, such as revelation of an unusual phenomenon, replication of findings from other cases, contrary replication, elimination of alternative explanations, and elaboration of the emergent theory.”*

Theoretical sampling is often positioned closer to grounded theory approaches as it is chosen by researchers who look for theory to emerge from the data inductively (Eisenhardt, 1989). As per the quote of Eisenhardt and Graebner (2007) this form of sampling distinguishes itself from the likes of purposive sampling and others through the emphasis it places on selecting and neglecting cases solely on their perceived ability to further theoretical development and understanding.

As mentioned initially, purposive sampling is the other most commonly employed technique for selecting cases or embedded subunits. Bryman and Bell (2015, p. 429) define this approach as *“a non-probability form of sampling. The researcher does not seek to sample research participants on a random basis. The goal of purposive sampling is to sample cases/participants in a strategic way, so that those sampled are relevant to the research questions that are being posed.”*

This, again, illustrates the distinction between theoretical and purposive sampling as the latter is somewhat guided by purposes, facets, entities, or points of interest within the single-case (Yin, 2013). Subunits and their representatives within the cases are consequently chosen for their representativeness of the specified case and phenomenon. Ellram (1996) emphasises that, to allow for external assessment and to ensure the robustness of a case study, selection criteria should be clearly defined. Further, purposive sampling is considered appropriate when only a limited number of cases can inform the research aim, and when there is a need to select cases that are particularly informative (Neuman, 2005).

Purposive sampling is considered most suitable for the selection of the two case studies and the sub-unit representatives considering the context in which the research is based.

The aim of the research is to examine how social capital in port community triads influences port community performance in the context of Scottish trust ports. Thus, there is a requirement to select cases which are accessible even though the maritime industry is rather close-knit and allows for the investigation of multiple subunits within the port community. These considerations resemble the factors outlined by Bryman and Bell (2015) as being well suited for the purposive sampling technique. Theoretical sampling is not considered suitable due to its emphasis on the sampling process being controlled by the emerging theory (Neuman, 2005). The study's sampling process is guided by the need to select embedded units of analysis which are capable of representativeness for the three port community member categories.

Similar to the transferability notion of Dinwoodie and Xu (2008) regarding case selection, port community members within the three categories of port authority, cargo owners and logistics service providers were purposively selected with respect to the following criteria:

- Selected organisations and their representatives must have been part of the port community for an extended period to allow for the formation of relationships through repeated interaction.
- Selected representatives must have dealings with both other nodes of the port community triad as the triadic perspective of their interactions is of particular interest to the study.
- Selected organisations' representatives must fulfil the role of liaison at operational or strategic level between the nodes of the port community triad.

#### **4.4 Data Collection Methods**

Regarding data collection there are two major considerations when choosing its appropriate forms (Bryman and Bell, 2015). Primarily, selected methods must be coherent with the philosophical stances which guide and underpin the present study and, secondly, data collection methods need to remain feasible when considering the researcher's time and resource constraints (Creswell, 2013). Thus, the interpretivist view is that it is only possible to understand how social capital in port community relationships influence port community performance from the perspective of the actors within the port which are beneficial or detrimental to it. Consequently, methods aiming to establish a generalised causality and explanation for such phenomena are not suitable for this research. This, therefore, excludes most quantitative data collection methods like surveys or experiments (Ellram, 1996). Contrastingly this study, therefore, requires methods enabling the researcher to draw interpretations and conclusions from rich data which can be predominately obtained through qualitative methods of data collection. Even though initially considered by the researcher, a longitudinal observation, especially across the three port community member categories were deemed non-feasible because of logistical and resource constraints.

Based on the above-mentioned concerns, two data collection methods are chosen. The main data source is semi-structured interviews, which were recorded and transcribed. These are supplemented and enriched by observations of interview participants and the port community. The following sections discuss each data source individually.

##### **4.4.1 Interviews**

Among the qualitative data collection methods, interviews represent the prevalent choice of researchers; they can, depending on mode, generate rich descriptive data while also allowing the researcher to obtain the personal views and insights of participants on a specific matter (Bryman and Bell, 2015). In the sphere of qualitative data collection via interviews there are two main options available to the researcher comprising the unstructured and the semi-structured interview (Creswell, 2013). While, in terminology both types are exclusive and the researcher has to decide what to brand their interview strategy as, the actual way of conducting the interview can range between the two and incorporate suitable elements of both (Lyon, Møllering and Saunders, 2015). Table 12 highlights the repeatedly mentioned commonalities and differences of the two.

Table 12: Qualitative Interview Types

Source: Adapted from Bryman and Bell (2015)

Type	Format	Characteristics	Application
<b>Unstructured</b>	Interview guide, Leading introductory question, Checklist	Results dependent on interviewer guidance, close resemblance of a conversation, loose and flexible, explorative, and high chance for redundant information.	When a researcher wants to explore unknown territory and has no prior insights into what data might be most desirable to be generated.
<b>Semi-structured</b>	Interview guide, Detailed script	Fairly specific topics, Predefined set of questions with room for further exploration, retains flexibility regarding order and introducing additional questions.	When there is an established research focus which is to be investigated with participants still being encouraged to expand replies and topics during the conversation.

Considering the research aim and the already existing focus on the subject area, which is to be investigated and analysed, semi-structured interviews were deemed the best fitting approach for this research and the ensuing data collection. This increases the chance for the conversation to stay within the research focus and offer valuable insights provided by interviewees. Nonetheless, as highlighted by Bryman and Bell (2015), the two options are not two opposing extremes; rather, the selected interview method is positioned between the alternatives and leans towards one or the other. Interview structure varied significantly depending on the interviewee's thoughts and the direction taken in the conversation. While all predefined questions were answered by participants, this has repeatedly occurred through the natural flow of the conversation with the researcher probing, resonating closely with an unstructured interview approach (Lyon, Møllering and Saunders, 2015). This, though, was not possible with all participants and the researcher utilised the interview guide to direct the conversation with reference to it accordingly. Both methods of interview conduction left the interviewees enough space to express their own thoughts and raise topics they found to be relevant or linked to the subject in question.

The combination of producing an interview guide but letting the conversation flow when it remained within the field of interest was considered as particularly useful and coherent with the research design and philosophical assumptions.

In total, 30 individual semi-structured interviews were conducted with lengths varying from 31 minutes to 1 hour 36 minutes. All interviews were carried out face-to-face, and with the permission of the participants following the introduction by either the port authority or other port community members. All interviews with COs and PSPs were recorded and transcribed by the researcher whereas interviews with the PA, owed to the at preceding research consultancy project and common place of ad hoc conversations were recorded in the form of field notes, revolving around individual questions rather than the entire interview guide. The semi-structured interviews were, when possible, conducted in the port where the interviewees held their offices or in their respective headquarters when applicable.

The interviews for TP1 were conducted over a six-month period between February 2017 and July 2017 which also enabled the researcher to extensively draw on experiences made during the interview process. Having gathered these insights from TP1, interviews with port community members were informed by previously obtained knowledge and access to participants was facilitated by established relationships. These interviews were conducted over a four-month period between February 2018 and May 2018.

As access to the port community of TP1 was facilitated by its respective port authority, a list of port community members was provided by the latter. Subsequently, the researcher contacted the listed port community members to explore their availability and willingness to be part of this research. Contact was made via email and supporting statements were provided by the port authority of TP1 at the time. The initially sent email communication was several weeks later followed up by another reminder restating the purpose and scope of the research. Based on this process a total number of 16 interviews were arranged and conducted with port community members of TP1. The 11 semi-structured interviews with PCMs at TP2 were in their arrangement were facilitated by contacts the researcher established while undertaking their research at TP1. The close proximity of both trust ports as well as the links or presence several port community member organisations had in either of the two ports validated earlier stated considerations for case study selection.

Having developed relationships and rapport with case study participants in TP1 led to introductions by the former to potential participants in TP2. Closely mirroring the process utilised for approaching case study participants in TP1, introductory emails were initially sent to PCMs identified as integral to the port's performance based on feedback by case study participants up to that point and data available from TP2's PCM register. Follow-up emails in-line with adopted practice for TP1 were sent to PCMs not initially responding to the enquiry. Through supporting introductions made by previous interviewees, 11 semi-structured interviews were successfully conducted and transcribed for TP2.

Before any of the interviews took place, interviewees were contacted via email which explained the aim of the research and the topics the researcher would like to talk to them about. While most of the participants consented with being named in the study several participants decided against it as they disclosed information they viewed as critical and potentially harmful to their organisation. As the port community is reasonably dense in terms of triad members which would be interacting with each other, interviewees having chosen not to be named could potentially be identified by contrasting them to the participants willing to be identified. Consequently, to ensure anonymity the researcher chose not to name any of the participants but only disclose their port community category affiliation.

Preceding the actual recording the researcher introduced himself, shared some of their personal background and re-elaborated the study's aim and focus. Commonly, this initial unrecorded warming-up phase lasted for around thirty minutes and the researcher learned about the interviewees background, their organisation and some of the rumours of the port community. The introductory questions were meant to obtain information about the participants and their organisations; depending on them having shared that information prior to the recording, this set of questions was skipped and written up from the researcher's notes. While the average interview duration varied between participants, predominantly depending on their willingness to share more detailed insights into their relationships with other port community members, the researcher spent between 1½ and 2½ hours with each interviewee. Valuable insights were often provided by participants after the recording stopped and the individual interviewee felt more at ease with the researcher and was willing to disclose information freely.



A full list of interviewed port community members of each trust port, their PCM group, position in their respective organisation and interview duration are shown in the tables below.

*Table 13: Details of TP1 Interviewees*

<b>Trust Port 1</b>	<b>Code</b>	<b>Position/Key Area</b>	<b>Interview Length</b>
<b>Port Authority</b>	PA 1	Chief Executive	Multiple formal
	PA 2	Harbour Master	and informal
	PA 3	Business Development	meetings >8 hours
<b>Port Service Providers</b>	PSP 1.1	Director	1 hour 6 min
	PSP 1.2	Regional Manager	40 min
	PSP 1.3	Managing Director	51 min
	PSP 1.4	General Manager	1 hour 23 min
	PSP 1.5	Ships Agency Manager	42 min
	PSP 1.6	Managing Director	39 min
	PSP 1.7	General Manager	1 hour 5 min
	PSP 1.8	Sales Director	52 min
<b>Cargo Owners</b>	CO 1.1	Project Director	41 min
	CO 1.2	Operations Manager	49 min
	CO 1.3	Terminal Operations Manager	52 min
	CO 1.4	Operations Director	1 hour 10 mins
	CO 1.5	Business Manager	1 hour 13 min
	CO 1.6	Site Manager	1 hour 11 min
	CO 1.7	Director	1 hour 36 min
	CO 1.8	Managing Director	57 min

Interviews of port community members of TP2 offered a significantly different perspective on the port community environment participants' experience within TP2 even though both ports were perceived as being subject to the same guidance and trust port regulations (Transport Scotland, 2012).

In the case of TP2, interactions with the port authority occurred during Port User meetings which the Operations Manager of TP2 attended to discuss problems and developments with port community members.

*Table 14: Details of TP2 Interviewees*

<b>Trust Port 2</b>	<b>Code</b>	<b>Position/Key Area</b>	<b>Interview Length</b>
<b>Port Authority</b>	Round Table	Operations Manager	~2 hours
<b>Port Service Providers</b>	PSP 2.1	UK Agency Manager	49 min
	PSP 2.2	Chief Executive	1 hour 4 min
	PSP 2.3	Projects Director	37 min
	PSP 2.4	Assistant Manager	32 min
	PSP 2.5	Director	34 min
	PSP 2.6	Regional Director	46 min
	PSP 2.7	General Manager	41 min
<b>Cargo Owners</b>	CO 2.1	Materials Manager	54 min
	CO 2.2	Financial Director	31 min
	CO 2.3	Project Engineer	52 min
	CO 2.4	Operations Director	1 hour 11 min

While data was collected over periods in 2017 and 2018, dating back five and four years respectively, the analysed data set, subsequent findings, and derived synthesised conclusions offer an explanation for the influence PCMs relationships have on PCP in two Scottish trust ports. Findings and discussion are representative of the contextual setting they were obtained at the time, and address research gaps which have not yet been answered. The questions asked during the interview process focused on developing an understanding for the influence of social capital in port community triads for the port's performance. Table 15 outlines the main guiding and probing questions which were, in some form, asked during the recorded interviews.

Table 15: Semi-structured Interview Guide and Questions

Objective	Interview Questions
1. To identify the role of the port community member in the port.	<ul style="list-style-type: none"> <li>• Please describe your company's role in the port.</li> <li>• How long has your company been working with the port?</li> </ul>
2. To identify social capital facets within the port community influencing port community performance.	<ul style="list-style-type: none"> <li>• How would you describe your relationship with the [insert triad category members]?</li> <li>• <b>Probe:</b> How important is trust for this relationship?</li> <li>• <b>Probe:</b> How important are shared values?</li> <li>• <b>Probe:</b> How important is the resulting network?</li> <li>• How does the relationship influence the port's effectiveness?</li> <li>• How does the relationship influence the port's efficiency?</li> <li>• Would you mind sharing some positive or negative experiences?</li> <li>• <b>Probe:</b> Could a different relationship make it better/worse?</li> </ul>
3. To identify how social capital facets and dimensions interact within the port community setting.	<ul style="list-style-type: none"> <li>• How does your relationship with [insert category member] influence your relationship with [insert category member]?</li> <li>• <b>Probe:</b> How important is trust in this constellation?</li> <li>• <b>Probe:</b> How important are shared values in this constellation?</li> <li>• <b>Probe:</b> How important is this for your network?</li> </ul>
4. To apply and extend Hartmann and Herb's (2015) concept of social capital effects in port community triads.	<ul style="list-style-type: none"> <li>• Dependent on the responses to the previous questions</li> </ul>

These were intended to inform the research objectives. After the introductory phase of questions, the researcher raised questions about the relationships between port community members and how social capital in these relationships is connected to the port's performance. While some questions were occasionally met with short and definite answers, by design they were all open-ended which was meant to encourage the interviewees to engage and provide rich and exhaustive answers (Lyon, Möllering and Saunders, 2015).

#### 4.4.2 Observation

Observation in this research resembles something closer to embedded scholarship than a form of organisational ethnography as the researcher did not spend several weeks with the individual participants even though the process of data collection for each port community extended over a period of several months.

Nonetheless, observation forms a crucial aspect of data collection. Through spending more than only the time for the interview with the participant and their colleagues in their offices, the author developed a more nuanced understanding of the organisation's general culture as well as their approach to doing business.

The time over which the researcher observed TP1 and TP2 differ significantly in line with their respective focus and setting. During the data collection for TP1 the researcher first engaged with the port authority for access to port community members whereas in case of TP2 the port community members themselves acted as a gateway to approach the port authority. At the very start of the research it was integral to understand the essential rules which govern the port community and the various actors within it (Atkinson and Hammersley, 1994). While for the very first interviews the approach was mainly theory led and based on findings of social capital research in different contexts, the engagement with participants and conduction of interviews as well as introducing the talking points was positively influenced by the growing understanding the researcher developed for the port community settings. Non-confidential information the researcher obtained from earlier interviews was, at times, utilised to probe participants regarding their understanding of the port community setting and dynamics.

Therefore, for the first data collection cycle, the researcher spent significantly more time within the port community. The interaction with interviewees, in both case studies, followed an almost identical pattern where the researcher, if possible, spent several hours on the interviewees' site and engaged with other employees or observed their interaction with each other or clients on the telephone. When considering how these observations informed the data analysis process, particularly observations of interactions between PCMs allowed the researcher to evaluate if expressed and communicated behaviour actors was an approximate representation of earlier made claims. Furthermore, open expressions of values or beliefs, particularly regarding "*how things are done*" could be contrasted with observed working environment on aspects as use of language, maintenance or appearance of equipment and the work areas as well as based on reactions of co-workers to the interviewee. All of the above allowed for additional data points the researcher was able to draw from for triangulation of data and educated assessment of the validity or representativeness of data gathered during interviews.

#### 4.4.3 Documentary Materials

Documentary materials are considered a textual record which provides additional information on a phenomenon of interest for the researcher but does not exist because of their research endeavour but independent of the research and interests (Myers, 2013). These materials can be used by the researcher to help make sense of primary data and guide the process of data analysis and interpretation (Denzin, 2008). Consequently, documentary materials are valuable to the researcher as they can be considered reasonably objective in nature and either support or contradict claims which have been made by interviewees (Yin, 2013). Thereby, these aid the process of data verification and reduce the risk of interpretation errors. The main documents which were collected for each case study are displayed in the table below.

*Table 16: Documentary Materials*

<b>Document Type</b>	<b>TP1</b>	<b>TP2</b>
Port Website	✓	✓
Mission Statements		✓
Port Development Data	✓	✓
TP Governance Guide	✓	✓

The individual port websites, as well as the mission statement of TP2, were of particular importance as they allowed the researcher to review how the respective port authorities portrayed themselves and if information about port service providers or cargo owners working within the port was available. Furthermore, the mission statement of TP2 and development aspirations of TP1 communicated via their web presence could later be contrasted against statements made by either port authority or port community members. All used documents were publicly available with the development data having been extracted from the port freight statistics published annually by the UK government and the “Modern Trust Ports for Scotland: Guidance for Good Governance” document published in 2012 by Transport Scotland. Particularly, the port freight statistics allowed the researcher to put actions and behaviour of port community members in contrast to historical developments of the two ports. These data sets particularly informed the contextual setting sections at the start of each case study findings chapter. Furthermore, information on size of cargo throughput per CO or extent of service portfolios by PSPs informed considerations regarding the power dynamics within existing relationships as

well as reflections on the importance of the individual actors for the port community and if their relationship configuration is representative of their network position.

## **4.5 Data Analysis**

Yin (2013), posit that analysis of collected data is among the least developed aspects of case study research. The process of analysis, however, should generally follow a process of data segmentation and organisation through which the researcher will be enabled to distinguish key themes and identify novel insights. To generate these outcomes a common approach is the use of codes to establish themes and assign streams of data to specific topics (Myers, 2013). For the analysis of collected data this study adopted template analysis. The sections below provide the rationale for its selection and elaborate on the process undertaken.

### **4.5.1 Template Analysis**

The selected approach for data analysis of the transcribed interviews and the gathered documentary materials is template analysis, as developed by Nigel King (King, 2012). Template analysis is a thematic approach to qualitative data analysis which “seeks to balance flexibility and structure in how it handles textual data” (King and Brooks, 2016, p. 3). Initially, the researcher needs to derive a list of codes from the literature (template) which are organised according to their hierarchy and association. This organising of codes forms the basis of the template analysis which, ultimately, aims to generate a structure of codes which can capture and order the, rich, gathered textual data (King and Brooks, 2016).

Considering the rationale for selecting template analysis, there are several reasons supporting the researcher’s choice. First, as social capital theory and port performance in isolation are well established within extant literature, a joining of the two has not yet occurred to the extent to which this study envisions. Subsequently, employing well documented and peer-reviewed codes for the initial template facilitates the validity of drawn interpretations and guides the attribution of a posteriori themes in line with extant literature. Second, template analysis is well suited for research which, whilst working with social capital theory to explain the influence of port community relationships on port community performance, still takes an inductive approach to theory building itself (King, 2012). Third, King and Brooks (2016) consequently posit that template analysis in itself is quite an adaptable approach which is suitable for a variety of philosophical

perspectives. Adopting this method of analysis, therefore, ensures that there are no philosophical or methodological issues regarding their alignment for this research. Lastly, template analysis is considered fitting for this research as the hierarchy of codes and the ensuing segmentation of information facilitates the development of an in-depth understanding of the social phenomena in question. Other qualitative approaches, like content analysis, even though also allowing the researcher to work with an established and guiding theory, predominantly focus on frequency of codes rather than exploring the meaning of the analysed data set (Krippendorff, 2012).

While the approach of using template analysis might be considered as more prevalent in research of an inductive nature (King and Brooks, 2016), this study, while pursuing the aim of developing an understanding for the influence of port community relationships on port community performance via a social capital lens, draws heavily from extant social capital research and port performance literature. Subsequently, the template utilised for the categorisation and structuring of the collected data incorporates the three dimensions of social capital in line with Nahapiet and Ghoshal's (1998) conceptualisation as well as prevalent port performance criteria (Woo, Pettit and Beresford, 2011; Schellinck and Brooks, 2016). This a priori template is further reflective of the categorisation throughout the ensuing reporting of findings and discussion sections.

The researcher used the computer-assisted qualitative data analysis software (CAQDAS) 'NVivo' to support the process of data analysis. The identification of themes and the following interpretation of uncovered and segmented information can distinctly be improved through the applied use of computer-assisted qualitative data analysis software CAQDAS (Bryman and Bell, 2015). The software is designed to help researchers analyse and organise large sets of text-based data. The identification and coding of individual text segments facilitates the allocation of themes and different datasets to the individual research questions (Bazeley and Jackson, 2013). While the use of CAQDAS is often critiqued for its tendency to encourage data fragmentation (Webb, 1999), Bryman and Burgess (1994), though, find that CAQDAS improves the transparency and traceability of data interpretation processes and consequently adds to the validity of the conducted research. The process, as with any form of interpretive work being conducted, can be regarded as both subjective and objective and, in such regard, identical to the non-computer aided analysis (Bazeley and Jackson, 2013). The researcher is required to define codes, a priori, and while coding if new themes develop; exemplary of these are "trust",

“values” or “belief”. The coding decision inevitably draws upon the experience, knowledge and other gathered data (field notes, documentary materials) of the researcher. This, again, is impacted by the researcher’s interpretation, ontological and epistemological stance (Bryman and Bell, 2015). NVivo allowed the interview transcripts, field notes and documentary materials to be attributed to established codes, known in NVivo as ‘nodes. Thereby, NVivo helped contrast common nodes within each case and between the two; thus, supporting the researcher in deriving meaningful insights and identifying commonalities and differences between both port communities.

#### 4.5.2 Process of Template Analysis

Considering the process of developing a template and conducting template analysis in a multiple-case study research, King and Brooks (2016) assert that there is no singular answer; rather, it mostly depends on the degree of similarity between the cases to be analysed. As the aim of the multiple-case study approach was to compare findings of both cases based on their similarity in governance structures, geographic location and existing markets developing a single template is understood as the best suited option. Furthermore, as this research explores the influence of port community relationships within the two ports on the respective port’s performance through the lens of social capital theory, a single template incorporating these elements for both case studies seemed most reasonable. Regarding the actual process of template analysis King and Brooks (2016) propose seven subsequent stages. Table 17 displays the individual stages and offers an account of how they were incorporated into the project (see Appendix C).

*Table 17: Stages of Template Analysis*

*Source: King and Brooks (2016)*

Process Stage	Application
<b>Familiarisation</b>	For the initial stage of template analysis, the researcher familiarised himself with reading each of the TP1 transcripts and field notes multiple times after finishing the data collection of the first case study. As the process of data collection spanned several months, recordings of the oldest interviews were listened to again. All audio recordings were transcribed by the researcher himself without the use of any transcription aides which might have distorted themes and contextual references. This presented an initial



	familiarisation period with the data and the conceptualisation of potential themes.
<b>Preliminary Coding</b>	Following the familiarisation stage, data segments the researcher considered relevant to the research questions were marked in NVivo and appropriate codes were allocated to respective themes. This included a priori and a posteriori themes. The a priori themes were selected as they emerged from port performance and social capital literature. For this stage of coding these were the main facets representing the individual social capital dimensions and the main factors determining port efficiency and port effectiveness. Following King and Brook (2016) preliminary coding was carried out using a smaller sample of the TP1 case study (a total of six, two of each port community member group).
<b>Clustering</b>	After the preliminary coding stage, the established initial themes were grouped together in wider themes. General themes capture and incorporate various levels of phenomena essential to answering the research questions. At this stage NVivo proved particularly useful and well suited to merge themes, identify links between codes and highlight these connections within the software.
<b>Initial template</b>	<p>The merged sets of codes and themes functioned as the foundation of the initial template. Where applicable, themes were organised into their corresponding hierarchy which produced a conclusive list of relevant themes. Consequently, the initial template is comprised of these codes.</p> <p>This initial template was purposefully kept rather simple which, according to King and Brooks (2016), reduces the chance of the researcher being reluctant to make changes in the template even though existing data demonstrates this necessity.</p> <p>The initial template is available in the Appendix section of this thesis. After having produced a template based on data extracted from an initial six transcripts, the template was applied to the remainder of TP1 transcripts.</p>
<b>Reiteration of template</b>	As case study TP1 was conducted prior to TP2, the reiteration of the template saw the initial list applied again and the researcher made modifications to the template in any case data that were either not accurately

	reflected by the template or not yet part of the template itself. Adapting the template from TP1 to TP2 only involved minor omissions by incorporating alternate experiences, particularly on the negative effects of low degrees of social capital in port community relationships.
<b>Development of final template</b>	After applying the template to the full dataset of interviews, field notes and documentary materials which involved several reiteration cycles, the researcher considered it to reflect the dataset accurately and the template was finalised. Theoretically, this reiterative process can continue over the course of writing up until the final submission of the thesis, but the researcher subscribes to the point made by King and Brooks (2016) that, at some point, the small gain in quality no longer warrants the extensive efforts of revising the template another time.
<b>Writing up</b>	After finalising the template, it was employed to guide the interpretation and ongoing analysis of data which is further reflected in the organisation of research findings in the following chapters. This involved repeatedly reviewing the final template and establishing patterns between themes. Additionally, as part of this process the researcher had to capture the meaning of what these themes say about aspects relating to the research questions to conclude the process with answering them. In line with the notion of King and Brooks (2016), the template not being the end-product but, rather, an aide to answering the research questions, the researcher omitted aspects which the author concluded to be irrelevant.

#### 4.5.3 Reliability of Analysis

Lastly, it is essential to ensure the reliability and validity of the process of generating findings and insights from the collected data (Myers, 2013). Bryman and Bell (2015) assert that, whereas quantitative research seeks to arrive at verifiable measurements of social phenomena, qualitative researchers first and foremost emphasise the necessity of ensuring that data interpretation is valid and rigorously supported (Guba and Lincoln, 1994). Table 18 summarises and highlights prevalent strategies of qualitative researchers to ensure reliability and increase validity of findings while also offering examples of their application in this study.

Table 18: Summary of Actions to Ensure Research Reliability

Source: Adapted from Lincoln and Guba (1994), and Bryman and Bell (2015)

Action	Method	Application
<b>Triangulation of data</b>	Two or more sources of data are used to improve on the reliability of findings and the preceding interpretation of data.	This study incorporates field notes based on observations, semi-structured interviews, and documentary materials.
<b>Triangulation of sources</b>	This refers to incorporating the views and insights of a wider range of informants with differing backgrounds which can be contrasted against each other.	This study explicitly targeted and interviewed members of the three most important port community groups (port authority, port service providers and cargo owners).
<b>Verification by experts</b>	This method encompasses the discussion of interpretations made by the researcher with experts and researchers to assess their reliability.	The process of analysis has been discussed with two experienced researchers and conclusions were reviewed with PC members.
<b>Participant verification</b>	Research participants review or reflect on the information they contributed to either confirm or contest the researcher's interpretation.	Interviewees were asked if they agreed with the interpretations of the researcher at several stages of the research.
<b>Response Confidentiality</b>	Participants are given the option to remain anonymous, are reminded of their right to renege on participation which, in turn, increases the likelihood of receiving honest answers.	Interviewees in both case studies were kept anonymous. Furthermore, any information they considered critical was omitted from the final transcripts and study.
<b>Thick description</b>	'Thick description' refers to rich and detailed analysis and description of the culture and context of the phenomenon of interest. Thick	A detailed account of the Scottish port sector is provided in earlier sections and the findings offer a

	description allows others to assess validity and transferability of findings.	thick description of interviewees perceptions.
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## 4.6 Research Ethics

Myers (2013) posits that compared to quantitative researchers, qualitative researchers studying social phenomena need to put significantly more emphasis on ethical obligations regarding their participants since they intrude on their personal thoughts and environment to conduct their research. The present study was conducted adhering to the ethical standards established and enforced by Heriot-Watt University. Before commencing field work the researcher had to submit a proposal regarding the chosen approach and the measures, they are going to take to comply with university regulations. Only after approval by the responsible University Ethics body the PhD researcher could engage with interviewees. The following sections briefly discuss the main ethical considerations underpinning this study.

### 4.6.1 Harm to Participants

When conducting research there are typically two types of harm to participants which are to be considered, namely physical and psychological (Bryman and Bell, 2015). In the case of this research there never existed a plausible rationale for the researcher to fear that interviewees might come to physical harm or be subjected to physical danger in any respect because of their participation. Considering psychological harm, particularly in qualitative research there is the underlying risk of causing participants distress by asking questions which might cause offense or invade their privacy, respectively.

Therefore, the researcher reviewed the interview themes and questions carefully while also reassuring any interviewee that any response and its detail is at their discretion.

### 4.6.2 Informed Consent

When considering interacting with potential research participants, informed consent is achieved through providing would-be participants with sufficient information regarding the content, approach and goal of the study so they are enabled to make an informed choice about participating or not (Bryman and Bell, 2015). To ensure participants can

provide the researcher with informed consent, in the introductory email, the nature of the study was laid out, and the intended use of information which might be provided by the participant was delineated. Participants were assured of their rights of anonymity and the option to refuse participation. Furthermore, the initial mail also established if participants would consent to the audio recording of the interview and were assured that the information, they disclosed would be kept safe, anonymous and not shared in any way which might allow for their identification. When meeting participants, the researcher again went through these instructions and made sure the interviewee still felt comfortable participating and sharing their thoughts on the respective questions. Lastly, the researcher offered to answer any question the participant had before, during, or after the interview was conducted.

#### **4.6.3 Confidentiality**

In line with the consideration of psychological harm to participants, an integral ethical consideration is the assurance of anonymity for participants should they desire it (Bryman and Bell, 2015). As alluded to in the previous section, the researcher assured all potential participants of their right to anonymity and/or withdrawal from the study. Since a significant number of participants were competing in the same port or market, respectively, most interviewees preferred to remain anonymous. Another concern of participants was repercussions stemming from shared information regarding the business conduct of other port community groups or their members. Even though some participants stated to not mind about remaining anonymous, the size of the respective port communities might have allowed to identify participants wanting to remain anonymous through contrasting both sets and their roles within the port community. Consequently, to ensure the anonymity of all participants the researcher did consider it most suitable to not reveal the identity of any interviewee but to rather categorise them based on their group affiliation. Furthermore, the researcher elaborated that any information which participants considered confidential or sensitive would not be part of the wider study. Last, any files allowing for identification of participants as well as all collected audio recordings and respective transcripts were stored in separate and secure server locations. Quotes in the following chapters were extracted from interview transcripts but to limited extents adjusted when revealing information potentially making the interviewee identifiable.

## 4.7 Chapter Conclusion

This chapter has provided the rationale for chosen methods and reviewed their suitability for achieving this research's aim and objectives. The present study is positioned within the interpretivist paradigm. This was considered appropriate given the nature of the research aim, which is to understand the influence of port community relationships on port community performance through the lens of social capital theory. The multiple-case study design was selected as the most suitable strategy based on the aim guiding this research. A qualitative approach to data collection was considered most appropriate.

This approach involved conducting semi-structured interviews with port community members in two Scottish trust ports and gathering data through observations and from documentary materials. The King and Brooks (2016) template analysis was used to analyse the data. Table 19 summarises the key methodological positions of this research.

*Table 19: Summary of Methodological Positions*

<b>Area</b>	<b>Position of Thesis</b>
<b>Philosophy</b>	Interpretivism
<b>Context</b>	Scottish Trust Ports
<b>Phenomenon</b>	Influence of social capital in PCRs on port community performance
<b>Research design</b>	Multiple-case study
<b>Unit of analysis</b>	Port Community Groups (CO, PA, PSP)
<b>Data collection</b>	Interviews, documentary materials, observations
<b>Data analysis</b>	Template analysis

## 5 Trust Port I – Findings

### 5.1 Introduction

The findings of this study are organised and segmented into the two following chapters. Each investigated trust port is represented in their individual chapter which further details findings of the case as well as delineates differences between cargo owners, port authority and port service providers' perceptions. Consequently, the presented findings are addressing the overall research aim by delineating how port community relationships influence port community performance through a social capital lens at the two trust ports in question. For this study, port community performance is further segmented into port community efficiency and port community effectiveness with both aspects being illustrated separately. The distinction, itself, is drawn from Neely, Gregory and Platts's (1995) definition whereas, historically, the wider port performance literature used efficiency and performance interchangeably. Incorporating both, the research applies port efficiency and effectiveness criteria as identified in sections 2.2.2 and 2.2.3. Thus, to address the aim successfully, the study must establish how port community relationships at both Scottish trust ports influence the port's effectiveness and efficiency through the lens of social capital. As port communities and their ensuing relationships are not homogenous, the individual port community was further segmented according to the individual actor groups and explored regarding their triadic relationship impact on the ports and its community's performance. The specific nature of these actors, their perceptions of the port and its performance are described in the following chapters.

Reiterating, this study adopts the definition of social capital by Nahapiet and Ghoshal (1998, 243) who consider it as *"the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network"*. They elaborate that social capital is comprised of three distinct dimensions. The individual dimensions comprise structural social capital (SSC), which refers to network positions of actors and frequency of interaction; relational social capital (RSC), which depicts the quality of relationships through elements like trust; and, cognitive social capital (CSC) which displays the degree of shared understanding between interacting parties regarding culture, attitudes, values, and norms.

The present chapter explores findings of the primary case study, TP1, which involved a total of 19 semi-structured interviews and a nine-month period in which the researcher familiarised himself with the port community and its dynamics through fieldwork. The chapter begins with a broad discussion of the port community, delineating the range of actors having been interviewed and being considered representative of the port community. Next, the influence of social capital on individual port performance indicators/factors are explored based on the perceptions of interviewed port community members. This includes the identified contributions of port community members towards port performance, the extent to which social capital moderates these activities, and interaction outcomes. Finally, the effects of social capital existing between two parties in a triadic relationship setting on the respective third party and, consequently, its influence on the performance of the port are examined.

## **5.2 Port Community Setting**

To develop an in-depth understanding of the influence of port community relationships on port performance, also exploring the role of social capital for port community performance, it is essential to explore the individual roles the port community members play for the port's performance as well as how they understand their own role within the port community. Historically, port authorities have been perceived as operating under a landlord model, distancing themselves from the activities in the port besides charging dues from arriving vessels or organisations maintaining and leasing space within the port's boundaries (Verhoeven, 2010). This, in turn, is understood to result in transactional relationships between port authority and other port community members, thereby emphasising a re-active rather than pro-active engagement between all parties.

In the case of TP1, port authority and port community members, particularly stevedoring port service providers, engage in more than transactional relationships and jointly represent the port at industry events. According to the CEO of the port authority this form of relationship setting, and behaviour, is mutually beneficial as:

*"We do know what we're good at but in the end it's the stevedores in the port doing the work. They do compete but we all are looking to get business for the port in the first place. So, at first, we're all working together to get the business and then the stevedores sort it out between themselves. We can't favour either of them, it's good for the customers and helps the port."*



Next, the individual port community member groups are reviewed regarding their perception of the port community setting.

### **5.2.1 Port Authority**

The presented findings on the port authority's perceptions of the port community setting are based on the interviews with their representatives as well as the observations the researcher has made over the course of their nine-month period in the field, working with the port authority.

The executive team of the port authority at the time of the interviews had worked in their specific roles between one and three years whereas some of the port community members located in the port have been working there for more than two decades. Despite the more recent on-boarding of the executive management team, all individuals had been working in the same industry prior to taking up their present role and had already been known (as individuals) to most of the port community members based on previous interactions in their old roles.

*"If you've been working in this business as long as I have been you just end up knowing everybody. Scotland isn't so big you know; you can't help running into each other."*  
(PSP)

This aspect is of relevance as it emphasises that even though the PA executive team had not worked in their role for an extensive period, they had already developed relationships with organisations and individuals present in the port and can be further contrasted against their predecessors regarding their developed relationships and facets with port community members.

When asked to reflect on the existing port community setting the consensual perception of the port authority was that their customer-centric approach sets them apart from their immediate competition. At the same time though, the CEO asserted that given the geographical setting, governance structure, and history, it cannot compete solely on the service, infrastructure, and port connectivity offering the port currently displays. Limitations are experienced regarding draft, tidal restrictions as well as space constraints for new developments within the port's boundaries.

*“I think you simply treat people the way you’d like to be treated yourself. They know we want to work with them. I guess over the years there’s quite a good amount of trust and understanding we built between us and them.” (PA)*

The PA considers the shared understanding between PA, PSPs and COs situated in the port as a crucial aspect of their ongoing development. As a trust port they are further constrained in their options of attracting funds for future port development projects and require the cooperation and commitment of existing PSPs and COs which are in the port. Drawing from recent experiences, the port authority shared that while they do consider themselves treating everyone equally, there is a certain weariness regarding the degrees of trust they extend towards some of their PSPs as that increases their risk to be taken advantage of. Equally, two port authority representatives voiced concerns that the shared understanding of how to use shared information is not incorporated by all participants of port management meetings. While no interviewee of the port authority disclosed an actual record of a PSP breaking these informal codes of conduct, it was repeatedly mentioned and by some emphasised as detrimental to the exchange of information. Particular in joint meetings which in turn according to the PA reduces the effectiveness of the port.

*“I’m sometimes just really surprised how much people do share in these meetings. I’m not sure how comfortable I am with it either. [...] I mean they are competing with each other, and they (a PSP) might just use what they’ve heard here even though they shouldn’t. There’s just no way to prove it. [...] I’ll definitely make sure to not share anything that could be difficult.” (PA)*

The above comment highlights the feeling of uncertainty regarding some port authority executives concerning the trustworthiness of some PSPs. Considering the whole port community, according to the PA, this severely limits their ability to openly discuss aspects of their business strategy with other PCMs even though their input, respectively feedback, is considered as beneficial to the development of a cohesive port development strategy.

In general, though, the port authority members assert that they do consider the communication in the port as open, frequent, and direct which, in turn, is enabled by the ease of getting hold of all PSPs and COs when necessary as well as the trusting

relationships and the coherent approach to developing these relationships with all their PCMs.

### **5.2.2 Port Service Providers**

Considering the perceptions of port service providers in TP1 regarding their role, the port community relationships, and their individual contributions to the port's performance, there appeared the need for further delineation. Following the interviews of all participating PSPs it became evident that while there are certain aspects which are supported by a consensual view, there were found to be significant differences regarding their perception of existing relationships based on their location on either the south or north quay or outside the port's boundaries. Consequently, the following findings are reported and distinguished accordingly.

#### **South Quay Port Service Providers**

Port service providers on the south quay are situated close to the premises of the port authority and characterise their relationship with the port authority as genuinely positive for their own operations in the port as the port authority has proven to be reliable, trustworthy, and very interested to learn more about their PSPs' concerns and plans. Contrastingly though, this level of trust between PSPs and the port authority does not necessarily extend to other PSPs or cargo owners in the port. This shared understanding and trust, as well as the lack thereof, is further highlighted by the quote of a PSP company located on the south quay.

*"You know, it's very informal when we have a chat. I think their door is open, my door is open all the time. If I need to speak to the port authority I just go, see them. So yeah, it's very informal. [...] Thing is, I trust the port because we've been doing this for a long time and it's in their interest as well as mine you know. I mean if I have an inquiry, you know often obviously, it includes the sizes of vessels, so I have to speak to the harbourmaster. You would tell certain people, but you wouldn't want to tell everyone in the port you know."* (PSP)

Generally, though, the impression of PSPs on the south quay is that the port community, particularly port authority and port service providers are working as a team which, in turn, benefits all port users. The shared "can do" attitude which has notably been nurtured since

the previous CEO took up their role more than six years ago had an invigorating effect on the PSPs regularly interacting with the port authority, especially when bringing new clients in to showcase the port.

*It took some time to get back that confidence into the port authority to get things done in an effective fashion, but I do trust them that way. We've had people coming down to see the port, they liked the port and liked what they saw. It's all about getting them in the door, show them what we can do, how we can do it. It's about raising the profile up as well you know. People are unaware of what the port does. And people here had that shared sense of making the port better, raising the profile. It's quite a community down here, it's good teamwork. (PSP)*

This notion is shared among most south quay PSPs who reported that the informal way of communication between them and the port authority really benefits their and the port's responsiveness to any upcoming customer queries. Furthermore, the proximity of PSP and PA premises facilitates the rapid exchange of information, particularly if something urgent comes up which requires the immediate attention of someone.

Despite this informal approach to communication and the ease of getting hold of port authority representatives or other involved PSPs, several PSPs reported the approach taken by the port authority regarding the communication and enforcement of health and safety regulations lacked an understanding of their individual business processes. In most circumstances, while important and urgent information was found to be communicated personally or via telephone and rarely via email, PA health and safety representatives made use of all these channels, thereby disregarding the urgency of the shared information. This lack of understanding and acknowledgement of what information is important for whom, as well as what communication channels are to be used, limited the effectiveness of port authority communications as PSPs were reluctant to react to, or respond to, calls or emails. While this problem was mentioned by north quay PSPs as well, they reported to only have received the emails but no immediate communication via other channels. Nonetheless, the approach of the PA, to them, felt equally overbearing.

## North Quay Port Service Providers

The north quay port service providers, to an extent, were found to share the notions of the south quay PSPs. This is particularly accurate when comparing their comments regarding the overbearing communication and perceived mismanagement of health and safety regulations by the port authority. Similarly, interviewees did attest the previously discussed “can-do” attitude as well as having developed an amenable and easy to deal with customer-centric approach.

Contrastingly though, north quay PSPs generally shared the feeling of becoming less valuable to the port because of their strong link to the cargoes which have traditionally been handled in the port and which were also connected to further services they provided to cargo owners. While this feeling was not openly expressed by the impacted PSPs, in separate meetings with the researcher cargo owners of “uncommon movements” disclosed that their dealings with the respective parties regarding storage space within the port have been rather difficult.

*“I don’t think they really wanted us in the port as they wouldn’t be handling our stuff. Sure, we’d rent the space, but I guess they just weren’t satisfied with that. [...] again, I guess they just didn’t see our business as something that adds to their own operations. Now we’re looking for alternatives. Quite a shame.” (CO).*

The above excerpt highlights the current situation the port is facing; while customer centricity and a “can-do” attitude is expressed by many PSPs and COs alike, the behaviour and mindset displayed above limits the ability of the port to diversify and attract new business. The missed opportunity in the excerpt, while being an extreme manifestation across the north quay, was found to be representative of the attitude which several north quay actors displayed. While the PA section of the port community section elaborated that the port authority found itself to be impartial and fair regarding its dealings with all port community members, some PSPs shared a genuine feeling of being treated differently.

In contrast to this notion of some PSPs at times feeling they were treated unfairly, there was consensual agreement that in terms of being business friendly and overall trustworthy, the previous and current CEOs of the port authority have generated a lot of

goodwill and reduced friction which has existed between past port authority management teams and PSPs.

*“When you look around, all these have been built fairly recently (warehousing facilities) [...] if I would have asked my boss fifteen years ago to invest that much money into our location here, ... it would’ve been a straight no. There has been a lot of bad blood between the port authority and the company in the past. [...] Now, I could phone him this second, tell him what we need and why we should do it and there’s a good chance it would happen” (PSP).*

This quote, in turn, highlights the relevance of trust and goodwill between the port authority and PSPs as well as the commitment of both sides to invest in the port. As the port has transitioned through several downturns in different cargoes, for some time the volumes had not significantly changed. Nonetheless, the currently existing port community relationships between PA and PSPs as well as COs appears to have aided a greater commitment of individual parties to the port and its joint development.

### **External Port Service Providers**

For external port service providers, it is important to delineate ships agents working slightly further for their COs in TP1 and other external PSPs which render services in addition to offerings by port-centric service providers on the north and south quay. While, both groups again share a very positive outlook regarding the relationships they have with the port authority, the latter group in contrast to the ships agents has repeatedly been highlighted as not complying with the port’s code of conduct and its health and safety regulations.

The ships agents, though, consider their relationship with the port as rather fortunate; particularly, the shared understanding of how markets function and what the responsibilities as well as capabilities of individual actors were highlighted as setting the port authority apart from other competitors in the Scottish context. The willingness to develop an understanding for the requirements of port users is considered as truly beneficial as it allows all parties to perform best in the areas in which they are knowledgeable and competent.

*“I think the difference between TP1, and other Scottish ports is that it clearly shows a willingness to deal with companies in that kind of accepted way of agents and stevedores bringing the business in and the port being there to listen to the actual requirements of the port users to understand what they need and how markets might change.” (PSP)*

Equally, external PSPs emphasised the ease of communicating with the CEO of the port authority as it increases their own responsiveness to customer queries and, in turn, increases the chance of TP1 to attract business it might have lost out on with longer and more formalized ways of communication. Additionally, it was emphasised that the informal agreement of everybody “sticking to their traditional roles” was appreciated by ships agents as it allows them to focus on delivering a good service to their clients rather than fending off competition from the port authority.

*We particularly like the CEO and what they bring to the port. In fact, he’s very open, he’s approachable, he has also a good understanding of the market we work with ourselves. He also understands and has appreciation for the commercial element, and we find that they are there to support our business rather than to try to drive the business or to influence our business too heavily.” (PSP)*

Contrastingly, external port service providers which are rendering additional cargo handling or vessel-related services on a standby basis, are being viewed as regulated and monitored less extensively than they experience it themselves. In several interviews port-centric PSPs voiced concerns over external PSPs not complying with health and safety regulations which they themselves would have been made accountable for. External PSPs not being held to the same standard because of their limited awareness of how things are generally done in the port, either through informal understanding or formal communication, lead to port-centric PSPs considering their own values and efforts to ensure a compliant health and safety environment. Furthermore, several times, port-centric PSPs brought up the inequality they perceived in regard to the financial expenditure they have based on operating from permanent facilities within the port rather than only “showing up for the job when needed”.

*“They just show up when a ship of [...] is coming in, I think it’s the only business they’re handling here. You know, there have been incidents where they just didn’t pay enough attention and people could have gotten hurt. We’re committed to the port and pay for our*

*warehouse and everything, but they're getting off easy and pay the same as we do. It's not fair, just not fair."* (PSP)

Since both port-centric and external PSPs are charged the same fees regarding their cargo or vessel handling activity, they argued that the port authority could do more for their local PSPs to show some appreciation of their long-term commitment to the port. As highlighted above, the PSP in question had an exclusive service contract with a local cargo owner which sourced the required services from outside the port rather than utilising port-centric service providers. Next, the port community setting of cargo owners at TP1 will be explored.

### **5.2.3 Cargo Owners**

Like the distinction of PSPs in the previous section, cargo owners were found to often differ regarding their view of existing port community relationships and their current state based on whether they have traditionally had facilities and operations directly in the port or if they could be attributed to cargo volumes which, historically, have been less common to move through the trust port. While there were, again, some differences regarding the perceptions of port community relationships between COs, port authority, and port service providers, these were found to be less dependent on the north and south quay divide but more on the traditional dry and wet bulk cargos or other cargoes. In consequence, the following findings are distinguished by common cargo movements and uncommon cargo movements.

#### **Common Cargo Movements**

For the category of cargo owners affiliated with more traditional cargoes, particularly dry and wet bulk, several interview participants shared the notion of being less appreciated in the current port community compared to how things have been with the previous management team of the port authority. This became particularly evident in regard to the port authority's display of interest in frequent interaction, respectively communication, with the individual "traditional" cargo owners.

*"You know the previous guy, he came over here quite often, just did his rounds and checked-up on everybody. He always asked how we're doing and was up for a chat. It didn't really matter if there was a problem or not, it was just good to know you could*



*... speak to him in person every day. He'd tell us how the authority is doing, and we'd tell him about our business.” (CO)*

While the previous quote highlights the reduction of interaction frequency as well as the reduced exchange of valuable information, some cargo owners in this category did attribute the development to the maturity of the existing relationship, no longer requiring the frequent interaction to establish a collective understanding of their business relationship and to build trust between both parties. Contrastingly, a set of cargo owners interpreted the development to the current management team of the port authority to care less about the traditional cargo volumes as they represent business which has already been secured for the port and is in no danger of relocating to a competing port in the region. This line of thought, which has been expressed by some cargo owners, further led to them reducing their commitment to openly exchange information with the port authority.

*“It wasn't always like that you know. Now I feel they're just getting in touch when they need something. If I try to get a hold of them it can be quite difficult to find a slot; I don't know, to me it seems the new guys care more about the money and less about the people.” (CO)*

The above-mentioned quote highlights the stark contrast between the perception of some of the cargo owners affiliated with common (traditional) cargo flows and most other port community members regarding the port authority's approach towards port and relationship management.

### **Uncommon Cargo Movements**

In TP1 cargo owners associated with project cargo or break bulk are categorised in the uncommon cargo movements as they have not historically been prevalent generating or contributing cargo volumes for the port. Like the general view of PSPs, cargo owners affiliated with uncommon cargo movements expressed the goodwill they extend towards the port authority which was found to mainly stem from the very honest and informal approach to conducting their business as well as offering commitment and service which go beyond the notion of only servicing clients if money is to be immediately made; thereby building a positive reputation of the port as well as the commitment of the respective cargo owner.

*“Yes, the PA is approachable and friendly, and the rates are reasonable. [...] They are just more human; you can ask them directly and they will directly answer you. They are very keen to work. The harbour master is fantastic. He’s fantastic and nothing is ever too much trouble. It just seems like they always want to work with you rather than just get their money.” (CO)*

Despite this consensual view regarding the port authority and its approach to port and relationship management, COs of this category offered insights into the split reception they at times experience in the port. As TP1 like many other ports is constrained in its quayside space, there is an ongoing perceived competition between common (traditional) cargo owners and their affiliated PSPs, and new entrants to the port which could disrupt the existing cargo hierarchy and position of the respective companies in the port. One interviewee shared their frustration during the interview when asked if there are any reasons they could imagine for the unwelcoming and even port performance damaging behaviour of these port community members.

*“No, not at all. It’s all just devilment. There is no competition between us at all. In fact, it would only bring them money if we’re in the port. Because we will need things being lifted on and off ship. We will need the use of forklifts and cranes. We need to buy steel coming in through the port. Our end goal is to have a large facility with a direct or near to direct quayside facility. So, we can build things that we otherwise couldn’t get transported down the road.” (CO)*

Furthermore, new cargo entrants to the port highlighted the adversarial approach of the respective PSPs to doing business. They shared their frustration of being met with ambiguous and calculating behaviour when trying to engage in direct and honest negotiations with them. Nevertheless, this experience, while being shared by others, seems to only apply to a minor group of PSPs in TP1.

*“With others we only had small interactions, but we are very happy with how things are working out with most of them. We’re very open an honest when we do business with someone. The other PSP is just really adversarial for absolutely no reason at all that we could work out that is. And we’ve been certainly very open and honest with them so far.” (CO)*

The varying settings of port community relationships between port authority, port service providers, and cargo owners were all to some extent found to impact the port's performance, respectively port community performance. Next, the findings of the immediate impact these relationships and their facets have on port performance have will be reported.

### **5.3 Port Effectiveness**

To further delineate the findings of links between social capital in port community relationships and port performance, findings are presented according to their prevalence and within their respective domain of port effectiveness or later port efficiency. This includes a further segmentation of facets to attribute social capital dimensions or aspects appropriately. Generally, it is essential to note that performance (effectiveness and efficiency) of the trust port in question is not contrasted with other ports. The interviews, and consequently findings, in that respect draw from comparing historical performance outputs of TP1 to current performance, including experienced limitations and improvements as well as the shared understanding of participants of how social capital in port community relationships could further benefit their own and the port's performance.

#### **5.3.1 Fulfilment of Special Requests**

In the case of TP1, the fulfilment of special requests as the most predominant differentiating port effectiveness factor has been repeatedly highlighted by all three port community groups. Noteworthy is that, despite differences in terminology and way of expression, the common theme throughout the interviews with port community members was that the port authority is considered as amenable, easy to work with, and results driven.

*“They’re always keen to bring business into the port and are a lot easier to deal with than some of the other ports in the area. [...] They really want to understand what it is we need to get the job done and how they can help us to bring the business into the port.” (PSP)*

The port authority itself equally emphasises their commitment to enable PSPs and COs alike to flourish through selecting TP1 as their port of choice. The CEO of the port authority expressed that they are open to any proposal brought to them and will try to be as accommodating as possible while also considering the requirements and situation of existing port stakeholders. Further, it was suggested that having developed strong long-

term relationships with current COs and PSPs often increases the ability for fulfilling special requests. This was mainly associated with the notion that within the port community the interaction between port community members is not a zero-sum game. COs recalled situations where they have been willing to accept an obstruction of their quayside activities for certain time frames as it allowed the PA to bring additional business into the port. Similarly, one of the stevedoring PSPs elaborated that their own ability to fulfil special requests was often tied to the willingness of the port authority to accept late changes and to allow for deviations from standard operations.

*“They’re (PA) really good that way. We asked them if we could use the area as storage until the vessel arrives. Getting everything off, moving it around to our site and back would have taken an awful lot of time, probably too long altogether.” (PSP)*

In turn, the port authority disclosed that they often feel only able to accommodate special requests because port community members consider them as fair and treating everyone equally without forms of preferential treatment, disregarding the size or volume of potential business propositions.

*“At times it’s difficult you know, especially when we got a new customer and [...] ask why they get the same treatment. But then I do think they appreciate us trying to treat them all the same even though none of them would necessarily mind getting the best deal. It simply creates a level playing field for everybody.” (PA)*

Despite this appreciation, which has been confirmed by COs and PSPs alike, some of the interviewees expressed their concern, and at times disbelief, of new port users experiencing the same treatment and being accommodated in the same fashion as themselves. Based on their long-term relationship and commitment to the port community, among some there was a strong belief that this should result in them receiving preferential treatment, especially when compared to more recent additions to the port community. Nonetheless, the consensus remains that PSPs and COs trust the port authority to do right by them and to not seek an immediate gain by pitting them against each other or primarily pursuing their own business interests.

### 5.3.2 Reliability of the Port

Regarding the reliability of the port, there was general agreement among interviewees that the port authority was reliable when having reached any contractual agreements or having confirmed an agreement in an informal fashion. It is important to note that cargo owners and port service providers, while considering the PA itself as reliable, did not perceive the reliability of the “port”, as such, the same way. This according to participants comments, is attributable to the tidal restrictions’ vessels frequenting the port might experience.

Despite this difference of understanding, perceptions of PSPs regarding the reliability of the port authority have been developed over long periods of beneficial interactions. The interviewed PSPs mutually agreed on the notion that the port authority under current management has proven to be trustworthy and does not attempt to renege on previously agreed terms by introducing additional surcharges or limiting service offerings within the port community. This was often commented upon as experiences across other Scottish ports varied significantly. In some of the disclosed negative experiences, agreed upon conditions were not upheld by the respective port authority and costs were passed down to the cargo owner. Consequently, according to the PSPs, this severely affects their own reliability and ability to produce accurate costings for the COs, thus limiting their overall willingness to frequent the port, especially if other ports can provide competitive alternatives for the required services and have been shown to not solely pursue their self-interest despite having had a prior agreement with a PSP.

*“They are just very straight forward to work with. I’m not saying nothing ever changes with them either but if it does, they give us a call and we usually manage to sort it out easily enough. Once they did end up charging us more than was agreed for something we didn’t even do but we told them, and their accounting team sorted it quite fast” (PSP)*

Cargo owners situated within the port itself further elaborated that the shared customer-centric focus of port-centric PSPs and PA, alike, enhance the reliability of port services. During interviews several cargo owners independent from each other highlighted situations where stevedoring PSPs lend part of their equipment for minor tasks without charging or offer to help with operational tasks if they have spare capacity to do so. These

services and the exchange of equipment took place outside of contractual agreements and without the expectation of an immediate return for the helping party.

*“We had to discharge the vessel quite fast but some of our gear had broken down, so we rang them (PSP) if they could help us out this time. They did and didn’t even charge us for it that time. [...] Knowing that you can rely on them to do what they can to help us definitely makes a difference.” (CO)*

Sharing equipment within the port community, consequently, was found to enhance the reliability of the port since it allows individual parties to buffer their own shortage of labour or equipment with resources of the port community. In some reported instances, competing stevedoring companies within the port helped each other by supplementing each other’s workforce for jobs that did prove more labour intensive than previously estimated. Relating this to port reliability perceptions interviewees of the PSP category particularly emphasised that,

*“the actual customers don’t really care who did the job, if they get a bad and unreliable service they think of the port rather than only the company doing the work. [...] If we mess up it still hurts our reputation, but it also reflects badly on the reliability of the port (community) as a whole.” (PSP)*

Furthermore, interviewees representing the port authority shared similar views in regard to the benefits stemming from having these mutually beneficial relationships within the port community. While they did acknowledge that port-centric stevedoring companies compete for business on a regular basis, they highlighted that if these PSPs are capable of cooperating at times of need, it increases the availability of services and, thereby, the reliability of the port while also raising the profile of the involved companies as well as the port itself.

### **5.3.3 Accuracy of Information**

Closely linked to the reliability of the port and its operations, interviewees found the accuracy of information which is exchanged on an ongoing basis between port community members to significantly impact their own as well as the port’s overall effectiveness. Accuracy of information was found to be understood as a synonym for information reliability and, thereby, as the frequency of communicating factually wrong

or misleading information. Furthermore, having reflected on distinctions in greater detail, port community members (PCMs) argued that exchanged information needs to be correct and precise, as they often experience communication of information which is factually correct but too vague to be of actual use.

Ships agents represented in the PSP category as well as representatives of the port authority both independently of each other asserted that developing and fostering a trusting relationship is perceived as mutually beneficial to both parties as it allows for the exchange of more accurate information. While neither side of the relationship would disclose what exact detail of information they are exchanging, both confirmed that the trust existing between them enhances the willingness to share information as well as increasing the accuracy of information which is shared. This, in turn, benefits the accuracy of information the port authority is able to utilise for its own business forecasts, thereby improving the effectiveness of their operations and suitability of their strategy while also giving them the opportunity to leverage the obtained information when negotiating or planning matters with other port community members.

*“Agents have their ears close to the market ground and often inform us of changes in the market, they are committed since they value doing business with us.” (PA)*

Comments across all port community member categories further suggest the trust extended towards the individual PCMs benefits the port's effectiveness because the exchange of more detailed information allows all involved parties to increase their own planning accuracy which, in turn, benefits port users frequenting the port. On a similar notion some PSPs emphasised that only when they feel they can rely on all involved parties equally do they experience an improvement of the ports and their own performance. Considering the significant variety of PCPs involved in the daily operations of the port as well as the port authority itself, the accuracy of information was understood to only be as good as the “worst bit”. Ships agents arranging for the arrival and servicing of the vessel require accurate information from several supply chain/port community nodes prior to and after the actual arrival of a vessel. In absence of streamlined and collaborative IT solutions as experienced in TP1, they stressed the relevance of receiving coherent and accurate information from all involved PCMs as they inadvertently relay the obtained information to their client.

*“When you talk to [...], he always knows. If he doesn’t, he won’t make you wait but get right on top of it and get back to us asap. If he tells us that is how things are we trust him, and it saves us calling around.” (PSP)*

Referring to the trust extended to the port authority regarding their information network and accuracy, multiple PSPs asserted that with the relationship they have with the current port authority members they are confident in the reliability of any information which is shared with them. Reflecting on the historic development and past experiences, though, a consensual view exists that this degree of trust had not been extended to the predecessor of the current harbour master. PCMs shared the perception that, in the past, information which had been shared with them was lacking in accuracy mainly because the person in question was not aware of specific requirements and, further, had not shared the same customer-centric mind-set as displayed by the current port authority representatives.

*“In the past you just got the feeling he couldn’t be bothered to look things up. We often felt like certain business wasn’t welcome and that’s why he was reluctant to make the effort. Especially if it meant more work for him.” (PSP)*

While some PCMs argued that this attitude and behaviour while damaging existing relationships and limiting the accuracy of shared information, many stressed that its adverse effects were more strongly felt in regard to the general availability of information.

#### **5.3.4 Availability of Information**

In addition to the general accuracy of received and communicated information within the port community, the availability of the actual information which is sought after represents a crucial aspect of port effectiveness. In the case of TP1, port authority, port service providers and cargo owners alike did share the notion that, in the Scottish context, having this strong network of relationships within and outside of the respective port community is significant for the success of their individual endeavours.

*“Oh, it’s definitely about whom you know. They’ve recruited [...] which is a really good thing. Him having been on our side of the business will give them a lot more opportunities because he knows people and understands how we work. We’d like to develop something*



*with them because our business can bring a lot of information to them. Helping them to develop business plans and business models.” (PSP)*

The above quote of a ships’ agent emphasises the benefits of developing a diverse network structure of relationships, particularly those which, in this case, allow the port authority of TP1 to access a wider range of information through added network nodes and the ability to access them based on the reputation and understanding the respective employee has developed with these nodes in the past. Given the otherwise limited tools for market research, utilising existing networks which are willing to share information because of the strong relationships they have developed with the port authority enables the latter to plan more precisely and effectively.

Another aspect which was disclosed by cargo owners especially those not located directly in the port, was the notion of timeliness of information and responsiveness to requests for information. COs highlighted that while in other ports they usually tend to communicate everything through their agents or other indirect channels, in the case of TP1 the communication and availability of information is considerably better. The CO’s comment, below, attributed this to the level of trust both they and the PSP jointly extend to the port authority.

*“I just love the fact that everybody can talk to everybody. We can get things done so much quicker because we don’t have to worry about a lot of the formalities or procedures because we all trust each other. Everybody in that triad working together makes such a difference to the whole operations side of things. You need to know you can rely on your agents to get things done but, just as much, it really helps that the port wants to help you out and is willing to take part in making things better for their customers.” (CO)*

Similarly, COs highlighted that being able to communicate with port community members beyond the obligations defined in their contractual agreement is a significant advantage. At the same time, though, the willingness of port community members to engage in and develop such relationships needs to exist before the CO can benefit from their relationship management investment. The following quote particularly highlights the cost savings and efficiency gains of strong relational bonds with TP1 port community members which sets it apart within the Scottish port context.

*“[...] if I ask somebody to do something for me, I just can’t ask a stranger, can I? Well, I can but it’ll cost me three times as much, so relationships are really important. I’ve been on the phone to the operations guys in TP1 at times they’re not generally in the office and they all have been really helpful. The contractual piece just goes out of the window at such times and it’s just about getting things done, we tidy the paperwork up on Monday and that is just all about relationships.” (CO)*

This notion of port community members of TP1 often extending their services and help beyond contractual agreements was found to be shared by more than two-thirds of the case study participants. Cargo owners, particularly, reported that TP1 and the approach taken by the PA towards relationship development and the honest as well as direct communication with any of their port community members created a trusting relationship setting which often allowed them to bypass the existing standard of communicating requests and feedback through their agent. COs emphasised that, generally, ships agents (PSPs) would have stronger relationships with the ports as they interact on a higher frequency and have developed the relationship over an extensive period. Nevertheless, this common way of business conduct and triadic interaction differs in TP1 as the following quote reiterates.

*“I wouldn’t phone other ports because I would leave it to our agents to phone as they’ll have the relationship with them. Being able to just get on top of things on your own makes things so much easier and better. So instead of having to get two people out of bed you only bother one and the whole process ends up being faster.” (CO)*

In line with the availability of information, adequacy of the same was reported to greatly benefit from the existing shared understanding between PCMs which will be reviewed in the next section.

### **5.3.5 Adequacy of Information**

Adequacy of information in interviews was often referred to as quality and usefulness of information. Generally, participants reported that receiving the right information, particularly without specifically having stated what it was they were looking for, was a significant benefit they experience when working with port community members in TP1. Participants from the port authority side in conversations and interviews did not refer to

the adequacy of information as being something they particularly strive for but more so reflects their approach to port management.

*“They just really listen and want to learn how our business works and what we need to get the job done. Sure, they want our business, but you get the feeling they want to understand our operations. It’s really helpful to not have to discuss everything repeatedly with them” (CO)*

With the PA having developed an understanding of what information is valuable and relevant to their port community members, the adequacy of shared information was found to be improved which, in turn, benefits the port’s effectiveness due to decreased investments into information exchange and the reduction of ambiguous communication based on limited understanding of the factual requirements of PCMs. Port service providers further highlighted that while usefulness and quality of information were important to them, they also consider reliability of information as crucial for a port’s effectiveness. Following this notion, several PSPs reiterated that for their own planning cycles the reliability of tariffs and any other form of charges was of great significance as their own initial proposals for clients will reflect those numbers. Ships agents reported that deviating from those at later stages severely impacted their own reliability. The trust placed in those agreements between PA and PSPs when eroded will result in the port no longer being endorsed by PSPs if feasible alternatives exist.

*“We’ve gone through the same exercise of asking for some input on charges in other ports and there was no chance, no chance. When we ask TP1 it is all so much easier. They’ll give us a rate and yes, it might be somewhat higher, but they’ll stick with it, they’re 100% reliable. In other ports we are literally working blind. We are working completely blind for 18 months down the line. That leaves a huge risk and hole in the potential budget of our client.” (PSP)*

Other ships agents seconded the notion that, at times, the information might no longer be accurate when compared to contemporary costing but if the port authority proves to be reliable and adherent to its initial agreement it provides planning security for PSPs. This, in turn, reflects positively on the port, particularly in the existing market climate. Equally, trust in the adequacy of information was reported to decrease the necessity of verification through third parties which, in turn, increases the efficiency of involved parties.

A negative aspect, though, which was disclosed by some cargo owners was the aspect of the port authority only now sharing information they considered adequate or relevant for the respective CO. While this in several cases led to the earlier mentioned efficiencies, the COs in question were found to be left out of essential feedback loops as the PA, based on their perceived understanding of the COs business, had not considered the information or news to be of greater significance. This, consequently, reduces the access of COs to information and further limits the port's ability for future development.

*“It’s not happened regularly; it seems to have been forgotten. Talking regularly with each other and exchanging our plans would help the joint development of the port and our own operations. Well even to know, being aware would be great.” (CO)*

### **5.3.6 Reputation of the Port**

In the case of TP1, the reputation of the port was perceived to have a significant impact on the port's effectiveness, respectively performance. While port community members shared the notion of port reputation being important to attract new business, there were different notions of where the actual reputation is derived from. With significant personnel changes in the port management team over the last five years, multiple PSPs and COs reported that considerable improvements stem from the new harbour master and chief executive. Particularly, ships agents arranging for the arrival of vessels highlighted that the trust they place in the harbour master raises the reputation of the port which then gets shared in their own networks.

*“Oh yeah, you know about the last harbour master. [...] is the harbour master now, he is great, great ship handler. There’s a lot more trust in [...] than there ever was in the old guy you know. Definitely raises the profile. Also helps bringing people back. It makes such a difference you know. They have a confidence in him you know. He’s worked here for a long time, a lot of years. He knows the port inside out. You need good people. It really helps the reputation of the port as well. (PSP)*

Furthermore, ships agents and cargo owners emphasised the perceived benefits of the existing shared approach of working with port users between port authority and port-centric service providers. TP1, based on the strong relationships of PA and stevedoring

PSPs has, according to Cos, managed to create a port reputation of being amenable, customer-centric, goal-driven and always willing to learn from their client base. They considered the current setting as integral to the port's ongoing success and performance as it represents an advantage and acts as differentiator to other Scottish ports.

*As long as TP1 continues to be as accommodating and doesn't lose its customer focus, they are going to do great. It's almost like this special mindset they have down there. It's not taking your customers for granted, which you don't get in other Scottish ports I guess it's just a different mentality of the people working together in the port. (CO)*

The above quote highlights the benefits for port effectiveness which can be derived from a common goal and shared vision on how to conduct business and engage with customers. Thus, both port authority and PSPs working together and developing a strong relationship based on shared values can enhance the port's competitiveness and ensure customer satisfaction. The PSPs located in the port further elaborated that the current approach has become possible because the PA as well as PSPs share the same vision. In the past, several PSPs had already pursued a customer-centric approach but the benefits to the port and its effectiveness were limited as the port authority was not adopting the same way of business conduct. Several CO interviewees shared that in the past it often felt like there were two distinctly unique styles of customer engagement and port management. Whereas the stevedoring companies and their representatives in the port have not changed for more than a decade, the port authority in the past pursued a different approach which did not align the interests of port community members and, thereby, did not create a coherent customer service environment which is now found to significantly bolster the reputation of the port.

*"Customer service is a big part of it. We got a lot of return customers, once you get into TP1 you usually stick with it. This happened especially over the last five years you know. They come here, they see how well everything goes together, save time compared to other ports with their discharge and loading so that attracts them back. Service is just one of the major selling points of TP1 I think." (PSP)*

The notion of return customers was further echoed by several cargo owners and ships agents. They emphasised that the most difficult aspect, initially, is to be made aware of the benefits which TP1 can bring to their business because of its approach.

The quote, below, further highlights the joint approach and shared values which govern the conduct of PA and PSPs.

*“We had a large area of space down there and the guys had split our equipment all over the place. After I got an invoice, I said I’m not too willing to pay for all that, so they gave us until the week after to cut down on the space we were using and like that they are just way more accommodating. I guess they are more customer centric.” (CO)*

Despite these aspects, which were found to enhance a port’s reputation and thereby its effectiveness, several PCMs also reported that TP1’s performance is still often associated with its old setting of PA and PSPs as well as its historic tidal constraints. Even though most of the negative aspects TP1 was known for have seen their impact reduced, raising the profile of the port and overcoming outdated perceptions was considered a challenge for the PCMs.

In that regard, the PA utilising their already existing network of relationships and the goodwill they have built with their port community members was perceived as a major asset for raising the profile of the port. COs and PSPs independently shared that the PA of TP1 could leverage their current position further through engaging with PCMs and future port users on social media. Furthermore, PSPs highlighted that endorsing any port on social media requires a substantial degree of trust and the belief that they will continue to do as good a job as they did for them. Reflecting on this topic one PSP made the following comment.

*“So, why does TP1 continue to get positive, basically positive messages being sent out by port users on Twitter, LinkedIn or Facebook. It’s because they have the confidence in TP1 that they as a company can go on social media and say: Did this job with TP1, fantastic, port couldn’t have done any more for us, job was done successfully, it was done on budget.” (PSP)*

In conclusion, port reputation was found to be significant as relocating the business of COs as well as convincing them to do so gets severely mediated by their knowledge of the port’s reputation. Reputation functions as a precursor to the development of trust between current and future PCMs. Consequently, it can also deter potential port users,

especially if their perception of the port is not positive, as exemplified by the following quote.

*“So, I’m talking to our client and tell him that maybe there was this issue, maybe there still are issues. But I think TP1 works very hard to mitigate these issues. You know I get lots of people having misconceptions of TP1. When I ask them about the last time, they were in TP1 you get some answer like ten years ago. This stuff really sticks.” (PSP)*

Additionally, port reputation was found to be dependent on all parties rendering services in the port and to be benefitting from a joint and coherent approach towards customer service and general business conduct. Accordingly, the influence of port community relationships on port efficiency will be delineated and reflected upon next.

## **5.4 Port Efficiency**

Regarding port efficiency, participants of the TP1 port community offered several insights which attributed the benefits of strong port community relationships to an enhanced port efficiency. To further delineate these reported links between social capital in port community relationships and port efficiency, findings are presented according to their prevalence. The interviews, and consequently findings in that respect, draw from comparing past berth utilisation and cargo throughput figures of TP1 to current performance levels. This, though, entails the participants’ perceptions of efficiency gains based on their own operations within the port community. They seldom considered port efficiency as current versus optimum throughput of TP1, especially because optimum throughput is not known to most port community members. Port efficiency, rather, was referred to as TP1 doing something better than other ports in the Scottish maritime industry. Consequently, the reporting style of port efficiency differs as PCMs did not consider absolute efficiencies but, rather, comparative ones. The effects of port community relationships on port efficiency will now be reviewed in two sections which are berth utilisation and cargo throughput.

### **5.4.1 Berth Utilisation**

Discussing the influence of port community relationships with various PCMs, the consensual view was that TP1 considerably increased their influx of vessels which consequently led to greater berth utilisation. While the port authority of TP1 pointed out that current utilisation of berths for most months is now higher than 90% which represents

a significant improvement over previous years, they themselves cannot consider it the best indicator for the port's performance in isolation. The rationale for their line of thought was linked to the circumstances which, in the current climate, allow for this level of berth utilisation. Historically having been less frequented than main ports in the region, the economic downturn in oil and gas led to a considerable number of vessels not being needed in close-by waters. These vessels, in turn, requested lay-by space in ports close to their regular operations. While reportedly numerous other ports in the region did not allow for these vessels to be berthed as they take up essential port capacity, the PA of TP1 was generally seen as taking a more amenable approach to these requests.

*"You know, we had the space, so we didn't really see why we shouldn't do it. [...] As long as we can keep our regulars happy it's a good way of using the space we have." (PA)*

In interviews with the port authority, they conceded that high berth utilisation rates come with higher port congestion which might drive away other port users. Equally, they thought that turning away their regulars could severely damage their reputation and the goodwill PSPs and COs extended to them. Especially, since lay-by vessels are not moving volumes across the quayside, they not only contribute to berth efficiency but, at the same time, increase the risk of generating an altogether lower cargo throughput because of occupied berths.

*"Well, I guess they are trying to get as much use out of their berths as possible which we don't really mind as long as there's still space for us. There have been times when we had to move the vessels around a bit which was annoying. [...] Then again though you know they'll do right by you as that's just how we operate here, it all works out well enough" (PSP)*

While PSPs all perceived the port as busier than usual over the course of this research, the double berthing of vessels in TP1 from aside the operational aspects was reported to have worked as well as it did because PCMs believed that the port authority will do right by them and continue to be as accommodating as they have been in the past. This trust in the amenability of the PA as well as the willingness of other PSPs or PCMs for moving vessels between berths, according to PSPs, was a main factor which enabled the port authority to increase its berth utilisation rate while maintaining their reputation and service level with recurring port users.



PSPs, when reflecting on the approach, further asserted that while the port authority will not be generating the same revenue with vessels which are sitting idle in the port between jobs, it does allow the port authority as well as other port-centric service providers to showcase the port, its environment, and customer-centric culture. This, according to the PA at the time of the interviews, had already led to them attract new return customers as the repeated positive experience in TP1 encouraged some COs to make it their homeport for several vessels operating in the area.

*“We know they usually went somewhere else. [...] Us making space for them when others didn’t, that gave us a shot at showing what we can do for them, and I guess they really liked what they saw. Now they’re talking about using us more often.” (PA)*

In conclusion, the shared mindset of customer centricity and the port community’s “can-do” attitude enabled the PA to better utilise their berths since PCMs were willing to accept minor disruptions to their own operations.

Furthermore, the shared goal of making things work for all the port community members seems to have a significant impact on the outlook of the port’s overall efficiency as reported by ships agents.

*“[...] and ports are limited, ports are limited by their geography, are limited by their size but yet I would say that TP1 outperforms what is has available in terms of quayside and numbers of berths because of their way of doing business.” (PSP)*

#### **5.4.2 Cargo Throughput**

Cargo throughput by non-participants was used to analyse and contrast the optimum handling capacity with the existing throughput in the case of TP1. Similarly, cargo throughput by case study participants was differentiated into cargo stemming from captive traditional markets and new cargo TP1 attracted through various means. On the operational side, COs as well as PSPs reiterated that the limitations of TP1 generally stemmed from tidal restrictions, depth of berths and competing with other ports which service a comparably larger captive market. Despite these circumstances, year on year, TP1 managed to increase its total cargo volumes passing through the port whereas the North-East of Scotland itself was subject to a decline in volumes. Ships agents elaborated that the customer-centric mindset across PA and port-centric service providers allowed

TP1 to increase their market share, particularly because even though they operate in cost-sensitive times, TP1 continued to pursue their shared values and vision and did not compromise by delivering services of lower perceived quality in order to reduce costs.

*“They are very accommodating in that respect. I think they are probably viewed as a poor cousin in relation to the bigger ports in the region, and yet they are proving themselves in a very difficult market not just for oil and gas but for all trades. They are proving, despite very strong headwinds let’s say, that they can continue to develop their business, that they can continue to attract ships and the clients because they do business the right way.” (PSP)*

The above comment of a ships’ agent based in Northern Scotland servicing clients across the various ports in Scotland highlights the “*way of doing business*” of TP1 which they emphasised as a particular mindset present in the TP1 port community as a significant factor for the ports ongoing ability to attract new cargo volumes as well as managing to obtain concessions from cargo owners and service providers alike which were found to have relocated part of their operations to TP1. Discussing this occurrence during the interview process with the respective COs there was a common notion of amenability they experienced from the port community of TP1 as well as the value that PCMs placed in doing business with them to further develop the port and region. While COs asserted that services needed to be competitively costed at all times, the trust they placed in the reliability and amenability of TP1 and its PCMs was one of the single most crucial factors for utilising the port. Particularly, COs and PSPs discussing project cargo operations emphasised that the trust they place in TP1 allows them to get things done much quicker, more reliably and brings in more business to the port.

*“So yes, you’re right. We obviously do care about the money. At the end of the day we all need to justify our choices. TP1 is just really easy to work with. They might not always be the cheapest but if something goes wrong... which always can happen in our line of business, we trust them to sort things out and work with us rather than just for us. They’re very proactive and honest about what they can deliver.” (CO)*

Over the course of the TP1 case study, project cargo was mentioned by the majority of interviewees as an example where strong, trusting relationships make a significant difference. The willingness to extend services beyond agreed contractual boundaries in

the case of emergencies or general process changes was directly attributed to the strong relationship which PCMs have developed over time with each other. Furthermore, PCMs in TP1, sharing similar mindsets and going beyond contractual obligations, were understood to thrive in the port community itself while also contributing to the efficient and effective throughput of cargo flows in TP1 which was exemplified by comments like the one below.

*“You know there’s other ports we work with, and it just takes ages to get to the right person. If you need something ASAP, it’s always about whom you know in this business. Just being able to pick up the phone, knowing the guys on the other end want to help to keep things moving ... makes such a difference.” (CO)*

## **5.5 Social Capital and Port Community Performance**

This research investigates how social capital existing between port community members influences the performance of the port (community) within the context of Scottish trust ports. The analysis so far has focused on how individual facets of social capital influence port performance-indicating factors. Furthermore, though, to generate additional insights and extend social capital theory while also enhancing the understanding of port community relationships and their interdependency in the setting of TP1, the research must also explore and establish how varying degrees of social capital in port community triads affect the respective port community members and, consequently, the port's performance. The members of the port community triad comprise port authority, port service providers, and cargo owners.

The gathered interview data and observed interaction between port community members suggests that coherence of values or vision among port community members in the triadic setting benefits the performance outputs of the port. Second, relational social capital in the form of trust existing between the two dyads in the port community triad were found to be beneficial as individual organisations extended trust beyond the dyadic setting towards the other triadic member. Conversely, in the same setting, this research discovered the detrimental effects of distrust towards a singular PCM. Representing an integral part in the port community setting this respective PSP, through the lack of trust being extended to them by some PCMs, significantly inhibited the realisable performance outputs and improvements of TP1. Last, this research did not find evidence to support the earlier findings of Hartmann and Herb (2015) that stronger social capital existing between two parties in a triadic setting inhibits the third parties' contribution, or renders it obsolete. In the case of TP1 this type of triadic setting, rather, enhanced the required interaction frequency between the intermediary and the other triad members which was perceived as beneficial by all involved parties.

### **5.5.1 Influence of Relational Social Capital**

Trust, as a key facet of relational social capital, was repeatedly mentioned by case study participants and highlighted numerous times as being crucial for TP1's success as well as their own. Particularly when discussing information exchange between port community members or the relationship between trust and port reputation, PSPs and COs reiterated its importance and benefits. There is consensus among the port community members that

since they are all to differing degrees dependent on each other's services, cargo, or infrastructure, developing trust between all three groups of COs, PA, and PSPs is considered as essential. Trust is crucial for the port community's performance as it enables PCMs to exchange information freely without fear of it getting leaked or used by competitors to disrupt existing structures within the PCM to exert control over larger volume shares in TP1. Across the interviews as well as participant observation by the researcher, a common theme which emerged is that PCMs in TP1 understood the port authority to be trustworthy in any respect. While there have been reservations regarding their unanimous extension of goodwill towards all PCMs, PSPs assert that the port authority always appears to conduct their business in good faith. Consequently, PCMs did express their belief of not fearing opportunistic behaviour by the port authority which enables the performance of all involved parties. This is further exemplified by the following comments.

*"Being a trust port, there are no big secrets. Obviously also with my background on the board you know I'm trusted to keep certain things confidential. You need that kind of trust to get things done properly. They (port authority) are very receptive when I bring up these issues. It's usually for the benefit of the port and us. There isn't too much they don't talk about either."* (PSP)

The importance of trust, often in the willingness of both parties to see things through if something does not go according to plan, was particularly important to COs and ships agents. They emphasised, independently, that the trust they place in the values and behaviour of PA and port-centric PSPs increases their own as well as the port's resilience.

*"There's always something going wrong. We're working with them for years and you just can't plan for some things. When stuff goes wrong, we trust them to do right by us, if there is a problem on their side, they'll let us know. If you don't have trust, you don't have anything in this business."* (CO)

Another identified theme among PCMs in TP1 was the importance of coherent degrees of trust between all parties. If all port community members trust each other, respectively they are committed to not take advantage based on confidential information, and all involved parties benefit from an increased openness and transparency of information exchange. The importance of this coherent level of trust became particularly apparent in

discussions with PCMs when reflecting on previous TP1 management meetings which included several PSPs operating in the port, Cos, and external PSPs (ships agents) among other stakeholders with no immediate commercial interests. None of the interviewed PSPs or COs commented on being worried about the port authority taking advantage of confidential information they disclosed during private or wider port management meetings. This, in turn, according to research participants created an atmosphere of generally high degrees of trust between all involved parties as the predominant perception became one of everybody working together for the betterment of their own organisations as well TP1's performance. In said environment, PCMs tend to disclose information which is highly commercially sensitive and could be taken advantage of by other competing PCMs. A representative of TP1's port authority considered the situation as potentially detrimental to the port's balance of PSPs.

*"It's crazy at times when you hear them talk about sensible information like this... The first time I joined one of the meetings I couldn't really believe it. Don't get me wrong, it's good we can talk about issues and stuff, but I just think it's too risky. Some things just shouldn't be discussed in those meetings." (PA)*

These concerns of the PA management team, according to statements of port-centric PSPs, were justified as three PSPs over the course of the interviews elaborated that they had experienced negative consequences regarding information they had disclosed during those port management meetings. While they in the past had appreciated the openness and transparency of information exchange between all parties as it helped the development and enacting of their own strategies as well as the improvement of their alignment with other PCMs, during interviews and informal conversations they expressed their fear of the increasing opportunism risk. Furthermore, they highlighted that one PSP "sours the mood" of organisations in the port and limits the effectiveness of the community.

*"I was at these meetings for nine years before and when I heard anything that people said about their business, I never would have thought of to encroach, even if it was a competitor. But it's not the same any longer. There definitely is the risk of opportunism now. Right now, there is just a lot of distrust, I definitely wouldn't trust them right now." (PSP)*

Further elaborating on the existing detrimental situation of the PCM setting, PSPs emphasise that while they want to work together in the port and ensure port users get the best service, they no longer feel that disclosing information and working together will end up costing them business.

*“They approach my clients all the time. It’s a well-founded distrust. They are always knocking at the door of my clients. It’s not a healthy thing either; it’s damaging the port’s business in general. I mean if they’re taking business off me, that’s competition, that’s life, but with the constant encroaching it also drives away customers, you know.” (PSP)*

This sentiment of the port community and the port’s performance suffering because of an increasing level of distrust between PCMs was further stressed by a CO which, at the time of the case study, was in negotiations with PA and PSPs to significantly extend its operations in TP1 which, in terms of additional quayside volumes and berth utilisation, were understood to further improve the existing situation of TP1. Negotiations, though, did not result in an increased commitment to the port but, rather, resulted in damaging the port’s reputation as one PSP being part of these negotiations repeatedly went back on its word and thereby eroded the trust the CO had in the ability to expand its operations in the port and work jointly with other PCMs.

*“Well, we went to them, asked for a price for the land and my dad said yeah that’s fine. This is business, so as I said earlier. As it all went sour, our solicitors had a longer look at it and told us we’re paying too much per sqm. I said I don’t care I want to get this concluded. But now we don’t want to have anything to do with them.” (CO)*

The erosion of trust between the involved parties ultimately led to the dismissal of all the expansion plans of the cargo owner in TP1 as they would further have had to closely work with the PSP without an existing base of trust. Attempts by the port authority to act as intermediary for the exchange and facilitate a more beneficial outcome for the port ultimately failed with the respective PSP being understood as wanting to assert its position as key stakeholder in TP1. Furthermore, they mainly handled the traditional cargo moving through the port and were strongly linked to existing COs which also might have faced competition regarding quayside access, berth availability and, generally, a diminished negotiating position within the port community.

*“PSP X themselves might just be unable to develop their business further and that might be why they don’t want anyone else to do it in front of them. They’d be our neighbour; it should be an open and honest relationship. With someone you trust you’d write it down, but you wouldn’t have to worry about it ever becoming a problem.” (CO)*

In contrast to the emergence of distrust based on the perceived misconduct of one PSP in the port community, the majority of PCMs regard the port authority as impartial, fair, and trustworthy. The trust between PA and PSPs was found to allow for joint planning initiatives and the development of additional business ventures. The atmosphere the existing levels of trust between PCMs create encourages PSPs to bring business into the port as TP1’s conduct sets them apart from their competition whereas the PSPs and respective COs appreciate the ease of doing business and the amenability of the port authority.

*“I get the feeling that we really trust TP1. That trust is very hard to come by in other ports they compete with and makes it easy to work with them. And again, because we can identify them because of that trust and because of the way they conduct themselves makes doing business rather nice in what otherwise is often a difficult landscape at the time.” (PSP)*

An increase of vessels in TP1 further benefits most PSPs as they can compete for additional business which, in turn, can increase their own asset utilisation and thereby improve their bottom line and efficiency. In the existing triadic setting of PSP, CO and PA trust between all parties has been found to decrease the need to communicate via intermediaries, namely ships agents, which allows information to be accessed significantly faster and more accurately as the direct interaction between PA and CO also reduces the risk of miscommunication by the intermediary. Similarly, ships agents in TP1 reported not minding their customers directly communicating and interacting with stevedoring companies in the port without them acting as first point of contact between either side. COs and ships agents working using TP1 emphasised that they trusted the port authority and respective stevedore and did not perceive any opportunism risk. The present understanding benefits all involved PCMs and, consequently the port, as it reduces the time spent on information exchange while it also forges stronger relationships without the original intermediary party having to worry about losing out on their business because PCMs take advantage of their established relational bonds with cargo owners.



*“We can get things done so much quicker because we don’t have to worry about a lot of the formalities or procedures. Everybody in that triad working together makes such a difference to the whole operations side of things. You need to know you can rely on your agents to get things done but just as much it really helps that the port wants to help you out and is willing to take part in making things better for their customers.” (CO)*

### **5.5.2 Influence of Cognitive Social Capital**

The relevance of the customer-centric approach which TP1 is advocating, and pursuing has been a recurring theme throughout the gathered data. It resonates strongly with the importance of creating a “shared vision” within the port community as it enables a coherent experience for port users, especially in the case of port users entering the port for the first time. As discussed in the literature review and previous sections, a common “shared” vision is one of the main facets of cognitive social capital (CSC). Over the course of the nine-month long case study it was repeatedly suggested that the shared “customer-centric” approach is the unique selling point of TP1 which is only possible to be realised if PSPs and PA alike share this common vision. At the same time, this common goal provides strategic direction for PCMs and guides the day-to-day operations of the port community. The following quote illustrates the notion of customer centricity as a unique selling point of the port.

*“We have that sort of “can do” attitude here. I think our guys got a lot of experience with a lot of different cargoes you know; we know our customers pretty good and know right away how to handle the cargo and what works best you know. We, that’s us and the port authority, really just want to offer the best experience possible.” (PSP)*

*People come here, they see how well the operation goes, saves time compared to other ports with their discharge and loading so that attracts them back. Service is just one of the major selling points of TP1 I think. (PA)*

Alongside this notion of a coherent experience, particularly for new port users, existing long-term port community members recurrently expressed the belief that TP1 exhibits a cooperative climate in which PCMs help each other without expecting an immediate return. This type of business conduct was mainly attributed to the majority of PCMs acknowledging that they do benefit from each other being in the port as it enhances the availability and variety of service offerings in the port which, according to the research

participants, increases the effectiveness of the port and can consequently lead to an increase in quayside traffic which, in turn again, attracts a higher service offering in TP1. Especially, PSPs highlighted the benefits of such an approach to doing business for them and the port community as highlighted by the quotes below.

*“Then again, you’re attracting more business, the more you can offer, the more help you give, the more likely they are to actually come back, you know. Having people thinking alike makes all the difference. Customer service is a big part of it. We got a lot of return customers; once you get into TP1 you usually stick with it.” (PSP)*

In the above account, a vessel maintenance service provider located in the port reflects on external providers coming in and what they bring to the port. While in some respects the PSP is competing with external providers who operate on an on-call basis, it is emphasised that at the same time them providing additional services not available in the port vicinity itself allows them to focus on the services which are most frequently required. Nonetheless, the PSP asserted that since TP1 exerts this common vision for customer centricity, external service providers who do not share a similar approach to doing business might negatively affect the experience of other port users and, consequently, the port’s reputation. Another CO posits that because of the shared vision of PSPs and PA in the port community they consider external providers adapt their own attitude/behaviour as they are *“shamed into providing the same excellent service”*. In addition to this influence of CSC, a recurring theme shared by participants was the general amenability of PSPs and the port authority. PSPs offer to help COs in the port free of charge with some of their machinery as well as the port authority being very accommodating regarding mooring requests by vessels even when berths are currently occupied. PCMs, particularly the PA expressed that because they are amenable themselves, vessels (their agents) are willing to move between berths and moor alongside each other if necessary because they know, the port authority, in turn, will also try to accommodate them at another time. These notions are expressed in the two quotes below.

*“You know, there’s a certain, ‘you help me I help you later’ system that is going on for a lot of the port users, you know. For instance, mooring systems, they need the forklift for half an hour or something and I just give them a forklift. Later on, I need some of their equipment and I just get it free of charge as well. It’s simply mutual benefits, you know. It’s adding value to all of us and then when a job comes up, they won’t go to anybody*

*else, you know. And you obviously also end up understanding a lot more of each other's business which always helps.” (PSP)*

Similarly, the following quote is exemplary of the port authority's thoughts on the matter of how this way of business conduct helps TP1 to outperform its restrictions of size and location.

*“For a better service, we're more amenable to any new business that comes up. We have that sort of “can do” attitude here. I think our guys got a lot of experience with a lot of our customers; you know? So, we know our customers pretty good and often know right away what they need. We just understand their business rather well, I think. If we don't, we ask them, so we understand how they operate, what they require and we're out to help them.” (PA)*

With the port authority highlighting their longstanding experiences with several of their port community members, they also emphasised the importance of the shared understanding they have developed with these respectively. Knowing customer-specific requirements of PCMs regarding the interaction with the port authority or port service providers was widely regarded to considerably enhance the effectiveness of the port and its operations since involved parties generally knew what services are needed and how they need to be rendered. On the port user end, having developed this common ground with the PA and PSPs reduced the exchange of redundant information and allowed for a more resilient and proactive approach.

*“TP1 is the kind of port that says “Okay, tell us the problem they encountered, what caused it, what's been learned from it and allow us as a port to learn from it as well”. They don't want to reinvent the wheel, they don't want to make things difficult, and they certainly don't want to learn by mistake, you know they don't want a mistake to happen, they listen and want to understand our business, they are very open” (PSP)*

Contrastingly, some COs expressed concerns regarding the PAs actual understanding of their business and requirements. The port authority, having developed a strong belief of knowing some of their long-standing PCMs business requirements in adequate detail, opted to make choices on behalf of their PCMs to reduce downtimes in case of equipment breakdowns. One CO reported the recent breakdown of a weighbridge in the port which

they operate as part of their lease agreement with the port authority. To immediately resolve the problem, the port authority, relying on their understanding of the COs' requirements in the past, ordered a new system as fast as possible which ended up not being compliant with the needs of the respective CO.

*“So, they just went ahead, but really, they should have asked us in the first place. You know because it’s us that operate it. That was a case where better communication and understanding of each other’s business really would have helped to solve the problem a lot quicker.” (CO)*

Consequently, this led to disruptions of the COs’ operations as well as an increased cost because the wrongfully ordered weighbridge system had to be returned and replaced with an adequate solution for the cargo owner. This occurrence represents a potential negative impact of CSC for the port community when the perception of understanding each other’s business rather well leads to a complacency in ensuring that actions remain in conformance with PCM requirements at any given time.

Nonetheless, in the case of TP1, the majority of PCMs asserted that the port authority was engaged in developing a good understanding of what port users require to operate in the best possible way within the boundaries of the port. Similarly, cargo owners repeatedly emphasised that the strong relationships respective ships agents have developed with the port authority significantly enhances their own performance when using the port. Ships agents understanding their clients’ needs as well as the approach the port authority and port centric PCMs generally pursue was found to significantly benefit all three parties as the ships agents were able to manage expectations towards the client side while also being aware of the capabilities and amenability of the port authority to new business. Particularly, at times, TP1 faced problems with congestion or if problems arose within the port which needed to be resolved as soon as possible.

*“They probably have a very good understanding of the port, have a lot of dealings with the port authority themselves, understand how they work and also have a very good relationship with them. Knowing how to work with them in the best way helps them run the operations as best as possible which helps us doing a better job.” (CO)*

Touching upon the difference of cargo types, several PCMs expressed their belief that the type of cargo certain PSPs and COs are affiliated with changes their approach to doing business as well as their allegiance to other PCMs in the port. These notions added further nuance to the shared understanding which exists between port community members but also displayed the lack of shared beliefs/values between individual organisations which caused rifts when these opposed mindsets engaged in doing business with each other. The attitude described by the following quote was mentioned by several PCMs and considered as not beneficial to the port's future development as it damages its reputation and inhibits its capability of attracting new business not associated with agri-bulks.

*“Particularly, that company has some very strange ideas, we here do care and take pride in our work and do account for how we are perceived by others, they do not. They got loads of broken-down equipment lying around in the yard. The equipment is old and worn, they have an agricultural head and almost this farmer-like outlook, they run their stuff to destruction. And that just doesn't look good in a port, you know. (CO)*

This disparity of held beliefs and, consequently, the ensuing behaviour of said PSPs reportedly lead to other PCMs being considerably more guarded when doing business with them. The port authority was often understood to act as neutral intermediary for any member of the port community. While this conduct allowed for the facilitation of business, a limited number of PCMs expressed that by treating everyone the same, particularly when perceived as undeserved, they tarnished their own reputation as the PA allowed the questionable business conduct to continue.

### **5.5.3 Influence of Structural Social Capital**

When analysing structural social capital (SSC) as a factor influencing TP1's performance through its port community there are several aspects of it which need to be delineated and reviewed based on their individual impacts. Initially, according to Kwon and Adler (2014) an important nuance to establish is the nature of SSC and what it enables PCMs to do. SSC represents the network links and network position of individual nodes as well as the frequency of interaction between nodes. Consequently, it is considered to depict network structure and the number of existing relationships but not the actual strength of these relationships. Furthermore, density of networks can be differentiated alongside the frequency of interaction between nodes with more frequent interaction being assumed as

representing stronger relationships. The findings of the influence of SSC on port community performance will be reviewed accordingly.

In the conducted interviews with PCMs the most common SSC-related theme which emerged was the relevance and influence of growing existing networks and knowing the right people for certain jobs of business proposals. Expanding the PCM network represents a strengthening of SCC for all members as additions realised by one, particularly when leading to new business coming into the port, presents an opportunity to strengthen their own network and grow the reputation of the port. While SSC only represents the network itself but not its content, several PCMs highlighted the importance for the port authority of utilising its existing network links to promote the business of TP1 and strengthen its position in the market.

*“They do a really good job, you know, but there simply is no point in being the best kept secret. You have to get yourself out there. We are out there promoting our business with everyone, they could do such much more with what they have already, and we would be happy to help them.” (CO)*

The above quote emphasises the influence SSC can have on the overall performance of TP1 as the number of network nodes which it can utilise also represent channels for communication regarding the service offering of the port and opportunities to grow the reputation of the port.

*“A lot of people just never have heard of us or would have considered us as an option for their business. I get to talk to a lot of people at all kinds of events but advertising yourself is never the same as if some of your customers do it for you. We actually did get a lot of business because of relationships our PCMs have.” (PA)*

This assertion of the port authority further adds credit to the influence of SSC on the performance of TP1. With PCMs in TP1 utilising each other’s networks to promote their own and the port’s operations the likelihood for new port users to select TP1 was found to increase significantly. Nonetheless, the ability to utilise each other’s networks is strongly dependent on the quality of existing relationships, which is depicted by RSC and CSC in the port community. Given the generally harmonious alignment of aims, beliefs and business conduct, as well as adequate degrees of trust between PCMs, the individual

organisations in the port can expand their own network. Furthermore, beneficial experiences COs had with PSPs in TP1 encouraged them to consider those for operations in other ports if their service network allowed for it. As the common attitude towards doing business in TP1 enhances the port user experience, it consequently allowed PSPs to tender for work in other ports more competitively as their work is also associated with the overall experience.

*“We’ve been using them here for a while now. They’re doing a really good job, everything just fits together, I guess. We definitely have to worry less about the work getting done in TP1 than in other ports. [...] We’re now using them in TP2 as well if we can. Pleasure to work with really.” (CO)*

In addition to the mentioned impacts, SSC was found to be essential for cooperation between PCMs and ongoing commitment of PSPs and COs to develop their business in the port further.

*“There doesn’t have to be too much chatting and talking as we are all somewhat busy people but knowing what’s happening really helps. Also, I’d be more comfortable moving forward with other projects in the port and would be willing to discuss opportunities together if there’d be a more active display of interest.” (CO)*

Keeping in touch with PCMs and ensuring SSC does not decline beyond individual thresholds was reported to be important to the ability of the port authority to attract investments from existing cargo owners and port service providers alike. Particularly, relationships which the port authority considered as “stable” and to have reached maturity regarding their development potential for TP1 experienced declining frequencies of interaction from the port authority side. COs asserted that at times they felt like their business was considered a given for the port and that because of that there was not too much of an interest to engage with them on a regular basis. In several cases COs emphasised that if there would have been more interaction between them and the port authority, they would feel more comfortable about expanding their operations in the port as well as it is allowing them to gain a better understanding of the direction in which TP1 is headed.

*“Since the last chap resigned, I’ve not had any more meetings with them. It is always me instigating these things so again it must be my fault for not instigating it with him. It’s not happened regularly; it seems to have been forgotten. Talking regularly with each other and exchanging our plans would definitely help the development of the port and our own operations. Well even to know, being aware would be great.” (CO)*

Consequently, SSC according to the findings of this research, was found to be of significant influence on TP1’s performance, particularly regarding the effectiveness of port operations and the expansion of the port’s reputation. While mature relationships exhibiting SSC were found to benefit CSC and RSC, a decline of SSC between PA and other PCMs was found to inhibit the port authority’s ability to realise existing opportunities for port development.



## 5.6 Chapter Conclusion

This chapter has presented the findings for the exploratory case study of TP1, a minor Scottish trust port with <500 people working in its port community. Identified port performance criteria were analysed regarding the influence social capital has on them through established port community relationships. The following table summarises the prevalent perception of PCMs regarding social capital facets describing existing relationship constellations amongst each other and their experienced benefits. These are depicted in Table 20 with reference being made to realised benefits which have been linked to the respective facet.

Table 20: Prevalent Social Capital Relationship Configuration TP1

<i>SC Facet / PCM</i>	<i>PA</i> <i>5.2.1</i>	<i>PSPs</i> <i>5.2.2</i>	<i>COs</i> <i>5.2.3</i>	<i>Perceived</i> <i>Influence</i>	<i>Section</i>
<i>Trust in reciprocity</i>	PSP, CO	PA, CO	PA, PSP	Positive	5.3.1, 5.4.1, 5.3.2
<i>Trust beyond formal agreements</i>	PSP, CO	PA, CO	PA, PSP	Positive	5.3.2, 5.3.5, 5.3.6, 5.4.1
<i>Shared vision</i>	PSP, CO	PA, CO	PA, PSP	Positive	5.3.1, 5.3.2, 5.4.1, 5.3.6
<i>Shared values</i>	PSP, CO	PA, CO	PA, PSP	Positive	5.3.2, 5.3.4, 5.3.6
<i>Shared understanding</i>	PSP, CO	PA, CO	PA, PSP	Positive	5.3.3, 5.3.5
<i>Network ties &amp; opportunities</i>	PSP, CO	PA, CO	PA, PSP	Positive	5.3.4, 5.4.2, 5.3.6

RSC in the form of trust extending beyond formal agreements as well as trust in reciprocity appears to be integral to conduct and PCM interaction within the port community as well as to their open and efficient exchange of information. CSC in PCRs was further found to be beneficial to port performance as shared values and vision facilitate coherence of the prevalent customer-centric approach to doing business in TP1. However, RSC in rare instances was reported to be perceived as giving way to the rise of opportunism. Despite these concerns, occurrence of opportunistic behaviour, based on breaking trust among PCMs was not substantiated. SSC was reported as being mobilised in conjunction with strong relational bonds, thereby granting access to the wider PCM network. In sum, social capital in PCRs was found to be a positive influence on PCP.

## **6 Trust Port II – Findings**

### **6.1 Introduction**

This chapter presents the findings of the second case study, trust port (TP2). It follows a similar structure as the previous chapter but will at times offer an account which is less broad and specifically aimed at reasserting and respectively exploring notions which have been identified in the primary case study of TP1. The case study, in comparison to TP1, focussed on interviewing PSPs and COs with a longstanding history of working with the PA of TP2. Interviews with the port authority itself were not conducted face-to-face but the researcher participated in meetings of PA and PSPs discussing the potential for joint approaches as well as existing problems which were raised by PSPs. For this case study a total of 11 PSPs and COs were interviewed. As elaborated during the explorations of rationales for case study selection and verification of TP1 findings, TP2 was selected because, from the outset, it displayed similar characteristics. Namely, these were identical governance structure according to the regulations and recommendations outlined in the Modern Trust Ports for Scotland white paper (Transport Scotland, 2012), similar diversity of cargo moving through the port, and geographical proximity which, in turn, leads to both ports potentially competing for volume. Discernible differences, though, comprised the significantly bigger captive market and throughput of TP2, thereby leading to an altogether different port community setting, featuring PCM-dedicated quaysides which also limits the ability of the port authority to micromanage port activities. The chapter begins by providing a similar overview of the port community setting, delineating perceptions of PA, PSPs, and COs regarding the existing relationships in TP2. The chapter then discusses the influence these port community relationships are perceived to have on the performance of the port through the lens of social capital theory. Finally, this chapter particularly explores the detrimental influence a lack of social capital in port community relationships has on the performance of TP2, as expressed by several PCMs.

### **6.2 Port Community Setting**

To develop an in-depth understanding of the influence of port community relationships on port performance, also exploring the role of social capital for port performance, it is essential to explore the individual roles the port community members play in the port's performance as well as how they understand their own role within the port community. Historically, port authorities have been perceived as operating under a landlord model, distancing themselves from the activities in the port besides charging dues from arriving

vessels or organisations maintaining and leasing space within the ports boundaries (Verhoeven, 2010). This, in turn, is understood to result in rather transactional relationships between port authority and other port community members, emphasising a reactive rather than pro-active engagement between all parties.

In the case of TP2, port authority, port community members, and particularly port service providers, were reported to currently maintain mainly transactional relationships. While several of the 12 participants of this case study had a long history of working with the port authority as well as COs utilising the port, all of them, to certain degrees, mentioned their relationships with the PA to be challenging at times because of changes they had made over recent years regarding their business conduct and pricing strategy.

*“I just don’t think they really care. They had it good for so many years and have been charging us more and more money you know. With the new developments they’re now looking to get our help, but they’ll just end up doing what they want all over again.”*  
(PSP)

Next, the individual port community member groups will be reviewed regarding their perception of the port community setting and the influence social capital, or the lack thereof, has on the ports and its community’s performance.

### **6.2.1 Port Authority**

Findings presented in this section are based on perceptions of the port authority by cargo owners and port service providers as well as observations and field notes made by the researcher during interactions with PA representatives. The executive management team of TP2 went through significant changes prior to this case study which allowed for the contrasting of existing and prior practices of port management and port community relationships. Recently on-boarded TP2 management executives transitioned from privately run port management operations into the trust port setting. Despite these changes in the executive management team, all individuals had been working in the same industry prior to taking up their present role and were already known to most of the port community members.

Reviewing existing perceptions of the PA, PSPs and COs alike agree that apart from the day-to-day operations, TP2's orientation is run and positioned close to ports which have been privatised in the past. While the currently employed port management model conforms with general trust port practices and regulations, several PCMs voiced their concerns regarding the profit maximisation approach the PA has seemingly taken.

*“They’ve been increasing charges way above market rates these last couple of years. [...] They’re really looking to squeeze as much money out of it as possible. I’m not saying they shouldn’t make money but if some of us can’t cope any more that’s going to be bad for the port as well.” (PSP)*

The latter quote is symbolic of the exasperation which all the interviewed PSPs displayed regarding the port authority's pricing policy and lack of interest for their concerns. Furthermore, being a trust port, all earnings are required to be reinvested into the development of the port community to the betterment of the stakeholders. PSPs expressed concern that the port authority had significantly raised port charges for multiple years but that the envisioned development might not be available to be utilised by their organisations and clients. While most PCMs stated they wanted the port to flourish, including other PCMs despite having to compete with some of them for business, there was an underlying feeling of resentment regarding the port authority and its success. Nevertheless, this was more targeted at the prevalent port management approach than the institution itself.

Over the course of all interviews PCMs emphasised that formal relationships with the port authority are *“how things are done”* and that there was no informal setting in which they are regularly engaging with the PA to exchange ideas or jointly develop a strategy to further the development of TP2. Outside formal and contractual agreements, the port authority was perceived as of limited trustworthiness and lack of interest for any activities by port community members which would not immediately impact their own bottom line. Their approach to managing the port was generally referred to as the *“landlord model”* by PCMs, leaving all port operations activities such as cargo handling to PSPs. While this model is prevalent in almost all trust ports, port community members considered it to be of an excessive nature in TP2 as it was coupled with the earlier-mentioned perceived disinterest for the functioning of the port community if revenue streams are not affected.

### 6.2.2 Port Service Providers

In the case of TP2, major PSPs including ships agents or stevedoring companies, among others, were organised in a port user group which met for regular meetings to discuss development within the port community, raise problems they encountered as well as jointly lobby the port authority on matters of importance to them all. Following the interviews of participating PSPs there was found to be a general coherence of thought regarding how things are supposed to get done by people working in their line of business, and particularly in TP2 itself. Several had been working alongside within the TP2 port community for more than two decades and were, according to their own testimony, aware of each other's quirks, ways of running things and their approach to doing business. According to interviewees, this shared understanding of "each other's ways" significantly improved their working relationship and more so the effectiveness of port operations in which a ships agent would contract stevedoring companies for other port service providers. Having worked together for several decades on operational and strategic levels enabled them to have more effective communication while also reducing the need to elaborate specific details in many cases because the stevedoring company would be aware of existing requirements and further know how to engage with the vessels' crews and cargo owners respectively.

*"I guess it's a bit of both. Having worked with them for so long helps when it comes to talking about what we need. Half the time they know already, in the end it's them doing the job in the port for our client. There's definitely a lot of trust we have in their work and commitment to do a good job." (PSP)*

Nonetheless, even though ships agents and stevedores attested that communication between them was considered transparent and quite open, both parties confirmed that the same did not apply to exchange of information between their individual sub-groups. While all participants made clear that there existed a general feeling of mutual respect for their competitors within the port community and the industry sector itself, they first and foremost consider them as competitors. Despite the trust they placed into each other regarding the upholding of any formal or informal agreement, according to PSPs themselves it did not extend to sharing privileged information which could have benefitted the involved parties and the port community of TP2 in general.

Consequently, the regular meetings of PSPs in the TP2 port community were at times found to be limited in their effectiveness because of the limitations that come with having competitors at the same table. Disregarding the resulting unwillingness, particularly of stevedoring companies, to share insights into the development of their activities within the port community, the PSP meeting presented participants with a forum in which they openly exchanged information that posed no risk to their own business endeavours. Participating PSPs expressed that having a good working relationship with PCMs was essential for delivering great service to their clients. Consensus existed regarding the notion of the maritime industry being a “*peoples’ business*” where you will not make it far if one is not able to develop relationships with clients and competitors alike.

*“Mainly it’s the people in it I guess. I mean yes at the end of the day all of us want to make money, but you’d rather do it with someone you can trust and have a good relationship don’t you think. Some of the guys I’ve been working with for ages, and I’d have to think really hard to think of some time they’ve let me down.” (PSP)*

The latter quote further highlights the feeling of loyalty that several PSPs expressed towards working with each other as well as to the port itself, even though their thoughts on the port authority differed significantly from these notions. Similar notions of commitment to the community and certain PSPs in it were mentioned by COs which, in parts, will be discussed in the following section.

### **6.2.3 Cargo Owners**

In TP2 more than 50% of all cargo is associated with liquid bulks whereas approximately 25% of cargo volumes is generated by general cargo. While these two segments represent the two biggest shares of TP2’s cargo volume, they are also intrinsically linked to each other as the shipped general cargo supports the activities surrounding the liquid bulk trade and, more specifically, exploration and drilling for oil in the North-Sea. Consequently, both were considered by COs as complementary and reliant on each other’s continued activities. Despite these two major shares of total cargo throughput, TP2 handles dry bulk, containers, and ro-ro traffic as well, although in significantly lower volumes. Resulting from this setting and the relevance of specific cargoes, COs working within the specific sector consider themselves of greater relevance to the port and, at times, expect

preferential treatment by PSPs and port authority alike. Their main interaction in the TP2 port community, though, occurs with the ships agents who, in turn, further manage the required services and communicate rates, timelines and other information with other PSPs or service providers outside the immediate port community.

*“Na, it’s mainly [...] who deals with all those things. We’ve been working with them for several years and, so far, all seems to be fine. I can’t even remember when the last time was, I’ve been talking to the port authority to be honest. They’re not really in touch either.” (CO)*

Contrastingly, some COs as well as their ships agents stated that the port authority of TP2 had been contacting them without the agent’s knowledge. Interviewed COs which have been having meetings or telephone calls with the port authority were discussing the existing pricing of port charges and the opportunities existing for COs to work directly with the PA without necessarily including the ships agent as facilitating the intermediary member of the triad. These conversations, according to port authority representatives, are well within their rights and in the interest of the respective COs as they can allow for more effective communication and lower costs based on competitive pricing directed at the CO rather than their ships agent. This approach, though, had been condoned in previous PSP meetings by ships agents and been confirmed as not being practiced by the port authority. Consequently, COs and PSPs alike attested their discomfort with this development as well as the increasing lack of trust they place in statements made by some PA representatives.

*“You see, my client called me last week to let me know they’ve (port authority) been in touch to discuss prices and stuff. Don’t get me wrong, I don’t mind them talking to our clients in general but they’re trying to take my business and more importantly they’re doing a bad job at it. The numbers just don’t add up and in the end it’s us who’ll have to solve the problems because the PA won’t care as soon as the business is in the port” (PSP)*

The above excerpt from a conversation between a ships agent and the researcher highlights the different experiences which COs as well as their PSPs had with the port authority. Despite these incidents of the PA breaching former oral agreements of not approaching cargo owners of TP2 directly, all interviewed COs considered the port

authority as doing a good job. This “good job” was most commonly referred to as running things smoothly and improving upon existing systems. Furthermore, the safety of the port and the regulations ensuring said safety were highlighted as positive aspects which were attributed to the PA doing a good job. Similarly, the port’s infrastructure and the capabilities of stevedoring companies was associated with the port authority’s performance even though the latter used their own equipment as the PA had moved away from owning capital-intensive assets like cranes. Cargo owners attributing PSP performance to the port authority’s qualities, and consequently to the port’s performance itself, emphasises the relevance of the individual PCMs for the effective and efficient management of the port.

Another point that all but one CO highlighted was the lack of transparency regarding waiting times in TP2. Cargo owners considered TP2 notorious for its long waiting times for berths and port services. Even though COs, to some degree, attributed these delays to the busyness of the port itself they expressed clear concern about the decision-making process on which vessels would be berthed and serviced for what reason at what time. The intransigence or lack of amenability of the port authority regarding berthing arrangements or willingness to adapt their own approach to better suit their port users’ needs was reiterated on several occasions by COs but also was echoed by PSPs. In one instance the port authority was likened to a steam locomotive which is doing everything within the tracks rather well but is unable to deviate in the slightest way and neither is showing any signs of changing its approach any time soon.

The differing relationship settings of port community members within TP2 and their varying facets were all found to present opportunities for improvement. According to PCMs, these relationships can all be considered to impact the port’s performance as it represents the result of all interactions between port community members. The findings of the immediate impact these relationships and their facets have on port performance are reported next.

### **6.3 Port Effectiveness**

To further differentiate and explore findings regarding the influence of social capital on port community relationships in the case of TP2, the following sections delineate common themes according to their relevance for several port effectiveness criteria.



Participants of the TP2 case commonly asserted the advanced nature of the port itself as well as its continuous improvement while also emphasising that existing relationships between port authority and other PCMs are mostly of a formal nature which they consider as a limiting factor for the port's effectiveness. The presented information is drawn from conducted interviews and observations which have been made during PCM meetings. Participants often contrasted port effectiveness in TP2 to other ports in the region as well as comparing existing practice to past activities within the port community. Improvements as well as highlighted discrepancies commonly focused on the interaction between PCMs and resulting operational disadvantages rather than discussing the actual port effectiveness metric. These shared insights and perceptions offered a descriptive assessment regarding the influence of social capital in port community relationships on port performance in TP2.

### **6.3.1 Fulfilment of Special Requests**

Following the same approach as in chapter 5.3, the fulfilment of special requests and the influence of social capital in port community relationships is reviewed first. In the case of TP2, the port authority itself was not perceived as willing to grant special requests being further supported by the reporting of multiple instances where PSPs had made inquiries which were either refused or completely neglected by the PA. Commonly and as elaborated in the previous chapter, the port authority was perceived as a passive actor within the port community. Similarly, PSPs and COs reported that the port authority itself did not approach them to discuss requests which could be considered out of the ordinary. PCMs understood the port community as being governed by an extensive set of rules and rates which covered almost every aspect of day-to-day operations within the port. These regulations are accepted by most COs and PSPs as the way to do things in TP2 without an expectation of getting more service support or being granted special requests outside of it.

*“It's not like they're not doing their job. [...] you just wouldn't expect them to do any more than it says in the contract. We've got everything written down and if there's anything else we usually either don't hear back or it's a no.” (PSP)*

Contrastingly, the fulfilment of special requests by port-centric PSPs was repeatedly mentioned by COs and ships agents which work closely with these service providers to ensure smooth and reliable port operations for their clients. A group of several PCMs

meet on a regular basis to discuss the status quo within the port community and find ways to drive their own business through joint approaches or information exchange in non-competitive areas. These regular meetings of mainly PSPs, according to the same, fostered a shared understanding of each other's business and, more importantly, specialist knowhow of the individual organisations which they can make use of when necessary. Many of these PSPs have worked alongside within the port community for several decades and emphasise the mutual respect they have while also acknowledging they are competitors in some parts of their business. Nonetheless, the extensive period of exchanging information and working with each other to the benefit of their clients often allows them to comply with special requests as long as the port authority as a third and regulatory part is not involved. Particularly, knowing whom to ask regarding certain requests and being able to activate existing goodwill was found to be a major benefit of this PCM network which has been developed over a longitudinal period.

*“Often, it’s just a matter of picking up the phone and getting in touch with the right person. I’ve been working with some of these people for longer than you’re probably around and it really helps to know how everybody ticks when you need them for a favour.”*  
(PSP)

In line with these considerations several participants emphasised the perceived approach of the port authority to handling special requests made by PSPs in the port community as not satisfactory. The port authority, participating in some of the PCM meetings of TP2, though, stressed that they want to work closer together with their PSPs to ensure satisfying service delivery to COs and improve their capabilities regarding some of those special requests which have been declined in the past. These assertions by the PA, after the meeting concluded, were generally met with scepticism and questions of whether their offer was genuine or just more of the “old promises” some of the PSPs have become used to.

*“We’ve been trying to work with them so many times, but they never really listen to what we have to say. It just repeats itself. [...] and then if they actually want to work together you have to wonder what they’re after.”* (PSP)

Despite these reservations which are held by many of the TP2 participants, particularly PSPs which have worked with the port authority for several decades, PSPs were found to be rather amenable towards special requests from their clients. COs who had been dealing with the port authority as well as PSPs on various occasions nevertheless elaborated that while both parties appeared to do their job as best they can and to their satisfaction, the port authority generally remained reactive and required input through formal ways of communication whereas the PSPs took a rather customer-centric approach seeking to understand their requirements and go beyond *“just doing as they’re told”* (CO X). A more coherent approach of both parties, according to COs, would benefit the port’s effectiveness as it would pre-emptively manage expectations of port customers regarding the fulfilment of special requests among other aspects.

### **6.3.2 Reliability of the Port**

Case study participants in the port community of TP2 differentiated reliability regarding operational and organisational reliability. The former was understood as describing the wider performance of the port authority’s and PSP’s operations within the port whereas the latter was focussing more on the reliability of agreements between PCMs and if the same kept their word or went back on it. Similarly, rate and development transparency from the port authority was a factor repeatedly mentioned by PSPs which affected their own yearly planning and the reliability of their own commitments to the client, respectively. Even though extreme weather conditions at times delayed the berthing of vessels and other operations TP2 was considered by most PCMs as operationally reliable and robust. Disruptions caused by severe weather conditions were generally considered as the cost of doing business in the maritime industry and mostly perceived as part of the business environment in which PCMs operate.

*“There’s nobody at fault in these cases. Sure, you’d like to get into the port and get things sorted as quickly as possible but that’s just part of it all. You’ll never work in this industry and not experience some form of delay.”* (PSP)

Reflecting on the reliability of the PCMs themselves, though, there was repeated mention of the port authority being unreliable and not deserving of too much trust when it came to informal agreements among PSPs and the PA.

Most PSPs shared the common belief that contractual agreements with the port authority were binding, and all parties adhered to them but, nonetheless, many in some respects perceived them as operating in bad faith which has repeatedly caused higher financial risk and reduced profitability of PCMs relying on those agreements. The reliance on contractual agreements to ensure promises and agreements are upheld by all parties, particularly by the port authority according to PSPs, has become second nature with many of them not committing to any form of business interaction with the PA if they did not receive written and lawful confirmation prior to acting. This form of working together is considered by many as less than ideal but necessitated in the absence of trust and “*bad blood*” which has been spilt over recent years. Consequently, actions which at times need to be taken as quickly as possible are delayed as the individual parties wait for confirmation from either side and are not willing to extend any more goodwill towards each other.

*“We’ve been stung a couple of times; we plan our costs based on the agreements and rates we reached with the port authority. [...] they come back and want to renegotiate; I mean we already told our clients what they’re supposed to pay so in the end it’s us picking up the tap.” (PSP)*

This theme of distrust the PCMs extended towards the port authority was reiterated in several participant interviews and one of the most prevalent topics during the case study of TP2. In the last years, the port authority had repeatedly introduced hidden port charges which they were well within their right to introduce but none of those were communicated pre-emptively with port community members nor were any of the key PSPs consulted regarding the trickle-down effects of these changes. In the attended PCM meetings, members of the group jokingly considered the “*hunt*” for any additional charges a game they played on a yearly basis. The decline of existing degrees of trust which had existed in the past had further been amplified by the fact that the official communication from the PA side had been that there will be no additional charges as the year-on-year increase of rates in TP2 was sufficient to fund existing developments. Commonly, PSPs commenting on the introduction of these hidden charges asserted that the sole interest of the port authority was not the wellbeing of the port community and consequently TP2 as the leading port in the region but, rather, solely the increase of their own revenue. While this approach was not considered to immediately impact port operations or service levels

within the port community, according to PCMs it created an environment of distrust where informal agreements reached with the port authority cannot be considered binding.

*“[...] they’d definitely do something like that again if they’d think they could get away with it. But you know it hurts all our businesses and, in the end, it’s damaging to the port as well. You just can’t rely on things you discuss with them. It’s happened so many times now.” (PSP)*

The opportunism risk which PCMs experience in TP2 was found to reduce their willingness to openly engage with the port authority or work cooperatively on problems which affect several port community members as they fear being taken advantage of if the situation allows for it. The interviewed PSPs mutually agreed that the port authority was not deserving of the same levels of trust as they extended to each other or their clients in the port community. The current PA management team was considered by many as primarily commercially driven without greater interest into developing anything but arms-length relationships and to only be willing to work together with other PCMs if there was something to be gained from it.

Overall, the limited reliability of the port authority and its reneging on existing agreements creates ripple effects for PCMs as they consequently need to revisit their own costing and contractual agreements with clients which, in turn, negatively affects the reliability of the whole port community. The lack of trust between PA and PSPs was found to further reduce the likelihood of taking action without prior contractual agreement which also limits and disrupts the resilience of port operations as well as communication between PSPs and COs.

### **6.3.3 Accuracy of Information**

The accuracy of information, or more so the reliability of information in TP2, was found to be a crucial aspect for both PSPs and COs in the port community which, in turn, was perceived as closely tied to the reliability of the port itself. PCMs reiterated this notion as they stressed that information presented to them by the port authority at the time of initial exchange may very well have been accurate and truthful but in the process of utilising the information to plan their own business activities has proven unreliable. Numerous PSPs referred to this fallacy as disregarded by the port authority for their own activities and

relationships. PSPs committing their own business planning and propositions to COs or other clients on the information which had been provided by third parties were reported as standard practice as the port community itself is intrinsically linked.

Ships agents or port-centric service providers were asserted to heavily rely on rates disclosed by the port authority. While most rates get communicated on a year-to-year basis, calculations related to project cargo are perceived as more demanding and volatile. With projects being planned several months ahead, potentially in the fiscal year prior to calling the port, planning based on reliable and accurate information was found to be essential to secure business as well as to ensure financial viability of the contract for all involved parties. Deviations from agreed figures was reported to severely impact the reputation of the port community negatively in the eyes of the PSP's client as well as causing unprofitability concerns in situations where costings have been miscalculated based on previously reached informal agreements.

*"[...], they could just say that they don't really know. They are so sure of themselves at times. We rely on them to give us something we can work with to figure out the cost for our own client, so we can get the business for the port. Having to go back on my word is not really an option so we take the hit. Our clients won't pay for it." (PSP)*

Nonetheless, PCMs reflecting on the varying information channels, attested the port's integrated IT system to be accurate and to be a significant improvement for the flow of information and its availability. The discontent mainly lay with the accuracy of information which was exchanged outside the boundaries of day-to-day business, the IT system, or existing regulatory frameworks. PCMs argued that greater information accuracy, respectively reliability, would enhance the effectiveness of their own operations and consequently indirectly contribute to an enhanced performance of the port community. Furthermore, some PSPs emphasised that the passing on of inaccurate information, believing it to be accurate, reduces the trust their clients have in them as well as the original source. This aspect was understood as particularly important because these clients are ultimately making the decision of committing their business, and consequently cargo, to the port. A reduction in cargo flows negatively impacts the port authority through reduced revenue from port charges, can lead to underutilisation of existing assets of PSPs and PA in the port, while also limiting the opportunities of revenue generation for the bordering tertiary service providers.

*“We’ve not been happy I can tell you that. These days, I would not trust them with anything that’s not written down and confirmed. It hurts all our business and takes a lot more time because you have to double or triple check everything yourself.” (PSP X)*

PCMs mutually agreed that under current circumstances it will take some time to rebuild the trust which has been lost over the previous years by the port authority. While there was an expression of genuine interest into having more open exchanges of information across the port community, the recent history and experiences act as inhibitors and prevent some interviewed PSPs from engaging in these forms of communication on their own initiative.

The display of goodwill and creation of mutually beneficial interactions, according to the case study participants, needed to be instigated by the party which had caused the deterioration of past relationship settings. Interviewees considered the greater reliability of information as crucial and mutually beneficial as all PCMs are to use utilise the obtained insights for their own business forecasts, thereby improving the effectiveness of their operations and suitability of their strategy.

#### **6.3.4 Availability of Information**

Preceding the ability to obtain information, disregarding its accuracy, is the requirement of information availability. Depending on specificity of information the number of sources can be rather limited and having access to these network nodes can yield substantial advantages, particularly when competing among PSPs rendering similar services within the port community. In the case of TP2, all case study participants emphasised that because of the significance of TP2 for its geographic region as well as the abundance of affiliated organisations working with the port, they consider their port community as strongly embedded and connected in the Scottish context. Having this network of relationships within and outside of the port community was believed to be integral for the success of individual port community members as well as the ongoing growth of the port community.

*“I’ve been around for a few decades in TP2 and, believe me, it’s all about the people you know. It’s not always been easy in the last years, but we always managed to get some jobs*

*and the people I work with keep their eyes peeled and let me know if there's a chance that business is coming our way. [...] They know that I'll do right by them too."* (PSP)

The above quote of the managing director of an organisation in TP2 covering ships agency and cargo handling services emphasises the importance of developing a diverse network structure of relationships with PCMs which are willing to exchange market information proactively. Particularly, relationships exhibiting mutual respect and trust among PCMs were found to not expect an immediate return when passing on information or doing someone a favour. There was a distinct belief that the other party would do the same for them if the opportunity arises without directly asking for the return of the favour. In interviews, PSPs highlighted that an understanding of each other's business structures, capabilities, and modus operandi enables the proactive exchange as helpful information can be identified and passed on without prior specification of the other party.

At the time of the interviews for the TP2 case study, the concern of PCMs concerning how future capacity can be utilised and how potential new entrants to the port community might affect their own operation was highly sought-after information. According to PSPs of TP2 the port authority did not share their plans for developing the port with them and did not consult them on a recurring basis regarding the opportunities they saw for the utilisation of the additional quaysides and capacity. While the PA conducted their own market research, and in later meetings with PSPs disclosed some of their plans, they did not utilise the market intelligence of their port community members. PSPs themselves did not feel obliged to help the port authority, either, because the latter in the past was understood to have shown no interest in joint planning or making available information which might help PCMs better plan for upcoming changes to the port community. PSPs perceived the port authority to have a commercial mindset mainly focussed on looking after themselves without acknowledging that all PCMs contribute to the functioning and flourishing of the port. Particularly, regionally operating PSPs being part of multi-national organisations could have proven to complement the market intelligence research efforts of the port authority as it exceeded their own capabilities.

*"We've got this whole unit doing market research, looking into where the business will be going for the next couple of months and years. ... and I'd like to see them (TP2) do well you know but they've never asked and it's not like they share any of their stuff with*



*us either. I know more of what's happening down in the port because of the other PCMs than the port authority itself.” (PSP)*

The notion of making information available to other PCMs was further differentiated by participants into information which was not business sensitive and could not be used to the disadvantage of themselves and information posing the risk of opportunism if shared. The latter was considered by all participants to be particularly valuable and hard to come by. Information which individual organisations within the port community are privy to, can provide a significant enhancement for effective planning of the port's strategy by the port authority. Some PSPs emphasised that they did not currently regard some PA representatives as trustworthy enough to share this kind of information with them and that the existing arms-length relationships need nurturing whereas the mindset of the port authority also was perceived as needing to change.

Similarly, the port authority was perceived by many as hard to get a hold of. Communication was mainly instigated by other PCMs and information exchange within the PA was believed to be fractured and ambiguous. The limited availability of information and access to PA representatives, respectively, decreased the effectiveness of PCMs' decision-making processes while also at times leading to loss of business opportunities because of delayed *confirmations* to business requests.

*“Sometimes I feel like they're sitting there in their ivory tower, you just can't get anyone on the phone. [...] If you do get to talk to someone they quite often just don't seem to be too bothered. We need some information rather fast and don't really want to wait ages for somebody to get back to us.” (PSP)*

The general attitude towards making information available to each other within the port community as well as the type of information which is shared was found to be greatly dependent on the levels of trust between individuals. The proactive sharing of information was done by individuals who understood the requirements of their PCM's business and who believed they would do the same for them if the opportunity came to pass. This understanding of mutual benefits of information sharing among PCMs which have developed strong relationships over years or decades was found to be another factor contributing to the performance of TP2. The relevance these relationship settings have on the reputation of TP2, and its port community, will be reviewed in the next section.

### 6.3.5 Reputation of the Port

According to case study participants, the reputation of TP2 varies significantly depending on the area of analysis. PSPs with decade long experience in the port community stressed that while there is always room for improvement, the port has a globe-spanning reputation regarding its expertise in the liquid bulk trade. This knowledge and industry-wide understanding of the port community's capabilities was perceived by many as a decisive factor for new entrants to the port community. Interviewees likened these existing knowledge hubs of liquid bulk services to incubators for innovation which attracts more business to the port and region than the cargo flows on their own would. Working within this environment and being able to tap into the existing knowledge the port community exhibits was understood as competitive advantage which sets TP2 apart from other ports in the region.

*"We've got everything here that they could want. I've been to quite a few countries to meet clients and no matter where I went, you bet I'd always meet someone from around here working on the same stuff. We've got a lot to offer and have been building that expertise for some time now. People respect that and want to make use of it." (PSP)*

The latter quote highlights the relevance of having developed an international reputation of TP2 being host to numerous innovative organisations within the liquid bulk industry and its own tertiary sector. The reputation the various PCMs create for the whole port community was found to attract new entrants to the port community as well as inspiring confidence in existing port community members that TP2 will weather future economic droughts like it did the last one. With an acknowledgement of oil prices becoming more volatile and not going back to the peaks of recent years by interviewed PCMs, some elaborated that the knowledge base existing in TP2 will become of greater importance and should be developed further through cooperation within the port community.

Reflecting on the history of TP2's reputation, most interviewed PCMs brought up the recent personnel changes which, in some of their views, will drive the port further away from forms of trust port governance and port community development. Present exchanges between PCMs and the port authority have, according to three PSPs, made them consider the port authority and consequently TP2 itself to be a privatised port in all but name. Furthermore, among PSPs the reputation of the port has significantly suffered over recent

years as the PA had repeatedly introduced additional port charges without prior communication and, at times, with prior affirmation of not changing rates in any fashion which had not been discussed or shared with all the corresponding port community members.

*“It’s gotten worse I tell you. They’re raking it in. [...] I’ve got the mail here. They’ve told us there won’t be any changes and then you look through the whole thing and find this (hidden charges). It’s just no way of doing business. My word is my bond and I’d hope they’d be straight with me as well.” (PSP)*

Despite these negative experiences which have led to a deterioration of trust between PA and PCMs, reappointments of port authority representatives overseeing the port’s operations have positively affected the perception which PCMs have of working with the port and the approach they understood the port authority to pursue. Emphasis was put on the advantage of the new appointment to think along the same lines as they are as well as genuinely wanting to support them if it is within their responsibility and does not require further approval. Ships agents arranging for the arrival of vessels highlighted that while they remain concerned about the wider management approach, the operational aspects and consequently their relationship with the PA representative have improved significantly since the recent appointment.

*“Thing’s just got a whole lot easier with him now being in charge of it all. Before you were lucky to even get somebody on the phone but he’s really keen to help and gets where we’re coming from. We can now definitely talk about things differently than before.” (PSP)*

This change in attitude and business conduct, according to the respective PSP, allowed them to now *“run things a lot smoother”* because they believed the operations manager of the port authority would try their best to resolve problems and take a proactive role in their relationship while also being open to their suggestions and concerns.

On the port community level itself, PCMs agreed that TP2 had a favourable reputation as the *“place to be”* in the North-East of Scotland. Despite this notion, though, the performance of the port itself was not particularly attributed to it being renowned for its customer-centric approach, ease to do business or low operating costs but, rather,

dependent on being one of the few ports being able to service vessels of larger sizes, possessing a sizable captive market, and having an early mover advantage which was considered by several PCMs as almost impossible to overcome. Case study participants nevertheless concurred that in regard to TP2s reputation, there is the operational side which requires the port to offer the necessary facilities and services demanded by port users, and the port management side which had become unfavourable over recent years.

*“They pretty much run the landlord model you know. They don’t really care what’s happening with your business or in the port as long as their business model can stay the same. I guess it’ll never change which is a shame. It could be so much better.” (PSP)*

The reputation of the port authority, which at times was considered as representative of the port, was found to be particularly important to COs considering moving some of their operations into the port as well as for PSPs which managed warehouses or other port-centric services within the immediate vicinity of TP2.

In conclusion, while the reputation of the port authority was found to be relevant for decisions of locating or developing business in the port, cargo owners and other clients of PSPs expressed that their immediate concern lay with their ships agent or service provider. COs were found to extend their trust to their ships agents which, in turn, either recommended using or not to use the port. Furthermore, degrees of trust between PSPs and PA were perceived to increase the likelihood of the PSP to promote TP2 to their clients. The incoherent degrees of trust prevalent in the port community, though, were found to have decreased the chance of the port being actively recommended or promoted by PSPs. In the absence of TP2 being the only feasible option for their clients, several PSPs would consider utilising alternate ports with a more amenable and customer-centric approach.

#### **6.4 Port Efficiency**

Assessing the efficiency of TP2 according to some of the existing measures as discussed in chapter 2.2.2, as well as the influence port community relationships have on port efficiency, offers a snapshot of PCMs’ experiences and attitudes towards the port’s overall performance and the potential to improve it further. Most port community members attributed the market outperforming nature of TP2’s business to its geographical

location and its prevalence in getting frequented by liquid bulk cargo affiliated organisations rather than the business conduct of the respective port authority. Consequently, findings and delineations regarding TP2 and the influence of PCRs on port efficiency as expressed by port community members are more focused on lacking facets of social capital in existing relationships between the PA and other PCMs. COs and PSPs among themselves, though, expressed the beneficial nature of strong port community relationships for their own operations which, in turn, at times improved the performance of the port even though the port authority was not considered an integral part of these port community relationships or triadic settings. At the time of the interviews TP2 was going through a significant phase of developing new berths and, according to PCMs, is consequently looking to extend its existing client portfolio to secure an ongoing high berth utilisation rate for the new development.

The interviews and findings, consequently, often touched upon the ability of the port authority to market the new development and drive berth utilisation rates as well as to increase cargo throughput by attracting new clients. Commonly, this entailed the participants' perceptions of the current port efficiency, its management, origins as well as the efficiency gains generated by their own operations within the TP2 port community. In interviews, PCMs considered TP2's efficiency rather from a perspective on how it can be improved to benefit their own operations and how existing conditions are lacking and port community relationships do influence the status quo in TP2. As a result, attention was seldom paid to absolute efficiencies but, rather, to comparative ones if PCMs experienced more suitable approaches in other Scottish port communities. Nonetheless, the following two sections covering berth utilisation and cargo throughput will delineate findings regarding the relevance of port community relationships for each measure and its management.

#### **6.4.1 Berth Utilisation**

Over the course of the interviews with cargo owners and port service providers alike the consensual view regarding berth utilisation in TP2 was that while berths were occupied most of the time and the port appeared to be experiencing a significant upturn within the last year, the utilisation itself could be improved further. A prevalent notion among interviewed PCMs is the feeling that the port authority of TP2 often considers the berthing of vessels a zero-sum game where their focus rests on immediately generated turnover

rather than pursuing an approach which could allow for more vessels to be berthed by moving them between berths or alongside others. Furthermore, with TP2 featuring multiple port user dedicated berthing locations, PCMs not being party to those arrangements expressed thoughts of being treated differently by the port authority than others. These considerations particularly came to the fore when discussing the new development of berths in TP2 which were paid for by existing PCMs through year-on-year cost increases for working in the port but which, presumably in some cases, will not allow them to utilise the new berths adequately as they are planned to drive the diversification of the existing cargo portfolio.

According to cargo owners and port service providers this non-optimal berth utilisation mainly stems from the port authority up to the economic downturn never having been required to develop strong relationships with their PCMs as they operated in a “sellers’ market”. Furthermore, while the recession severely impacted the liquid bulk market of TP2, the port authority continued to raise its rates at above market levels, disregarding the ensued impact on the wider port community.

*“Don’t get me wrong, I don’t think they mean anything by it, but they just never had to bother to get business into the port. They always had it good and made their money. Now they’re building these new berths and I don’t really know how they’ll fill them. I don’t think they know themselves.” (PSP)*

Emerging from interviews was that the majority of PCMs want to see TP2 prosper as many feel a strong connection with the port, community, and wider region itself but less so with the port authority. Reflecting on the port authority’s ability to utilise the newly developed berths and infrastructure there was a genuine feeling of disbelief regarding their future profitability as well as the plans the PA had disclosed for their utilisation.

Efforts by the port authority to attract vessels to occupy the newly built berths in the future at times damaged existing relationships and further reduced the amount of trust which PSPs extended towards the PA. Most interviewed port service providers confirmed that they had been approached regarding the possibility of jointly growing the business they bring to the port considering the on-going development. PSPs stated that while at first generally having been willing to share more information and support, this approach by the port authority towards a closer relationship, they soon became to realise, was an

initiative taken by the PA which involved getting a hand on their client information to allow the PA to directly build relationships with cargo owners and cut out the ships agents for parts of the process.

*“So, they contacted us and were pretty much saying we’d like your advice on how to move things forward and what they can do to make things better for our clients. [...] You know, I don’t mind them talking to our clients but now they’ve started negotiating prices without our knowledge, basically going directly against what we said.” (PSP)*

These actions taken by the port authority severely impacted the willingness of PCMs to share privileged information and to engage in forms of jointly developing a strategy to promote TP2 to their wider pool of clients as this recurring experience reinforced feelings of distrust. Furthermore, the lack of past efforts by the PA to work with port community members for the benefit of the whole port community rather than their own profitability, according to PCMs, left a “sour taste in their mouths” and discouraged most of them from seeking more than formal channels of communication and information exchange. This, in turn, for ships agents informs their recommendations to clients regarding port choice which can negatively affect berth utilisation rates and subsequently the whole port community if it leads to less vessels calling at TP2.

*“The reality is, there simply often aren’t any real alternatives and it’s the client who decides in the end most of the times. [...] We do give recommendations though and, in some cases, end up using different ports that are just a lot easier to work with.” (PSP)*

Despite these experiences, some PSPs agreed that because of the more “practical and operations” mindset of a recently on-boarded port authority member, the actual berth utilisation in TP2 is going to improve because they are believed to share their common view of trying to get as many vessels into the port and, respectively, to be accommodating as possible to everybody if it does not disrupt the flow of existing operations. PCMs reported that in previous settings they had often not been able to even discuss the option of getting some vessels into the port as the port authority had not shown any interest in being accommodating to certain types of vessels for the utilisation of dedicated berths,

*“We got a good relationship with [...] he really knows what he’s doing and wants to help us out when he can. You couldn’t really ever talk to some of the other guys.” (PSP)*

In conclusion, the perceived opportunistic behaviour of the port authority was understood to distort the ability of the port community to ensure high berth utilisation rates, particularly considering the new developments in TP2 which would benefit from the joint promotion of available space by port authority and PSPs. Furthermore, due to the general approach of the port authority to accommodating vessels in the port, the goodwill extended by other PCMs towards them, and potential requests being made to accommodate more vessels, is significantly impacted.

#### **6.4.2 Cargo Throughput**

In the case of TP2, cargo throughput had risen continuously over the last five years and, consequently, the effective management of berths might have become more important for the port authority. Findings, though, suggest that the amenability of the port authority regarding vessel repositioning has improved more recently. Cargo throughput by PCMs was mostly assessed by the difficulty of gaining access to their desired berth as well as the general number of vessels calling at TP2 compared to previous months or years. Case study participants generally expressed the view that the port authority treated almost everybody the same whereas there was a common feeling that the organisations operating the user-dedicated berths received preferential treatment as they had been of greater relevance to the port community as a whole.

Reviewing the operational side, PCMs jointly highlighted the very formal and arms-length approach to doing business in the port while also acknowledging that its operations ran reasonably smooth for everybody. Nonetheless, several PCMs emphasised that the amenability of the port authority was almost non-existent and ran contrary to its governance structure of being a trust port which should develop and strengthen the port community rather than only immediately benefiting the port authority.

PSPs further reiterated that the port authority had not shown any actual interest in developing the port's service offering jointly with them. Ships agents, being part of this group, particularly stressed that even if they wanted to advertise the port's facilities and new development to their clients, the arms-length relationship and non-existing channels of information exchange severely inhibited their ability to do so. This became particularly apparent regarding the new development of berths in TP2. Most PSPs were not involved in any form of consultation regarding their best utilisation, nor did they feel that their input, even if asked for, was heeded or valued to drive cargo volumes in the future.



*“So, we have these meetings, you’ve been there yourself. What did you think of it? [...] They don’t really care what we tell them. They’ll hear us out, nod their heads but at the end of the day they’ll just continue as they always do.” (PSP)*

Despite these circumstances, TP2 greatly outperforms the market in which it is operating. Nevertheless, this is mainly attributed to the port’s history and geographic location rather than adequate relationship management practices of the port authority. COs and PSPs within the port’s boundaries emphasised that they often had second thoughts of pulling out of the port because of the “port authority first” practice rather than looking at the wellbeing of the whole port community. These actions, according to PCMs, are more cognisant of other privatised ports in the region. One PSP who recently relocated its whole operations to another trust port in the region stressed that while the captive market of TP2 allowed for greater immediate network connections and access to potential customers, the business conduct and acknowledgement of their contribution to the port community in their new location warranted the move. Furthermore, the relocation according to other PCMs happened almost unnoticed by the port authority. With the respective PSP, the whole market this one PCM served has started to move to the other trust port which, consequently, might lead to further effects on the TP2 community and the cargo throughput as vessels requiring the services of the relocated PSP might be considering calling at the alternative trust port to improve vessel uptimes.

*“[...] and then they just had moved, I think by the time they had figured out that they’re gone they really must have hit themselves. It’s a market they should have been proud to have here in TP2. I guess they just never paid it too much attention and now we’ll have to see if other business follows their lead.” (PSP)*

In summary, over the course of the TP2 case study, PCMs considered the port itself as a good place to do business even though they emphasised that cargo volumes could increase even more if the port authority would adopt a different approach to doing business and would welcome and implement some of the inputs they receive from PSPs and COs alike. While all PCMs, including the port authority, assert that “cargo is king”, the experience of interviewed COs and PSPs resonates closer with “port authority first” which sees the PA primarily seeking its own advantage even though it might be detrimental to the overall port community and negatively impact the port’s cargo throughput in the medium to long

term. Furthermore, PCMs in TP2 stressed that there is no evidence for a common mindset to doing business within the port community. PSPs might go beyond contractual agreements for their clients (COs) but the port authority as integral part of the port community triad was often perceived as the missing or flawed link in this setting.

## **6.5 Social Capital and Port Community Performance**

This section further explores the findings of how social capital in port community relationships influences the performance of TP2. Previous sections attributed social capital to port performance indicators whereas the following reported findings will particularly focus on the interdependency of PCMs in TP2 and how social capital in the triad of COs, PSPs, and port authority enhances or limits the performance of the port.

Findings extracted from interview data, field notes, and observations during PSP meetings suggest that the lack of trust between PCMs and the port authority reduces the effectiveness of TP2. The incoherent approaches to working within the port community were further found to negatively impact port user experience and to limit the join and coherent promotion of the port's activities and services within their respective sectors. Particularly, attracting new port users to the port with the purpose of portfolio diversification and ensuring utilisation of new facilities was understood as to be benefitting from a shared approach. Representing the interaction facilitating actor, the port authority's lack of shared values with other PCMs, which perceived the PA and their approach to port management as not aligned with the idea of being a trust port, was found to limit the realisable performance outputs of the port community triads as other PCMs reported their concern over opportunism risks. Advantages of social capital in port community triads regarding the setting of TP2 were mainly theorised by case study participants but not realised in the actual port community itself.

### **6.5.1 Influence of Relational Social Capital**

The importance of trust as an integral and beneficial aspect of port community relationships and its positive influence of port performance were continuously highlighted by interviewees of the TP2 community. For the triadic setting of cargo owners, port service providers and port authority, the lack of trust between PSPs and PA was reported as a significantly detrimental factor for the improvement of the port's effectiveness as well as the functioning of the triadic relationship. PSPs working frequently with the port

authority, thereby having had the opportunity to develop strong relational bonds through repeated beneficial interaction, elaborated that several larger incidents in which they felt that the port authority had broken informal promises or acted opportunistically had, in fact, eroded the continuously built trust between the organisations.

*“It’s nice enough working with them on most of the operational stuff but there have been some things happening the last couple of years. It made us question what we actually can rely on and how we’ll continue engaging with them.” (PSP)*

This quote is representative of the common theme which emerged from interviewing PSPs of TP2 who explained that, to some extent, they all felt “wronged” by the port authority by the hidden introduction of additional port charges. This was a particularly sensitive topic as prior to introducing these charges PA representatives had informally confirmed that there would not be any additional costs for PSPs, and they that they could plan along those lines. Consequently, most PSPs asserted that the port authority always appears to conduct to manage the port first and foremost for the benefit of the port authority rather than incorporating the improvements sought by the port community. This is further exemplified by the following comment.

*“You’d expect things to be different here. I mean, last time I checked they’re still a trust port. As far as I’m concerned that means, they should be looking out for all our interests, improving the port (community) itself rather than only their own bottom line.” (PSP)*

The notion of the port authority managing TP2 like a privatised port was echoed by all interviewees although several of them did not consider it an issue for their own operations within TP2. The conclusion of those PCMs was that while the port itself might not necessarily resemble the governance and management approach of some other trust ports in the region its size might require a different approach. Furthermore, TP2 being run like a privatised port was not perceived as the actual problem by many. The origin of their discomfort and the cause for formal relationships, the majority of PCMs maintained, was the unreliability of the PA’s approach to engaging with port community members. On several occasions PSPs reiterated that at times when they sought the help of the port authority, or were trying to work together on resolving an issue, there had been no immediate feedback from the PA side. Contrastingly, in port user meetings the port authority had assured present PSPs that they would be welcoming the input and help of

PCMs to drive the promotion and, consequently, future throughput of the new quayside developments of TP2.

*“Sometimes you just feel like it’s a one-way street with them you know. We’ve been quite interested in what’s happening with the port and what they are planning to do with the new facilities, radio silence. As soon as they need something from us though and see a benefit for themselves, they’re on top of it.” (PSP)*

These events of incoherent approaches from the port authority’s side made the majority of PCMs perceive them as opportunistic and seemingly unreliable regarding their willingness to cooperate or share information with other port community members. According to interviewed PSPs, in its current setting there is not much goodwill left that they would extend towards the port authority. Specifically, PA representatives approaching clients of PSPs after having reached an agreement with PSPs not to approach clients in their absence has “soured the water”. PSPs of TP2 who had their clients approached, confirmed that as a consequence of such conduct, they will be more guarded about what they talk about with the port authority and to ensure as best as they can that all information exchange between client and PA happens through them as intermediary to protect their clients as well as their own business interests. This setting of distrust was found to decrease the willingness to allow for a dyadic information exchange between PA and cargo owners which thereby reduced the efficiency and effectiveness of such endeavours. Similarly, joint promotion of the TP2 expansion by PSPs and PA became less likely according to PSPs. A common theme among port service providers was that while they would welcome the opportunity to get more business into the port and, at the same time, receive more information on how things are moving forward, the lack of trust makes them reluctant to include the port authority in marketing the port to their client. Part of this at times dysfunctional setting between port authority and port service providers was also the difference in mindset, the values and beliefs which guide the respective organisation’s approach. These will be reviewed in the following section.

### **6.5.2 Influence of Cognitive Social Capital**

The relevance of the incoherent mind-set which divides the port authority, and its port services providers has been the single most discussed theme throughout the conduction of interviews. The feeling of case study participants that the PA considers itself to govern a trust port but is widely perceived as pursuing management practise which resonates

stronger with the governance practice of privatised ports was brought up by almost all interviewees. PSPs emphasised that their strong feelings about this approach affects the effectiveness of the port and the relationships they maintain with the port authority and their own clients. PSPs expressed the belief that putting clients' interests first and understanding themselves as a service provider whose task it is to deliver the most beneficial outcome to them is something which, if taken on board by the port authority, would significantly alter the outlook of the port and improve its attractiveness, particularly for project cargo.

*"I don't think they really appreciate their port users. They see themselves as this landlord, no interest in anything that doesn't generate money. But they are, they need our business, don't they? They should be working for all the stakeholders and try to grow the port rather than take it for granted." (PSP)*

These concerns were also brought to the forefront by some COs who expressed an exasperation regarding the treatment of different cargoes moving through the port as well as the general willingness of the port authority to accommodate delayed vessels or those which had not been scheduled far enough ahead. While interviewed cargo owners acknowledged that the PA had to follow its own rules and comply with the existing monitoring and scheduling system, several COs as well as PSPs pointed out that the lack of amenability and customer-centric behaviour was damaging the port's reputation and loyalty of existing port users.

*"I don't think they ever even realised until they'd left. I've been here for long enough and it takes a lot of consideration to move shop. They've just always been taken for granted and now they're gone. Can't remember a time when the port authority made any concessions." (PSP)*

The latter quote highlights the disparity of approaches towards retaining clients by PSPs and the port authority. The port authority is perceived as reliant on their first-to-market advantage and being a major hub for liquid bulk cargoes in the North-East of Scotland which was believed to make them reluctant in developing mutually beneficial relationships with PCMs as their own position was ensured by existing captive markets and their PCMs. This attitude of not working for the clients of the port, but only to the betterment of the PAs bottom line, was perceived by many PCMs as the main inhibitor to

joint planning and development initiatives in TP2. The values of the port authority and its vision for the port community are not aligned with those of other port community members, particularly the PSPs who provide the majority of services besides the land itself.

Alongside this notion of an incoherent experience between PSP conduct, PA appearance, and actual conduct, existing long-term port community members recurrently expressed concern that TP2 is moving increasingly towards a climate strongly resembling one experienced at privatised ports in the region. These concerns were found to be heavily based on a recent appointment to the PA's management team and the ensuing conduct and approach to working with other port community members of TP2. An announced shift in the port authority's attitude towards working more closely with PSPs was widely met with scepticism and questions regarding the sincerity and rationale for the proposed change. While PSPs and COs acknowledged that they do benefit from each other being in the port in terms of variety of available services and the port authority providing a mostly "*level playing field*" for competing organisations, the arms-length relationships the PA maintains is perceived as limiting the port's effectiveness. Working together on promoting the new quayside developments is perceived as one of the key areas where the whole port community would benefit from a different approach. PSPs elaborated that jointly participating in conferences or other events with the port authority would allow for greater availability of information to their clients, an immediate point of contact with the port authority and further reduce the cost and workload for the individual organisations participating. Mainly, though, the utilisation of information from multiple channels was perceived as beneficial for existing or new clients as it allows for a more elaborate proposal and ensures the support of the relevant parties from the start. The absence of these joint approaches was attributed to the different mindset of the PA towards information sharing and jointly benefiting from these exchanges, as the quote, below, highlights.

*"They just got a whole different idea of how to do things. If we'd known about the marketing they're up to or just got the information I could have used it to promote the port, you know. I mean, with all the clients we have there's so much we could do with that kind of information, but they just go on and do it their way."* (PSP)

Another notion which was touched upon by PSPs was that while they in their own subgroup extended a lot of good will towards each other, there was no expression of accommodating the wishes of the port authority if there was no contractual or legal obligation to do so. Many interviewees emphasised that in recent years they had no experience of the port authority reciprocating any goodwill they could have shown in the form of going beyond what they are contractually required to do or just as a display of working in good faith with each other. According to PSPs, to a certain degree, this isolated the port authority within the port community and kept it distant from informal arrangements existing among PSPs and COs of TP2.

*“I mean they only ever get in touch if they need something. Sure, you don’t call everybody all the time, but you got people here that I’d help out and would expect to get something in return. I just know they’ll do right by me at some point or be there if I need something. We don’t have that feeling when it comes to the port authority.” (PSP)*

This disparity of “how things should be done” in the port community consequently led to PCMs being more guarded when interacting with the port authority, particularly PSPs which are interacting on behalf of their own clients. This led, overall, to a significantly reduced availability of information for the port authority and was found to inhibit the strategic planning activities of PCMs as they mainly reported being kept uninformed regarding changes by the port authority. While TP2 continues to grow when only considering cargo throughput, the effectiveness of the port, particularly the new quayside development, was criticised by the majority of PCMs. The PA’s chosen approach by case-study participants was perceived to be limiting but feasible if the captive market exceeds the available capacity but considerably less so if TP2 needs to attract new cargo flows to ensure utilisation of its capacity.

### **6.5.3 Influence of Structural Social Capital**

When analysing the influence of structural social capital (SSC) on the performance of TP2 and its port community, there were two major themes emerging from the interview data and the field notes of the researcher. These two themes were the limited ability of accessing existing network nodes for information and the generally beneficial breadth of network nodes with their origin being TP2’s position in the Scottish liquid bulk industry. The findings of the influence of SSC on port community performance will now be reviewed accordingly.

With most interviewees expanding upon the lack of trust and some kind of shared mindset which exists between them and the port authority, they further expressed these factors as limiting the port authority in accessing nodes within TP2's network to their benefit.

*"Just knowing people doesn't do the trick, does it? They've been doing a good enough job at growing the port but I don't think their way earned them any favours. You can't always just ask for stuff or raise the rates. People are less willing to help them [the PA] out these days. It'll be hard for them to regain the trust they lost." (PSP)*

The above quote highlights the common theme of PCMs regarding the port authority as being less deserving of their help which limits its chances of gaining access to these networks, particularly if ships agents feel they need to guard themselves and their clients from opportunism risks and operate as gatekeepers for engagement with numerous PCMs of TP2. These views of TP2 participants support the suggestions of Kwon and Adler (2014) who assert that structural social capital mainly represents opportunities for interaction and exchange of information, but that RSC and CSC moderate the actual outcome of these endeavours. In the case of TP2, the port authority and the prevalent role the port plays for the North-East of Scotland allowed for the development of a diverse and broad network of actors in the maritime and support industries. This can be considered as detrimental to the port's development because even though every addition of nodes to the networks facilitated by other PCMs extends the SSC of the port community, the accessibility of these for the PA was found to be declining. The reported decline was based on the word-of-mouth exchanges between old and new PCMs as well as the PA's reputation which reaches beyond the immediate port community.

As elaborated earlier, SSC in TP2 represented the network of relationships between PCMs itself but not its content; several PCMs highlighted the benefits which the port authority could have accrued through being able to engage with network members to promote the upcoming developments of TP2, thereby increasing the likelihood of achieving berth utilisation rates comparable to the existing quayside.

*"It's not like we don't want to see the port get busier but why would I let them talk to my client without me. Doing something together would be great but they need to do the first step. We're not just giving them access on good faith alone anymore. Show us what you want to share and we'll see." (PSP)*



The last quote emphasises the influence SSC can have on the overall effectiveness of the port to attract new business and ensure the utilisation of berths and equipment of port service providers. PCMs asserted that a joint approach, supported by an initial sharing of information from the port authority's side would significantly benefit the exposure of the new developments as well as the reputation of the port. Having access to reliable information regarding the strategic direction of the port and being assured support of the PA were factors which PSPs expressed to be lacking. Provided these were covered, PSPs believed they would be able to promote the port more effectively and attract new business from existing clients to TP2.

*"It'd be so much easier if we'd at least know where they're headed. You hear so many rumours but I'm not pitching business to my clients based on rumours, you know. If we could have a proper sit-down and chat about what's going on that'd be a whole different story. I can only discuss things I know about."* (PSP)

Consequently, according to the findings of this research, SSC was found to be of significant influence on TP2's ability to effectively promote its new developments and the reputation of the port (community) itself. These factors were believed to further affect the port's performance, particularly the port's future performance outputs when the quayside developments become operational. Declining SSC between the PA and other PCMs combined with reduced CSC and RSC was found to inhibit the port authority's ability to realise existing opportunities for port development. Nevertheless, the findings suggest that SSC alone does not enable PCMs, and consequently TP2, to realise performance increases as CSC and RSC is required to activate and access the existing network links.

## 6.6 Chapter Conclusion

This chapter presented the findings for the case study of TP2, a major Scottish trust port. Identified port performance criteria were analysed regarding the influence social capital has on them through established port community relationships. The following table summarises the prevalent perception of PCMs regarding social capital facets describing existing relationship constellations amongst each other and their experienced benefits. These are depicted in Table 21 with reference being made to realised benefits which have been linked to the respective facet.

Table 21: Prevalent Social Capital Relationship Configuration at TP2

<i>SC Facet / PCM</i>	<i>PA</i> <i>6.2.1</i>	<i>PSPs</i> <i>6.2.2</i>	<i>COs</i> <i>6.2.3</i>	<i>Perceived</i> <i>Influence</i>	<i>Section</i>
<i>Trust in reciprocity</i>	CO	CO	PA, PSP	Positive and negative (lack thereof)	6.3.4 6.3.4, 6.4.1, 6.4.2
<i>Trust beyond formal agreements</i>		CO	PSP	Negative (lack thereof)	6.3.1, 6.3.2, 6.3.3, 6.3.5
<i>Shared vision</i>			PSP	Negative (lack thereof)	6.3.5, 6.3.1
<i>Shared values</i>		CO	PSP	Positive and negative (lack thereof)	6.3.5, 6.4.1 6.3.3, 6.3.4
<i>Shared understanding</i>		CO		Negative (lack thereof)	6.3.1, 6.3.3 6.4.2
<i>Network ties &amp; opportunities</i>		CO	PSP	Positive and negative (lack thereof)	6.3.4, 6.3.5 6.4.1, 6.4.2

The lack of RSC between port authority and PCMs appeared to have a detrimental influence on the transparency of interactions within the port community as well as to the open and efficient exchange of information. The absence of CSC between port authority and PCMs in the form of shared values or shared vision was further found to negatively influence PCP as it led to an incoherent customer experience. The lack of RSC, particularly levels of trust between PSPs and PA, reportedly, is the consequence of PSPs' feeling of having been taken advantage of in recent years. SSC, according to interviewees does not present an immediate benefit to the port or themselves if the actor in question lacks the means to activate and access the desired network node through RSC or CSC. In sum, development of social capital was emphasised to be beneficial to PCP.

## **7 Cross-Case Discussion**

Chapters five and six report and outline findings of the case studies for Trust Port 1 and Trust Port 2. Both chapters are structured identically to allow for immediate identification of differences as well as similarities. Findings are reported based on themes identified in chapter two which reviews extant port performance literature and chapter three which explores social capital literature. The former allows for the delineation of performance measures in relation to wider port performance literature and port community performance, respectively. The latter operates as a lens for the investigation and aids the identification of facets for existing dyadic as well as triadic relationships. Those facets are further organised according to the three dimensions of social capital, relational, cognitive, and structural SC (Nahapiet and Ghoshal, 1998). Last, chapter five and six each identify social capital as being positively correlated with the performance of actors in dyadic relationships as well as port community performance which refers to performance beyond the dyadic relationships within the port environment.

The following chapter is synthesising the findings of both case studies and discusses these in contrast the extant literature. The structure follows the identified research objectives:

- Identify social capital facets within the port community influencing port community performance. (RO 1)
- Establish how social capital in port community triads (port authority, port service provider, cargo owner) can influence port community performance. (RO 2)
- Identify how social capital facets and dimensions interact within the port community setting. (RO 3)
- Extend Hartmann and Herb's (2015) concept of social capital effects to port community triads (port authority, port service provider, cargo owner). (RO 4)

The initial discussion revolves around the identification and delineation of SC facets within the port community and their influence on PCP. This level of analysis primarily contrasts findings of social capital's beneficial and detrimental effects on the performance of the port community. Subsequently, the triadic relationships between port authority, cargo owners, and port service providers are discussed in line with the nature of their relationships and the subsequent effects on port community performance. The interaction of social capital dimensions is then discussed in relation to extant literature. In its final section, this chapter explores how the synthesised data adds to the concept of social capital's influence within triadic relationships, as noted by Hartmann and Herb (2015).

## **7.1 Effects of Social Capital and Port Community Performance**

Identifying the effects that social capital can have on port community performance in the case of TP1 and TP2 is an integral part of this research. Section 2.2 discussed the differentiation of port performance into effectiveness and efficiency while also acknowledging the prevalent focus on performance measurement instead of performance management (Schellinck and Brooks, 2016). Social capital, though, is commonly differentiated according to its three dimensions (Nahapiet and Ghoshal, 1998) and can be further broken down into individual facets per dimension. Subsequently, the initial objective of this research was to establish the effects social capital was found to have on port community performance in the case of TP1 and TP2. This, in turn, lays the foundation for the ensuing analysis of the interplay of relationships between PA, COs, and PSPs in regard to their triadic relationship setting and their effects on port community performance.

Reviewing the information gathered as part of both case studies, it is evident that significant positive as well as negative effects to port community performance can be attributed to the utilisation of available social capital between actors of the port community. While negative effects of SC in TP1 can predominantly be attributed to the “dark-side” of social capital (Villena, Revilla and Choi, 2011), the case of TP2 highlights the limitations which an absence of social capital between port community members brings with itself for the improvements of port community performance.

The ensuing sections of this chapter discuss the individual social capital dimensions in more detail in relation to beneficial or detrimental facets considering their influence on port community performance and how those align or deviate from extant literature. Within the sections on individual dimensions, discovered facets and their effects will be linked to existing port performance criteria. Next, the effects stemming from the “dark-side” of social capital will be discussed as the separate analysis of identified effects and port community settings allows for a more detailed understanding of contributing factors as well as practical measures which allow for the management of such detrimental effects.

### **7.1.1 Relational Social Capital and Port Community Performance**

PCP is a novel construct, which has been introduced and defined to emphasise and correctly attribute the influence of relationships existing between actors of the port community on their performance and reverberations on the wider port community. RSC's effects on PCP are subsequently discussed by contrasting established port performance gains stemming from RSC mobilisation with identified RSC effects on performance within extant literature.

Considering trust was repeatedly emphasised as integral and beneficial by participants regarding the performance of a port community, this study's findings in relation to the importance of trust resonate strongly with similar earlier notions of leading scholars (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Villena, Revilla and Choi, 2011; Hartmann and Herb, 2014). This research refers to trust as the level of belief that PCMs have regarding the reliability of other PCMs. The PAs, PSPs, and COs across both case studies suggested that a lack of trust could result in adverse performance of the port community as not all potential business opportunities could be explored in the absence of trust (Uzzi, 1997; Nahapiet and Ghoshal, 1998; Day *et al.*, 2013). This particularly holds true for the desired realisation of a port-centric operation for an existing CO which intended to expand its operations within TP1 which would have seen cargo throughput increase for the whole PC and further improved TP1's diversification of its cargo portfolio and transition from agri-bulks to high-value contract cargo.

If sufficient degrees of trust were perceived to exist, trust was found to facilitate interactions of PCMs which are beneficial to PCP. Nevertheless, a distinction, participants of this study repeatedly made was that the degree of trust required to enter into formal/contractual agreements contrasted to the significantly higher degrees of trust needing to be exhibited to engage in activities beyond contractual obligations. Another distinction to be made was the trust in operational compared to organisational reliability which was emphasised at various times by interviewees. The port community of TP1 exhibited significant levels of trust amongst PCMs regarding both operational and organisational reliability which was found to facilitate the non-reciprocal transfer of resources as evidenced by the no charge lending of equipment between PSPs in TP1 discussed in 5.3.2 or the charge-free utilisation of quayside space of competitors for short periods of time without expecting an immediate return (Kim *et al.* 2015).

These interactions facilitated by RSC had a positive effect on berth utilisation rates and the reliability of the port which are prominent port performance criteria (Brooks and Pallis, 2008; Brooks, Schellinck and Pallis, 2011; Woo, Pettit and Beresford, 2011; Brooks and Schellinck, 2015).

With berth utilisation and cargo turnover rates, particularly when discussing port performance literature in light of container terminal throughputs, the ability to share resources is greatly diminished due to often stationary equipment and dedicated container terminals being reasonably common in larger ports (Woo, Pettit and Beresford, 2011; Madeira Jr. *et al.*, 2012; Chen *et al.*, 2016). With TP1 and TP2 predominantly not pursuing strategies to compete in this market, the ability to share quayside resources among PCMs is greater than might be the case for container ports. The improvement of turnover rates and respective increase of berth utilisation rates, while beneficial, do not capture the wider benefit the willingness of resource sharing brings with, itself, since the latter is also considered to increase reliability of the port/port community. This aspect was considered by many to be a competitive edge for TP1.

Partially attributable to those degrees of trust extended between PCMs in TP1, according to ships agents, is the further ability of TP1 to outperform its existing facilities and their capacities which could otherwise pose a constraint to its operations (5.4.1). Furthermore, closely linked to the aforementioned is that trust amongst PCMs into each other's commitment towards the PCs customers (COs in most referred cases) and the ensuing willingness to go beyond contractual obligations not only fostered TP1's reputation as customer-centric but can also provide a sustainable competitive advantage (Kim *et al.* 2015; Isaksson *et al.* 2015).

RSC Finding 1: Trust, in the port community triad of TP1, increases the likelihood of double-berthing arrangements being accommodated as port service providers trust in the former's reciprocity. (RO 1 & 2)

As illustrated above, in the case of TP1 the prevalence of trust in organisational and operational reliability between PCMs allowed for performance improvements in several areas whereas findings in TP2 highlight the limitations a lack of trust within the port community regarding organisational reliability imposes on performance management in line with port community relationships. In similar terms organisational and operational

reliability was understood by TP2's participants as the difference between operational competence which the PA exhibited in abundance whereas organisational willingness (trust) was not expressed regarding the interaction with PCMs outside of contractual obligations or the compliance with informal agreements between PCMs and the PA, as evidenced in section 6.3.2. The reneging on informal agreements in TP2's PC by the PA has eroded trust significantly and is perceived to negatively limit the responsiveness of PSPs when it comes to establishing pricing structures and agreements between themselves, the PA, and COs. This predominantly stems from the fear of opportunism risk PSPs are facing from the side of the PA as they have had repeated negative experiences where the PA reneged on informally discussed contract cargo rates which went beyond current planning horizons. Subsequently, low levels of trust due to limited organisational reliability hamper the ability of PSPs to market TP2 effectively since they cannot adequately cost their services for COs (Hartmann and Herb, 2014).

RSC Finding 2: Being perceived as true to their word, not having reneged on agreements, the trust in the port authority of TP1, extended by port service providers, grants them longer and reliable planning options which, in turn, increase the reliability of agreements cargo owners reach with port service providers. (RO 1 & 2)

Trust by most participants was referred to as an integral and desired part of the business relationships they maintained. This was expressed to the level of one participant stating that *"If you don't have trust, you don't have anything!"* which further stresses the relevance of relational social capital for the port community's performance as the latter represents the sum of generated business activity facilitated via the interaction of at least two port community members. The distinction of organisational and operational reliability/trust also closely resonates with the earlier findings of Leana and Van Buren (1999) who distinguish fragile and generalised trust, the former being dyadic and only extended to the immediate partner whereas the generalised conceptualisation of trust encapsulates the environment of TP1 in which trust is rendered to the community, itself, by COs and PSPs alike. This form of trust was found to discourage opportunistic behaviour and facilitated individual actors within the PC to go beyond solely acting for their own benefit but taking a role where they take action in consideration of the whole PC (Villena, Revilla and Choi, 2011; Holma, 2012; Blonska *et al.*, 2013).

RSC Finding 3: Trust, between port authority and port service providers in TP1, increases the likelihood of special requests being accommodated as port service providers trust in TP1's reciprocity. (RO 1 & 2)

With port services being rendered to and by various actors, often while utilising intermediaries for communication like ships agents, high degrees of trust were found to significantly enhance the effectiveness and efficiency of communication within the port community which, in turn, can allow for faster decision-making. Also, high levels of trust can help bridge hierarchical and inter-organisational divides as information and ideas can be exchanged more freely compared to a low-trust environment (Willem and Buelens, 2007). Accuracy, availability, and adequacy of information being three well established port effectiveness criteria (Brooks, Schellinck and Pallis, 2011; Schellinck and Brooks, 2015), and the beneficial influence of RSC on those performance measures, furthers the argument of RSC being mobilised in port community relationships as having a positive influence on overall PCP.

The earlier-mentioned nature of ships agents often acting as intermediaries between PA, COs and other PSPs makes them information brokers who significantly benefit from being able to reliably access, disseminate, and verify information (Carlan, Sys and Vanelslander, 2016). This study finds that port community members who fostered trusting PC relationships were able to neglect having to verify the accuracy of most shared information since they did trust the other party regarding the understanding of existing requirements and believed them to openly discuss any lack of understanding they experienced, as seen in section 5.3.3. This reduction of resource investment into data/information verification is repeatedly highlighted in the extant literature and a well-established benefit of RSC generation and mobilisation (Cousins, Handfield and Lawson, 2006; Carey, Lawson and Krause, 2011; Villena, Revilla and Choi, 2011; Li, Ye and Sheu, 2014). At the same time, though, the trust being extended between PCMs also allowed for fast verification of information should it be necessary as PCMs were willing to make information available to each other beyond their contractual obligations (5.3.4). The notion of RSC facilitating the willingness to share information is well documented and the findings of this study show that PCM relationships exhibiting trust allow for faster and easier access to information (Inkpen and Tsang, 2005; Li, Ye and Sheu, 2014). The accuracy and availability of information as an advantage of relationships displaying



relational social capital was aligned with the respective port effectiveness criteria according to case study participants.

**RSC Finding 4: Openness of communication and ease of information sharing based on trust between port community members positively influences shared understanding and effectiveness of communication through improved availability, adequacy, and accuracy of information. (RO 1 & 2)**

The openness positively influenced information sharing based on the trust existing between PCMs and was further found to influence information adequacy positively. Members of the port community who repeatedly engage in open information exchange delineated that, over time, they became more familiar with each other's information requirements and degrees of desired details (5.3.5) which was understood to improve the adequacy of exchanged information between those PCMs. Similar performance improvements related to information, while often being perceived as stemming from high levels of trust, are also linked to the development of increased shared understanding which captures vision, norms and values (Nahapiet and Ghoshal, 1998; Leana and Van Buren, 1999; Kwon and Adler, 2014).

### **7.1.2 Cognitive Social Capital and Port Community Performance**

While trust was strongly emphasised as integral to high performing PCRs, shared vision i.e., shared understanding (a facet of CSC) as a conduit for port community performance was repeatedly reported by interviewees. It was argued across the variety of PCMs that for effective service-delivery, PCMs need to understand the individual cargo or customer. Furthermore, sharing a similar vision for the importance of customer centricity strengthens the PC's attractiveness for existing and future customers since service providers along the supply chain operate under the same premise which allows for an aligned approach.

For example, in TP1's case, even though there were several PSPs rendering almost identical service offerings, competing PSPs did jointly advertise their services similar to a portfolio at leading industry trade fairs. Thereby emphasising that, initially, the customers' requirements come first and the shared understanding that any business that comes into the port is good business, as seen in section 5.3.6. Other PSPs of TP1's port community operated under a similar model, if they were approached for a business opportunity by prospective clients and did not consider themselves as being capable of

delivering the service at the desired standard, they would point the client into the direction of one of the other PCMs. This commonly happened because of the shared understanding and belief that “the busier the port is the better for all of us”. While no single PSP was able to render all services required by a ship’s agent on behest of their client, getting the business into the port allows them to compete for other parts of the service where they are perceived to provide superior offerings.

Shared vision and shared understanding as part of CSC among PCMs is therefore argued to enhance the effectiveness of service delivery within the PC and the planning ability of the PA. The sentiment of CSC in the form of shared understanding or that shared vision facilitates the cohesive delivery of excellent customer service is one of the prevalent themes of this research. While the vision for the port community to was, some degree, instigated and advocated by the respective PA, buy-in and working within the desired parameters was largely influenced by PCMs’ notions that “doing the best job possible” is just what they would expect others to do and, therefore, comply with themselves. Thus, COs and ships agents (among PSPs) alike found the PC to offer a unique customer-centric approach which sets it apart from its competitors in the East of Scotland and further allows it to outperform some of the constraints it owes to its setting.

Even though within the PC all actors are likely to be pursuing their own goals in line with their business objectives, the creation of a shared vision, can-do attitude, and customer-centricity, reportedly increase the attractiveness of the port for new port users while also strengthening the bond with existing port users and heightening the chance of return business (Panayides and Polyviou, 2011; Tang, Low and Lam, 2011). Research which investigated the impacts of shared vision on performance, i.e., relationships exhibiting cognitive social capital on performance (Li, Ye and Sheu, 2014; Hartmann and Herb, 2015) found that shared understanding of each other’s goals, business and wider approach to doing business can significantly improve performance.

CSC Finding 1: A shared culture of “customer centricity” among port authority and port service providers is experienced by cargo owners and new entrants which, in turn, communicate positive experiences with their networks, enhancing the reputation and attractiveness of the port. (RO 1 & 2)

Hartmann and Herb (2015), for example, found that CSC within a service triad of service buyer, service provider, and client, allowed the service buyer to step back from most day-to-day operational queries their clients might have as the contracted service provider had an equally good understanding of those requirements and was, subsequently, able to act independently. This, in turn, frees up time for the service buyer, reduces communication lag by cutting out one node of the information chain, and strengthens the position of the service provider as they offer a not imitable advantage over other service providers with lower or non-existent CSC in this setting. Those benefits were also identified in the present study between multiple PSPs, the PA, and various COs. Even though the constellation of actors differed at times, the notion of shared understanding of other PCMs' operations or business, as well as the shared vision of providing customer-centric services, led to increased speed and effectiveness of information exchange (5.5.2) which are captured themselves within the port effectiveness framework (Woo, Pettit and Beresford, 2011; Brooks and Schellinck, 2015).

Similarly, Li, Ye and Sheu, (2014) show that CSC has beneficial effects on information sharing for the parties in the relationship setting as enhanced CSC encourages the quality and quantity of shared information between actors. Furthermore, akin to Kwon and Adler (2014) they found that formal or informal social interaction between actors alone does not yield significant information sharing benefits. These were only realised when relationships displaying degrees of CSC or RSC were present as these allow for effective sharing of information beyond the immediate contractual requirements of the relationship setting (Li, Ye and Sheu, 2014). This approach to information exchange was repeatedly stated by the PSPs and COs of this study, emphasising that they understood the information requirements or shortcomings of other PCMs as they would go beyond any contractual scope to aid those PCMs within their own means. This was exemplified by ships agents and port-centric PSPs utilising their succinctly more developed information network (compared to the PA) to supply the PA with information the PSP considered relevant for them, despite the PA potentially not having been aware this information was available in the first place (5.3.4). Behaviour like the aforementioned extends the suggestion of Li, Ye and Sheu (2014) of CSC (and RSC) encouraging the meaningful exchange of information as PCMs extending goodwill towards the PA in TP1, while also having developed a shared understanding of each other's operations, became proactive in the sharing of information and, further, did not expect an immediate return but, rather, perceived it as nurturing the existing relationship. At the same time, though, involved

parties played to their individual strengths as the PSPs in question already had developed sophisticated information networks whereas the PA had developed a shared vision with most of its PCMs, allowing it to act on received information, enhancing the chances of increased performance of the port community.

CSC Finding 2: Shared understanding of port community members' business or requirements increases the likelihood of information requirements being anticipated and fulfilled. Shared understanding among the former was found to increase responsiveness. (RO 1 & 2)

Touching upon the identified display of a shared vision of the PC, Inkpen and Tsang (2005) operationalised the term as the degree to which internalised norms mediate individuals' behaviours and create a uniform set of behavioural standards. These understood norms were found to govern the behaviour of PCMs in TP1 despite the disparity of views regarding the PA from opposing quaysides. The internalised "customer-first" or "can-do" attitude of PCMs translates into an approach of mutual benefits, helping each other out without expecting an immediate reward, as well as helping out competitors within the PC after contracts have been awarded, thereby allowing for a more resilient operation which, in turn, was perceived to raise the attractiveness of the PC while also making it more amenable and accommodating to customer requests (5.5.2).

The ability of ports to accommodate special requests is another well-established port effectiveness and, thereby, port performance criterion (Panayides and Song, 2006; Woo, Pettit and Beresford, 2011; Brooks and Schellinck, 2015). The ability of ports to accommodate special requests is another well-established port effectiveness and, thereby, port performance criterion (Panayides and Song, 2006; Woo, Pettit and Beresford, 2011; Brooks and Schellinck, 2015). Cognitive social capital in the form of shared vision existing between PCMs, can be understood as leading to performance gains for the whole port community. Business being attracted by means of being able to accommodate special requests will be cargo which requires services to be rendered by multiple PSPs of the PC, the PA achieving greater cargo throughput and all involved PCMs increasing their fixed asset utilisation rates.

CSC Finding 3: Shared culture of “customer centricity” among port authority and port service providers in TP1 increases the likelihood of accommodating special requests by cargo owners. (RO 1 & 2)

Furthermore, echoing the previous findings of Kim, Hur and Schoenherr (2015) PCMs developing shared patterns of communication was found to facilitate efficient and effective information exchange which reduces the risk of miscommunication. Discussing the relevance of “*speaking the same language*”, i.e., shared patterns of communication with interviewees, the former can further be attributed to increasing the likelihood of PCMs engaging with each other, thereby strengthening the existing relationship which, in turn, can additionally support the quality of communication within the PC (Nahapiet and Ghoshal 1998). While these beneficial effects of CSC on information exchange have been observed by numerous authors (Nahapiet and Ghoshal, 1998; Inkpen and Tsang, 2005; Li, Ye and Sheu, 2014; Kim, Hur and Schoenherr, 2015) they were in some cases found to present barriers to information exchange between COs who were less familiar with the communication patterns of PCMs or had moved their operations from another location into the port itself (5.5.2) and are less used to the way business is conducted in the respective port community. The formation of in- and out-groups is a continuously echoed detrimental effect that the development of CSC brings with it, particularly in larger group settings as it distinguishes established group members from new entrants which, in turn, can limit access to resources for the latter (Bourdieu, 1983; Villena, Revilla and Choi, 2011). Even though this effect is generally considered as detrimental for new PCMs, both TP1 and TP2 PCMs were reflecting on the matter from a perspective of likely gains contrasted to eventual negative consequences on their own and the port community’s business. For the most part it should be considered a business decision if the benefits outweigh the potential negative outcomes.

CSC Finding 4: Using shared terminology, understanding industry specific language, and understanding requirements within the port community increases information accuracy between port community members as the likelihood of miscommunication is reduced. Shared understanding of each other’s (PCTs) business or requirements increases the likelihood of PCMs providing the required information without the other party having to explain themselves explicitly. (RO 1 & 2)

Contrastingly, incumbent PCMs of TP1 and TP2 shared varied experiences of the difficulties they were facing when sharing information with other PCMs. Those having become PCMs of TP1 only recently, without strong prior affiliation or interaction, found

the barriers posed by not communicating in patterns common to PCMs who had already developed CSC amongst each other, was mediated by the customer-centric shared culture of TP1's PCMs and their belief that an addition to the PC increases their general attractiveness within the region and can, thereby, increase the PC's competitiveness. Additionally, the PA of TP1 was reported to treat new PCMs no differently from existing long-term business relationships in their approach to doing business and, thereby, also aided the mediation of existing barriers. Leading by example and living the values the PA encourages to be shared by all PCMs also encouraged buy-in to this type of behaviour and nurtured the exhibited customer-centric culture. Conformity to informal rules and expectations as result of CSC is well documented within extant literature investigating the effects of CSC on inter- or intra-organisational relationship settings as well as dyadic and triadic business relationships (Nahapiet and Ghoshal, 1998; Leana and Van Buren, 1999; Inkpen and Tsang, 2005; Cousins, Handfield and Lawson, 2006; Lawson, Tyler and Cousins, 2008; Hartmann and Herb, 2014, 2015). Contrastingly, in the port community of TP2 the PA was not found to have this mediating effect on barriers to effective communication which new entrants to the PC are facing. As reported by PSPs and COs of TP2, it was the PA itself that was impacted by those barriers which, generally, new entrants to the PC had shared with the researcher in TP1's port community. PSPs and COs of TP2 iterated that the PA does not understand their concerns or shares their values in regards of doing business within the PC. Reportedly, in turn, this limited the ability of TP2's port community to realise the advantages achieved by TP1.

The findings of the present research indicate that CSC is a useful resource for PCs to accumulate between members as it facilitates PC cohesion and increases the chance of PCMs behaving according to informal understandings and conforming to widely exhibited values within the port community. While the benefits of CSC on group, team or organisational performance have been widely supported by literature, the link between CSC and port (community) performance has not yet been established. Although CSC was generally reported as allowing benefits for the PC to be realised which would not be obtainable in its absence, detrimental effects stemming from excessive CSC have been highlighted and will be further discussed.

### **7.1.3 Structural Social Capital and Port Community Performance**

Analysis of the collected data shows that SSC is a valuable resource for port community performance. Being able to correctly identify prospective port users which can be attracted to the port as well as staying up to date on developments within the sector beyond the immediate sphere of operation of the PC were considered key advantages stemming from SSC.

The influence lacking degrees of SSC has for port community performance is highlighted by responses of north quay PCMs who emphasised feeling disenfranchised from acting akin to other PCMs, in terms of commitment to the PC's shared values and understanding, since they were not treated in a similar fashion. Interestingly, it appeared to not be the content of exchanged information or the nature of the exchange which would have made a difference to those affected PCMs but, predominantly, the frequency of interaction itself. This particular notion differed from findings and proposed conceptualisations of SSC by Adler and Kwon (2002) and their later work (Kwon and Adler 2014). They considered RSC and CSC as depicting tie content and SSC as network tie structure. The latter representing the opportunity for resource utilisation and the former as determining the likelihood of mobilising those resources.

Furthermore, frequency of interaction or a lack thereof between PA and COs was reported by some COs as limiting the PA and, subsequently, the PCs opportunity to explore future business ventures with existing PCMs. COs were reluctant to bring these suggestions to the fore themselves and expected the PA to show an interest by means of interacting with them on a regular basis. Reportedly, the lack of interaction led to COs perceiving their understanding of the PCs current operations and strategy as limited which deterred them from seeking out additional business ventures with TP1's PC. Frequency of interaction facilitating the development of shared understanding, though, has been well documented by several studies (Tsai and Ghoshal, 1998; Inkpen and Tsang, 2005; Lawson, Tyler and Cousins, 2008; Kwon and Adler, 2014). Similarly, frequency of interaction appeared to facilitate the development of trust, i.e., RSC which resonates with the studies mentioned previously, as well. Even though this, in turn, strengthens the assertion that SSC indirectly positively influences PCP by means of facilitating RSC and CSC development, the predominant benefits appear to stem from the extension of existing networks and knowing whom to speak to about specific requests/requirements.

SSC Finding 1: Utilising contact points of the wider port community triad network increases the reach and opportunities for information access becoming available. Additional nodes present additional opportunities. (RO 1 & 2)

Considering the port performance criteria of information accuracy and availability (Brooks, Schellinck and Pallis, 2011; Brooks and Schellinck, 2015), SSC was perceived by interviewees as providing significant benefits in aspects pertaining to these two criteria. PCMs utilising the increased reach of their network by accessing other PCMs' nodes for obtaining and verifying information they required, reportedly benefited their operation and subsequently the PC itself. Acting on increasingly accurate information is understood to benefit the perceived reliability of the PC as a whole (Carlan, Sys and Vanelslander, 2016). Equally, being able to reach out to a greater number of actors within the industry, particularly in the absence of first-hand experience, is reported as a significant benefit. While the availability of nodes did not necessarily equate to access to them, PCMs reported that access to said information was not one of the prevalent issues if contact had been made via the primary contact and the desired information was not deemed sensitive to its owner business activities or strategy. Interview responses, though, corroborated findings of earlier studies in which degrees of trust (RSC) between actors of these triadic constellations was identified as having a mediating effect on the chances of obtaining access to said information (Pesämaa *et al.*, 2013; Hartmann and Herb, 2014, 2015)

With both PAs, and subsequently the dealings within the port communities, of this research being subject to trust port regulations and the ensuing governance (Transport Scotland, 2012), the ability to approach and access contacts of other PCMs is of great relevance. Extant literature provides strong support for the relevance of network position and frequency of interaction this research suggests. As an example, several studies have shown that SSC is of significant importance for allowing organisations access to investment and financing (Uzzi, 1997; Choi and Kim, 2008). This is of particular relevance for trust ports since they traditionally face greater challenges for port development, i.e., financing of expansions. Findings of these two case studies are supported by a rather well-established field of literature which shows that SSC and other SC dimensions contribute to positively influence the performance of the respective entity or system (Lawson, Tyler and Cousins, 2008; Kwon and Adler, 2014; Hartmann and Herb, 2015).



#### **7.1.4 Social Capital and Port Community Performance Summary**

This section has discussed the observed influences of social capital in port community triads on port community performance across the two case studies. Influences were, when appropriate, attributed to established port performance criteria. RSC and CSC were found to significantly influence the performance of PCMs and, subsequently, the port's community performance. Contrastingly, SSC was of relevance to actors who significantly benefitted from accessing the networks of other PCMs. The success of the latter, though, was found to be mediated by CSC and RSC. Support for this finding was found in service triad performance research (Hartmann and Herb, 2015) and the preceding work of Nahapiet and Ghoshal (1998) as well as Adler and Kwon (2002) which is discussed further in section 7.4. RSC in the form of trust in PCM relationships was identified as a strong facilitator of information exchange, particularly open and direct communication as the risk of opportunistic behaviour was perceived to decrease based on the established level of trust among PCMs.

RSC as a facilitator of open information exchange is widely identified as a key benefit of developing social capital within relationship settings (Inkpen and Tsang, 2005; Lawson et al., 2009; Villena, Revilla and Choi, 2011).

Considering the influence CSC was identified as having on several port (community) performance criteria (Schellinck and Brooks, 2015), it appears to be of particular importance for port performance management. CSC, depicted by a shared vision of how the port community should operate and what its values are in terms of service delivery, have shown to positively influence information exchange, fulfilment of customer's special requests as well as overall reliability of the port community. Cohesiveness has been closely linked by the extant literature as a benefit of CSC in the form of shared vision in buyer-supplier (Carey, Lawson and Krause, 2011), group (Oh, Chung and Labianca, 2004) and organisational (Maurer, Bartsch and Ebers, 2011) settings. The shared vision of a customer-centric focus among PSPs and PA aligned their conduct within the port community and facilitated a coherent experience for PCMs. Furthermore, a shared vision among most PCMs was found to have a mediating effect on the behaviour of PCMs considered as less customer-centric in their individual approach. The identified level of shared vision, instead, was understood by PCMs to oblige deviating members to pursue the same customer-centric approach to continue competing for business within the port community.

While conformity obligations can be regarded as negative for the individual actor, it was found to benefit the system which is often neglected in the review of social capital's dark side (Anderson and Jap, 2005; Villena, Revilla and Choi, 2011; Pillai *et al.*, 2017).

## **7.2 Dark Side of Social Capital and Port Community Performance**

The previous sections have identified and contrasted the mostly positive influence which all three dimensions of social capital can have on port community performance across the two case studies. While there is a significant amount of research exploring the benefits of social capital in various settings and circumstances, as well as the downsides of not accumulating social capital (Portes, 1998; Kwon and Adler, 2014), research on the negative aspects or influence of accumulating too much social capital is rather limited (Villena, Revilla and Choi, 2011; Pillai *et al.*, 2017). Considering the nature of ports, with some PCMs having to make infrastructure, equipment and general development commitments for decades in advance to ensure continuity and growth of their operation, the duration of relationships amongst port centric PCMs is reflective of these planning horizons (Carlan, Sys and Vanelander, 2016). Subsequently, it appears necessary to analyse those relationships in particular detail regarding the potentially detrimental influence of excessive SC on port community performance in line with effects previously identified by these studies. The findings across the two case studies within this niche of SC research present a meaningful contribution looking at these effects beyond a dyadic setting of relationships, affirming but also contrasting the earlier findings of Villena, Revilla and Choi, (2011) and Pillai *et al.* (2017). In addition to this expansion, the present study highlights the means to mediate the negative effects stemming from excessive amounts of SC accumulation in these relationship settings.

The findings show that both excessive levels of CSC and RSC within the PC relationship setting lead to negative effects, reducing the performance of the port community by impacting individual members' activities. One of the two identified negative occurrences was the perceived increase of opportunism risk PCMs feared due to individual members' attitude to "overshare" sensitive information in joint PCM meetings with RSC being the predominant facilitator. This involves trust having been built within the PC to an extent at which individual PCMs become complacent about the sensitivity of exchanged information which allows others to take advantage of privileged information. The second instance relates to CSC being accumulated excessively to the point where a PCM considers themselves to understand other PCMs' operational requirements or ways of

doing business so well that they were found to discontinue asking for confirmation before acting on behalf of the PCM in question. While this in itself can prove beneficial as it reduces lag between an issue arising and action being taken, the perceived understanding of each other might not match reality.

This aspect itself is insightful as social capital research predominantly relies on singular perspectives of the relationship setting with performance gains being attributed according to one of two actors within the predominantly dyadic settings in SC research (Choi and Wu, 2009; Kwon and Adler, 2014; Roden and Lawson, 2014). Having introduced two examples of identified negative effects, both SC dimensions and the identified detrimental influences of the dark side of social capital on port community performance are now discussed and detailed in turn.

### **7.2.1 Dark Side of Relational Social Capital and Port Community Performance**

Across the two case studies and the multitude of PCM relationship settings which existed within the two port communities, the effects of the dark side of RSC were identified only for some of the relationship constellations within TP1's port community. This in itself can be considered as an indication regarding the nature of the triadic relationship settings of PSPs, COs, and PA within the port community of TP2 and its realisation of possible performance outputs in contrast to TP1.

As the most prevalently experienced negative effect of RSC, the continuous increase of opportunism risk was identified by case study participants. An initial finding, though, was the varying understanding regarding the nature of increasing opportunism risk among PCMs themselves. Across interviews at TP1, opportunism risk was perceived to increase because of PCMs having developed high levels of trust across most of the port community, offering actors multiple access points to sensitive information while also limiting the ability of other PCMs to pinpoint which actor originally shared sensitive information and, subsequently, was taken advantage of and the high levels of trust the PA and several COs perceived to exist within the whole port community facilitating the disclosure of information which, according to several PCMs, should remain privileged despite the existing levels of RSC (5.2.1). Nevertheless, both individual notions are meaningful. The former indicates that high levels of trust in triadic relationship settings can reduce the likelihood of identifying and attributing opportunistic behaviour to the respective actor, thereby removing one of the advocated benefits of RSC (Cousins,

Handfield and Lawson, 2006; Elfenbein and Zenger, 2013). In addition, the present findings suggest that the benefit of actors within the triad, monitoring each other's behaviour and reporting opportunistic actions, as proposed by Hartmann and Herb, (2014) are limited to the consideration of triads isolated from the extended supply network in which additional actors with equivalent levels of RSC might be able to obtain and share similar information.

Regarding the second distinction of RSC increasing opportunism risk, the notion of increasing levels of trust increasing the chance of more valuable information being exchanged between actors of the dyad or triad is, once more, well documented (Villena, Revilla and Choi, 2011; Stuart, Verville and Taskin, 2012; Hartmann and Herb, 2015). However, the PA, by extending high levels of trust to other PCPs and sharing sensitive information which, in turn, could offer an advantage to individual PSPs when acted upon, was perceived as too carefree (5.5.1). Even though all case study participants asserted that the PA itself was trustworthy, many PCMs voiced their concerns regarding this particular behaviour as they perceived it as increasing the potential magnitude of opportunistic action being taken. These concerns are also reflected in the findings of Hawkins, Pohlen and Prybutok (2013) who consider RSC as able to prevent facets of opportunism risk while also fostering severe forms of opportunistic behaviour. Considering those notions expressed by case study participants, excessive amounts of RSC within the port community, beyond the dyadic or even triadic setting, were found to have two prevalent negative effects.

DS-RSC Finding 1: Excessive levels of RSC within the wider PC lowers the likelihood of identifying actors which shared privileged information with non-trusted parties as access to the former exists for multiple PCMs which exhibit sufficient degrees of trust. (RO 1 & 2)

DS-RSC Finding 2: Excessive levels of RSC between PCMs increases the sensitivity of shared information between actors which, in turn, is understood to increase the severity of opportunistic behaviour of actors within the port community. (RO 1 & 2)

The positive influence of RSC, as discussed in a previous section (7.1.1) outlining reduced monitoring requirements, effective and efficient information exchange in most cases appear to outweigh existing concerns among TP1's PCMs. Subsequently, conclusions drawn from these findings lend support to the suggested inverted curvilinear relationship between RSC and performance in the context of PCP (Villena, Revilla and Choi, 2011). These findings suggest that RSC experiences a reduction of positive influence on PCP at increasing levels while potentially further leading to the negative outcomes. Even though PSPs within the PC share strong relational ties with the PA as well as the interviewed ships agents and COs, none of the interviewees voiced concerns or shared experiences that relational embeddedness or perceived relational security (Krause, Handfield and Tyler, 2007; Holma, 2012) lead to a decrease of relationship-specific investments.

This is of further interest since the port community itself shares the conditions described by Blonska *et al.*, (2013) as PSPs cannot immediately be swapped for an adequate substitute by the PA or COs moving their cargo through the port. Given those shared conditions and the relationship setting, it could be expected to experience similar effects. However, most social capital research detailing the dark side of effects has focussed on dyadic relationship settings, being considered in isolation of market dynamics or the wider supply network, neglecting wider structural embeddedness or the other party's view. For the PC setting of TP1 and TP2, investments into supplier development should, therefore, not be considered or classified as relationship-specific but, rather, as port community-specific since it strengthens the position of PSPs within the PC setting. Additionally, the capital investment into new equipment, port-side improvements, or information exchange systems in the case of TP2 were found to strengthen relational embeddedness without observing the attributed negative effects emphasised by Yan and Dooley (2014).

Furthermore, the negative influence of excessive RSC existing between PCMs on PCP is also impacted by the mediating or amplifying effects of CSC. Like the consideration of dyadic relationship settings in isolation, the investigation of RSC's dark side effects, without discussing the interrelation of at least the two dimensions, only enhances specificity but not necessarily the conclusiveness of findings.

### 7.2.2 Dark Side of Cognitive Social Capital and Port Community Performance

Like the negative effects of excessive RSC, predominantly trust on PCP, CSC has been identified by case study participants to have a detrimental influence on PCP when reaching relationship-specific thresholds. Identified issues are predominantly linked to information exchange activities and proactive decision-making of PCMs. COs with port-centric operations disclosed that in previous instances the PA had taken a proactive approach when hearing of equipment breakdowns within the port community. In one reported instance, the PA acted based on the perceived existence of shared understanding and ordered replacement parts for machinery COs in the port required. However, these did not match actual requirements which led to an increased cost, disruption of the CO's and PC's operations as well dissatisfaction of the CO (5.5.2). Within the extant literature there is rarely a distinction made between shared understanding and perceived shared understanding, a fallacy of the considerations of any negative effects. CSC within the above case can most closely be linked to "group think" (Villena, Revilla and Choi, 2011) or "loss of objective decision making capabilities" (Anderson and Jap, 2005; Pillai *et al.*, 2017). However, group think is tied to actors becoming increasingly familiar with each other's thought patterns which limits the likelihood of actors deviating from perceived group norms or beliefs due to perceived negative repercussions which might follow such actions (Oh, Chung and Labianca, 2004). Thus, actors within the dyadic, group, or community setting are considered to behave according to their perception of the most desired and group norm compliant action even though the action can be detrimental to the group's performance.

DS-CSC Finding 1: Excessive CSC among PCMs lowers the likelihood of actors seeking verification of their perceived understanding of PCM activities, giving ground to the loss of objective decision-making capabilities. (RO 1 & 2)

As detailed initially, the most common negative influence which CSC appeared to have was related to the three port (community) performance criteria of information accuracy, availability, and adequacy (Brooks and Schellinck, 2015; Schellinck and Brooks, 2015). The impact of CSC on information exchange, entailing these criteria as measures of its performance, is well documented within the extant SC literature, particularly in the context of buyer-supplier relationships (Villena, Revilla and Choi, 2011; Pillai *et al.*, 2017). Open and honest information exchange as described by PCMs of TP1 (5.3.4) based on established values and the shared understanding was widely considered beneficial.

However, with TP1's port community, particularly port-centric operators, to a large extent, consistent with their shared vision and values for the community itself, the likelihood of objective evaluation of information was found to decrease.

DS-CSC Finding 2: Excessive CSC among PCMs lowers the likelihood of actors perceiving verification of obtained information for other PCMs as necessary, giving ground to decreases in information quality and reliability. (RO 1 & 2)

Last, having developed the shared understanding of which cargo the port community traditionally handles and what requirements such operations bring, PSPs who have been operating in TP1 for several decades were identified as very reluctant to abandon their firmly held beliefs of what the port community “does”. Decreasing can result in subpar and elongated decision-making processes as well as losses of relationship effectiveness (Villena, Revilla and Choi, 2011; Pillai *et al.*, 2017).

### **7.2.3 Dark Side of Social Capital and Port Community Performance Summary**

Villena, Revilla and Choi (2011) among others (Uzzi, 1997; Anderson and Jap, 2005; Portes, 2014; Pillai *et al.*, 2017) proposed and have shown that there are thresholds after which generating social capital yields no additional benefits and gives way to negative effects. The findings of this study also identified these “dark-side” effects of social capital in specific dyadic or triadic relationship settings within the port community. Increasing levels of shared understanding (CSC) between the port authority and COs contributed to proactive decision making on the PA's part based on its perceived shared understanding of CO requirements which delayed the resolution of an existing problem and increased capital expenditure. This is in stark contrast to research of Villena, Revilla and Choi (2011) who found no evidence of a curvilinear relationship between CSC and performance. They, instead, concluded that performance and CSC share a linear relationship. Villena *et al.* (2011), however, acknowledged the potential of their sample not yet displaying high enough levels of CSC to observe their theorised negative effects of CSC after a threshold has been reached. Regarding the influence of RSC in port community triads and its influence on port community performance the findings of this study closely mirror the dynamics of Villena *et al.*'s (2011) conclusion regarding RSC and strategic and operational performance. Additionally, Hartmann and Herb's (2015) findings, of intermediaries in service triads being replaced if service provider and customer become increasingly relationally embedded were not observed. Moving beyond the triad to the community, findings suggest that opportunistic behaviour in the triad would significantly impact the PCMs' standing in the wider port community.

Subsequently, high levels of community-wide RSC are considered to mediate the risks linked to the “dark side” of social capital in the sub-order settings. This extension of scope offers a worthwhile pursuit for further research as most BSR research considers dyadic or triadic relationships in isolation without incorporating the aforementioned influences (Choi and Wu, 2009; Kwon and Adler, 2014).

### **7.3 Social Capital’s Effect in Port Community Triads on Port Community Performance**

The previous sections have outlined the positive as well as negative influences which social capital can have on port community performance. This study considers the influence of interrelated SC dimensions and the performance of individual PCMs to affect the performance outputs of the community in its entirety. Despite the at times hardly distinguishable origin of positive or negative influence between CSC and RSC on port community performance the previous section pursued said distinction. A distinction is made not for the existence of influences in isolation but, rather, to attribute those to their commonly reported origin and subsequent influence. The meaningful interrelation has repeatedly been highlighted in previous research but should not deter the researcher from the endeavour of attributing SC facets and its influence as appropriately as possible (Nahapiet and Ghoshal, 1998; Tsai, 2001; Kwon and Adler, 2014).

In addition to the previous delineation of social capital dimensions, its facets, and their influence within port community relationships on PCPs, the following sections link PCMs social capital mobilisation to port community performance. PCMs are once more categorised in line with previous distinctions of port authority, port service provider, and cargo owner (Carlan, Sys and Vanelslander, 2016) to provide a delineation of benefits which individual actors within the port community can accrue from social capital generation and mobilisation. Findings are predominantly a reflection of the reported benefits accrued by case study participants and perceptions they have on SC’s impact on the PC relationships in question. The attribution of benefits to individual dyads or triads based on a single actor’s focus does not diminish the interrelation of PCMs’ activities within the PC or SC dimensions but is merely an instrument to allow for differentiation and analysis. Initially, social capital’s influence on the PA’s performance within the port community is discussed, followed by PSPs, and concluded by the review of COs’ accrued benefits from social capital mobilisation.



### 7.3.1 Port Authorities' Social Capital Effect on Port Community Performance

Trust ports, as per regulations and governance structures (Transport Scotland, 2012) and thereby their managing port authorities, are expected to consider adding value to their respective geographic community, i.e., catchment area, beyond immediate financial returns. Subsequently, in their decision-making on port community composition, PAs should be reviewing not only direct contributions of the added PCM but also their indirect contributions to the PC and the port's catchment area (Transport Scotland, 2012). Similar to the previous study of Demirbas, Flint and Bennett (2014), findings of both case studies suggest that the PA's ability to successfully manage and leverage its relationships with other PCMs contributes significantly to the port community realising its performance potential. Furthermore, goodwill being extended towards the PA by other PCMs allows it to pursue decisions beyond the traditional scope. Thereby, strengthening the PA's ability to make decisions which present the least amount of constraints for future port service developments (Demirbas, Flint and Bennett, 2014).

PA-SC Finding 1: Accumulated goodwill of PCMs allows the port authority to explore and make decisions beyond their traditional function as a landlord. (RO 1)

In the constellation of PA, PSPs, and COs, the findings of this research further show the PA significantly benefits from utilising the goodwill it accumulates within the port community to expand its reach and gain access to business opportunities which it otherwise would either have been unaware of or not able to realise. Particularly, ships agents working with TP1 and TP2 were found to be significant for the extension of the focal PCM network. In both port communities, ships agents need to be considered as integral nodes as they represent an access point to the multitude of potential future clients for the PA. Solely being aware of said opportunities and frequently communicating with ships agents, thereby building SSC itself, though, was not observed to ensure or even indicate success. The latter reflects the assertion of Adler and Kwon (2002,2014) that SSC depicting the network of relationships should be considered as depiction of existing opportunities for engagement rather than guaranteed access.

Initial access to clients of ships agents, as reported in both chapter 5 and 6, was heavily influenced by the CSC and RSC the port authority of TP1 had developed in these relationship settings. Contrastingly, TP2 in comparison needs to be considered as having a significantly stronger position within the network due to its significance for the region, sector, and historic prominence within the industry.

In the case of TP1's PA and their relationship with ships agents, though, the following quote adequately captures the benefit of having developed RSC in the form of trust and CSC as the shared value of customer centricity.

*"I wouldn't phone other ports. Because I would leave it to our agents to phone as they'll have the relationship with them. Being able to just get on top of things on your own makes' things so much easier and better. So instead of having to get two people out of bed you only bother one and the whole process ends up being faster."* (5.3.4)

While the original quote was made by a CO operating out of TP1, access to said CO was initially guarded by the ships agent who, over the course of repeated beneficial interactions, did develop enough trust into the port authority of TP1 to relinquish some of the controls usually exerted in these triadic relationship settings of PA, PSP and CO. Nevertheless, according to the findings of this study, the realised benefit of reducing the workload of respective PCMs could not have been realised by only developing social capital between two of the three members of the triadic setting but required a shared understanding between all involved parties. The accrued benefits of this constellation and social capital utilisation, though, have been reflected in extant social capital literature (Cousins, Handfield and Lawson, 2006; Hartmann and Herb, 2015).

PA-SC Finding 2: Trust and shared values within the triadic relationship of port authority, cargo owner, and port service provider enables the PA to directly engage with COs, improving responsiveness and reducing communication lag. (RO 1 & 2)

Furthermore, the CSC which the PA accumulated with various PCMs was identified as having a positive influence on the overall amenability of PSPs to special requests of customers (5.3.1) which is considered an increasingly important port performance criterion (Schellinck and Brooks, 2016). Since customer centricity and adaptability of services was identified as a recurring theme among COs for port choice, the data collected as part of this study suggests CSC between PSPs and PA has a positive influence on PCP. Existing CSC between PA and PSPs reduces the likelihood of misunderstandings (Inkpen and Tsang, 2005) while the shared social norms also increase the predictability of behaviours within the PC (Hartmann and Herb, 2014) and the shared understanding of "good" customer service contributes to a more uniform port user experience (Krause, Handfield and Tyler, 2007)

### **7.3.2 Port Service Providers' Social Capital Effect on Port Community Performance**

Having touched upon performance benefits derived from social capital for PAs and the wider port community, PSPs are a considerably less homogenous group when considering the triadic constellations in port communities of TP1 and TP2. Foremost, PSPs can and were found to operate out of several port communities, although this mostly refers to individual actors rather than the organisations themselves. Even though this study does not investigate the interplay between an actor and its organisation on the development of social capital in PCM relationships, it must acknowledge that particularly reputation, a facet of RSC and beliefs or values as part of the actors organisational CSC, can mediate the performance gains PCMs experience from SC mobilisation within the port community.

PSPs having developed trusting relationships with the PA were found to exchange information faster and more openly as they perceived the risk of opportunistic behaviour from the PA's side as marginal (Cai *et al.*, 2014). The increased speed of exchange predominantly stems from the decrease in efforts to control and navigate which information can be shared (Inkpen and Tsang, 2005) as far as RSC is concerned whereas CSC and shared understanding between PSPs and PA further increases the speed of exchange of information as it reduces ambiguity and increases the likelihood of communicating accurate and adequate information right away (Nahapiet and Ghoshal, 1998).

**PSP-SC Finding 1: Port service providers developing trusting relationships with the port authority experience improved access to and availability of information. (RO 1)**

The degree to which information is shared within the port community is further influenced by RSC existing between all PSPs and the PA rather than solely on the dyadic relationship setting. From the port community's perspective, the lowest degree of trust existing between PSPs offering the same or similar services and the PA influence the openness and nature of information which is shared by the PA. Since TP1's port authority is perceived as fair and trustworthy by its PCMs, information which could be of business interest to more than one actor (PSP) within the PC needs to be shared openly. Subsequently, sharing of information which might allow for opportunistic behaviour by individual PCMs is weighed against the existing levels of trust among those PSPs or PCMs (Cousins, Handfield and Lawson, 2006).

Considering CSC, port service providers whose relationships with COs, other PSPs, or the PA exhibit shared values, reported that they were able to access resources which they otherwise would not have been able to (Johnson, Elliott and Drake, 2013). Being able to utilise additional quayside space for storage when their allocated space was insufficient, without incurring additional PA charges, or the use of cargo handling equipment owned by other PSPs or even COs without being charged or a formal agreement in place. Shared asset (resource) utilisation and actors operating outside the boundaries of contractual requirements are well documented benefits of CSC in social capital research (Adler and Kwon, 2002; Krause, Handfield and Tyler, 2007; Villena, Revilla and Choi, 2011). In contrast to the influence of SC on information exchange for PSPs which was found to be mediated by the levels of RSC within the port community itself, it appears that resource sharing among PCMs is not strongly mediated by shared values outside the dyad itself. The expectation of reciprocal behaviour among PCMs that have shared their resources in the past with a PSP, has been identified as a benefit linked to social capital within the extant literature (Pesämaa *et al.*, 2013; Hartmann and Herb, 2014). PSPs sharing resources themselves accrue goodwill and subsequently thereby increase the likelihood of other PCMs granting them similar favours as they recognise the PSP in question as sharing the same values and being trustworthy.

PSP-SC Finding 2: Accumulated goodwill and shared values of port service providers with port community members allows for shared asset utilisation in the absence of formal agreements. (RO 1 & 2)

Furthermore, PSPs rendering services within the port itself reported that developing a shared vision for the port community's future development through recurring meetings on an individual basis or at board level significantly benefits their own strategic planning activities (Brooks, Schellinck and Pallis, 2011; Cai *et al.*, 2014). However, PSPs engaging with the port authority in the strategic planning process were found to influence the outcomes of the consultation process. PSPs already having developed a shared understanding of the port community in lieu of the port authority were identified as more likely to have their suggestions incorporated, thereby exerting influence on the strategic direction of the port community while also partially aligning it with their individual future endeavours.

Understanding the port authority's thinking and approach to business, as witnessed in board meetings, enables PSPs to formulate and bring forward strategic plans incorporating more of their own vision on future development within the port community. PCM relationships between PSPs and PA not exhibiting cognitive social capital should be considered as inhibiting their joint as well as individual strategic planning capabilities (Krause, Handfield and Tyler, 2007; Salvador and Villena, 2013).

### **7.3.3 Cargo Owner's Social Capital Effect on Port Community Performance**

Cargo owners are most commonly considered as port users/customers of PAs or clients of PSPs which can negotiate favourable terms due to their market position and power (Brooks and Schellinck, 2015). Throughout the interviews which were conducted before the Covid-19 epidemic and the ensuing change in power balance between COs and PSPs, the phrase "*Cargo is king*" was repeatedly voiced by case study participants (PSPs and PA) emphasising that accommodating cargo owners within their means to secure cargo volumes is of utmost importance. Even though this power dynamic in 2021 appears to have changed due to capacity constraints in the shipping industry, benefits stemming from developing SC between COs and PCMs should nonetheless be considered as desirable. The following discussion, though, is reflective of the circumstances when conducting the participant interviews and PAs and PSPs did compete for cargo interests (Yeo et al., 2014; Brooks and Schellinck, 2015).

Among the benefits reported in chapters 5 and 6, RSC in the form of trust between CO, PSP and PA appears to significantly improve information exchange efficiency. Relational social capital positively influencing information exchange is well documented for dyadic relationship settings (Adler and Kwon, 2002; Inkpen and Tsang, 2005; Lawson *et al.*, 2009). In TP1 and TP2, however, COs which are not immediately located within the port's boundaries predominantly interact with PAs through agents (PSP) which adds one additional node to information exchange activities. Accessing information through additional nodes or channels increases exchange duration (Autry and Griffis, 2008; Salvador and Villena, 2013). COs having built trusting relationships with their respective ships agent, with the latter perceiving the CO as loyal and trustworthy, was identified as enabling direct exchange of information between CO and PA.

Contrary to the previous findings of Hartmann and Herb (2015), with the ships agent in the role of service buyer, the port authority acting as service provider was not concerned about losing its influence over the CO.

CO-SC Finding 1: Mutual trust within the PA, PSP, CO configuration positively influences information exchange activities, reducing the need for COs communicating through intermediaries. (RO 1 & 2)

However, concerns of lost influence were evident in TP2 as PSPs reported that they would not encourage or facilitate interaction between their customers (COs) and the service providers (PA) since they are concerned about the opportunism risk the following setting would expose them to. In contrast, TP1's constellation of CO, PSP, and PA had, reportedly, established mutual trust among the individual actors which allowed COs to directly access the PA regarding any information or services they required without the PSPs voicing concerns of opportunism risk. The CO gained faster and reliable access to information whereas the PSPs experienced reduced workload, moving more towards an expert role, predominantly stepping in when their expertise was required by the CO or PA.

Cargo owners in PA or PSP relationship settings which had developed a shared understanding of each other's operation and capabilities were further found to benefit from increased adequacy of information as well as increased accuracy of information. The former was reported to predominantly stem from the PA or PSPs' better understanding the requirements of the cargo owner which enables provision of the appropriate information. This is of particular importance when COs are not yet able to exactly identify what information they require. Nevertheless, based on their shared understanding, the PA or PSP can assess the relevance of information they have available and are willing to share with the other party and, thereby, increase the likelihood for the CO to receive adequate information. This, in turn, reduces the COs workload to repeatedly assess received information and perform activities related to quality assurance or verify it via another third party source. Inkpen and Tsang (2005) as well as Lawson *et al.* (2009) among others previously highlighted these benefits of CSC on knowledge and information sharing within intra-organisational networks and strategic alliances. Despite the contextual differences, identified benefits were commonly shared.

CO-SC Finding 2: Shared understanding existing between cargo owners and port service providers or port authority increases information adequacy and accuracy. Shared language between CO, PSP, or PA further benefits information accuracy. (RO 1 & 2)

Information accuracy is found to benefit from CO and PCM relationships with higher degrees of CSC. COs adapting to language patterns and thought processes of PAs or PSPs within the port community, and vice versa, reduces the impact of ambiguous elements of communication patterns since all parties grow to understand what the other party wants to share by choosing the respective expression. Developing some form of shared language as part of an increasingly shared culture is an often-referenced beneficial influence of CSC on information accuracy and speed of information sharing (Lawson *et al.*, 2009; Cheng and Fu, 2013).

#### **7.3.4 Conceptualisation of Social Capital's Influence on Port Community Performance**

Incorporating the findings of this study into an existing model allows for additional points of reference while also ensuring the foundation of the conceptualisation is rooted in the extant literature. Based on the triadic setting within the port community the study adopted Hartmann and Herb's (2015) model of social capital's influence within service triads. The closest approximation of their model within the context of port communities and their performance would either be the triadic PA, ships agent (PSP), CO setting, or the CO, ships agent (PSP), PSP triad (Talley, Ng and Marsillac, 2014). In both scenarios, COs would contract a ships agent to manage the provision of services which, subsequently, would either be rendered by a port authority or further service-providers.

However, the conceptualisation of social capital's influence on port community performance through PCM relationships extends beyond their triadic model. It incorporates port-service providers (PSPs), cargo owners (COs), and port authority (PA) while also depicting relationships beyond the immediate triad within the port community. Social capital within these port community relationships beyond the triad have been found to influence port community performance in line with their social capital configuration. Of particular note is the mediating influence of RSC and CSC within the wider port community on the occurrence of the "dark-side" of social capital. Villena, Revilla and Choi (2011) among others (Portes, 2014; Pillai *et al.*, 2017) detailed detrimental influences stemming from excessive degrees of social capital which, in turn, (Villena,

Revilla and Choi, 2011) suggests a curvilinear relationship between social capital accumulation and performance. Hartmann and Herb (2015) further found high degrees of RSC or CSC existing in one of the dyads within a triadic setting to have a detrimental influence on the second dyad. These negative influences within the triadic setting of PCMs was not observed in either case study.

The following conceptualisation (Figure 9) depicts a port community setting without immediate reference to the individual case studies. While relationships within TP1 and TP2 were nuanced and displayed varying degrees of social capital within their individual dyads and triads, the ensuing concept aims to depict the primarily observed dynamics to outline the influence of social capital on PCP. The concept is of two parts, initially the port community and its social capital configuration is outlined which is then followed by the observed beneficial influence of SC on port performance criteria (Schellinck and Brooks, 2016).

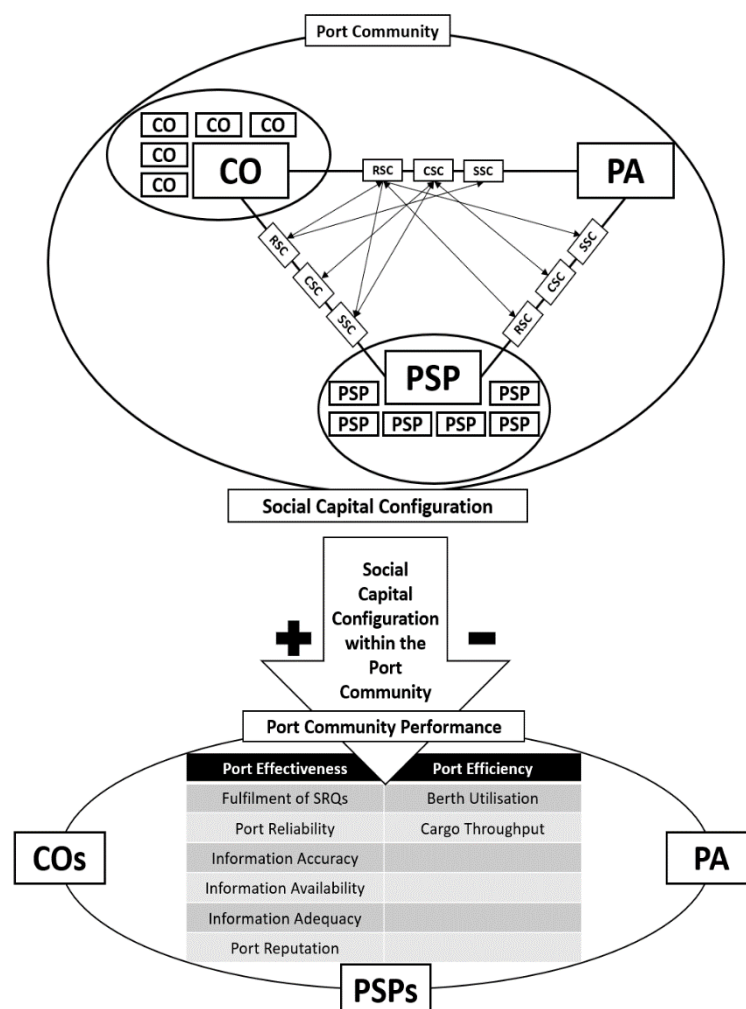


Figure 9: Social Capital's Influence on Port Community Performance

Source: Adapted from Hartmann and Herb (2015)



In terms of social configuration, within the port community triadic setting adapted from Hartmann and Herb (2015), RSC as well as CSC were identified as beneficial within the dyadic and triadic setting. CSC in the form of a shared vision between the PA and PSPs ensured a coherent experience of COs utilising the port. COs expectations in terms of service, disregarding the actually frequented port, were focussed on customer centricity indicators as depicted by port effectiveness measures (Brooks, Schellinck and Pallis, 2011; Brooks and Schellinck, 2015). The PA and PSPs, sharing that focus and acting upon it, aligned their shared vision with COs' expectations (vision). This congruence benefits the port's reputation, customer satisfaction and, subsequently, port community performance. However, fulfilment of SRQs (5.3.1), port reliability (5.3.2) as well as port efficiency (5.4) were found to be positively influenced by PCM relationships exhibiting high degrees of cognitive social capital.

PCM triads displaying high degrees of trust (RSC) were found to experience beneficial influences on information exchange activities which, further, were positively impacted by shared understanding (CSC). Within triadic settings, similar levels of trust among all actors facilitated increasingly open communication (Cai *et al.*, 2014) whereas reservations of one actor regarding the trustworthiness of another, even when not directly communicating with them reduced the aforementioned openness as detailed in section 5.2.1 (Hartmann and Herb, 2015). Similar effects were observed within the wider port community as the average level of RSC between PCMs was indicated to partially determine the openness of communication as PCMs could not be sure that information shared within the triad or dyad would not be shared outside of that setting. Interestingly, negative effects of excessive RSC between triadic members, as detailed by Hartmann and Herb (2015), of actors in an intermediary role perceiving an increase of opportunism risk as their client develops its relationship with the subcontractor, were not observed. The wider port community and its members appear to have a mediating effect on such behaviour as opportunistic behaviour would incur significant reputational damage across the entire community which could have detrimental effects beyond the immediate benefits of acting opportunistically. Thus, social capital based on this study's findings is found to have a beneficial influence on port community performance.

Furthermore, reported occurrences of negative influences of the “dark side” of social capital, when present in excessive amounts, lends further support to the suggested inverted curvilinear relationship of social capital accumulation and its related benefits (Villena, Revilla and Choi, 2011; Portes, 2014; Pillai *et al.*, 2017).

Last, the findings of this study suggest that port authorities particularly benefit from building trusting relationships and shared culture with other PCMs as it appears that RSC and CSC benefit SSC accumulation (Adler and Kwon, 2002; Cousins, Handfield and Lawson, 2006). This, in turn, increases their opportunities for accessing information and developing new business relationships in line with their growing network of contacts. While this benefit was only observed in the case of TP1, findings suggest that port authorities in other port communities could benefit in similar fashion. In conclusion, the conceptualisation of social capital’s influence on port community performance is depicted below.

### **7.3.5 Social Capital’s Effect on Port Community Performance in Port Community Triads Summary**

This section discusses the influence of social capital in port community relationship settings from each of the three PCM groups’ perspectives, thereby outlining and contrasting perceptions of PCMs amongst each other while also highlighting the more prevalent benefits which can be derived from social capital for port community performance aimed at informing practice. Consequently, the PCMs’ perceptions on social capital’s influence and benefits were conceptualised in section 7.3.4.

Initially SC’s influence on the operations of the port authority were analysed in the context of the wider port community. Regarding social capital generation, particularly the development of CSC in the form of a shared vision, the PA was identified as crucial. This can be attributed to their governance role as landlord (Transport Scotland, 2012). The decision of what portfolio of services and what type of PSPs as well as COs can lease land from them within the geographical boundaries of the port significantly influences the likelihood of developing a shared vision within the port community. Selecting PCMs not only on financial gains for the PA but also on organisational fit and congruence of vision positively influences the development of CSC. In the case of TP1, the shared vision of “customer-centricity” and the often-described “can-do” attitude of the port’s PCMs provided an advantage when attracting cargo interests (Tongzon, 2009; Brooks and

Schellinck, 2015). Furthermore, SSC accumulation was identified as particularly beneficial to the port authority as they developing CSC and RSC with other PCMs allowed them to access the latter's contacts and grow their reach (Choi and Kim, 2008). Similarly, PSPs were identified as benefiting from social capital accumulation within the triad; CSC in the form of shared understanding significantly improved information accuracy and adequacy whereas RSC was closely linked with information availability and the extent to which open and direct communication was enabled within the triad. Negative relationships between SC accumulation and performance previously identified by Villena, Revilla and Choi (2011) among others (Portes, 2014; Pillai *et al.*, 2017) in the respective PC triads were reported to be mediated by existing levels of SC existing within the wider port community. Last, COs arguably benefit significantly from PSPs and PAs developing CSC in the form of a shared customer-centric vision as it aligns their culture to the COs requirements. Shared understanding between COs and other PCMs was identified as improving information exchange due to reduced miscommunication and verification requirements whereas RSC in PC triads improved information availability for COs due to lessened concerns for opportunism risk.

#### **7.4 Interrelation of Social Capital Dimensions within the Port Community**

The previous sections individually discussed the influence of RSC, CSC and SSC on port community performance as reported by case study participants. Furthermore, benefits linked to social capital for individual PCM groups have been reviewed and, at times, contrasted with the extant literature. However, previous research strongly indicates that SC dimensions are meaningfully interrelated (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Adler and Kwon, 2002; Lawson, Tyler and Cousins, 2008) which is considered by some as one of the potential endogeneity root causes of social capital research (Kwon and Adler, 2014; Portes, 2014). Subsequently, it is necessary to observe how these dimensions interact in reference to their influence on port community performance.

##### **7.4.1 Interaction of RSC & CSC with SSC for business development activities**

Between both investigated port communities and the three categories of port community members, the port authority of TP1 stood out in regard to the interaction between the cognitive and relational dimension of social capital with the structural dimension. Business development, identifying, and approaching prospective port users of TP1 is a key objective for the port authority. Growing the network of business relationships, being

prospective or not constitutes creating SSC for this research. In the case of TP2, PCMs shared that the lack of sufficient levels of RSC or CSC between themselves and the port authority significantly limits their willingness to share their clients' information or contacts with the PA. Additionally, COs and PSPs of TP2 have proven to be reluctant to endorse TP2's port authority beyond its operational capabilities.

In TP1, however, the emphasis placed on trust (RSC) and shared values (CSC) for the general business conduct and subsequently business development activities of the port authority were recognised and appreciated by the port community members of TP1. The perceptions of PA and PCMs are matched on this account as the port authority repeatedly highlighted that shared values and trust within the port community increased their opportunities for business development as prospective port users, particularly COs, benefitted from the customer centric approach (shared vision) and considered the reputation (trust) placed in the PA by existing PCMs as guarantor for excellent service and reliability. When considering the trust which PSPs and COs place in the port authority it further becomes evident how the PA benefits from having generated RSC and how it facilitates the development of SSC for the PA. An exemplary quote of a ships agent describes that level of trust and its relevance.

*"I get the feeling that we really trust TP1. That trust is very hard to come by in other ports they compete with and makes it easy to work with them. And again, because we can identify them because of that trust and because of the way they conduct themselves makes doing business rather nice in what otherwise is often a difficult landscape at the time."*  
(PSP)

SCD Interrelation Finding 1: Mobilised cognitive and relational social capital positively influences the development of structural social capital by increasing the likelihood of access being granted within or referrals being made to the wider networks of PCMs. (RO 3)

The quote above is representative of the feeling that a majority of PCMs have for the port authority of TP1. Based on their feedback it is also one of the key aspects as to why they are confident in the capabilities and conduct of TP1 which, thereby, increases the confidence of PSPs and COs to recommend the PA (the port itself) to their own network which facilitates the PAs development of SSC.

This view is shared and acknowledged by the port authority which recognises the importance of their PCMs' business networks and the opportunity of tapping into them as the following quote emphasises:

*"A lot of people just never have heard of us or would have considered us as an option for their business. I get to talk to a lot of people at all kinds of events but advertising yourself is never the same as if some of your customers do it for you. We actually did get a lot of business because of relationships our PCMs have." (PA)*

Literature focussing on the interrelation of social capital dimensions is limited and, so far, has not come to generalisable conclusions as to the dynamics on dimensional interactions. Roden and Lawson (2014) as well as Tsai and Ghoshal (1998) conclude that CSC is a facilitator for developing RSC whereas other studies suggest that SSC, presenting the opportunity for interaction, facilitates the development of RSC and CSC (Kwon and Adler, 2014).

In line with Steinmo and Rasmussen (2018), this study's findings suggest that RSC and CSC can both facilitate each other's development. They conclude that if high levels of CSC are present in a relationship setting, RSC development is supported by existing shared vision whereas in the absence of a shared vision but existing high levels of trust (RSC) the opposite can be observed. These variations have not yet been explained even though contextual variations are highly likely, particularly since research of the interplay of SC dimensions is limited in quantity by itself.

SCD Interrelation Finding 2: Relational or cognitive social capital within port community relationships is mobilised to facilitate the growth of desired facets of the other dimension. (RO 3)

Considering these differences, particularly the facilitating effect of RSC for CSC in the latter's absence and vice versa, might suggest that, in its individual dimensions, social capital is leveraged to facilitate the generation of the desired facets. In the case of TP1, the port authority has limited network reach and, therefore, leverages its developed shared vision and trust present in existing relationships to grow its structural social capital, gaining access to a wider network for future business opportunities.

Steinmo and Rasmussen (2018) found that researchers sharing a common vision build further trust based on the existing commonalities which all participants are aware of. Likewise, in the absence of CSC, RSC facilitated the development of a shared vision since participants utilised the high degrees of trust to communicate openly and establish commonalities which aids the formulation of a shared vision/understanding. Nevertheless, this suggestion is once more limited by the contextual differences as much as the varying methods and timelines of data collection.

#### **7.4.2 Interaction of CSC with RSC in information exchange activities**

An additional way in which social capital dimensions were reported to interact was the influence the cognitive dimensions extended to the relational dimension. Gathered data of both case studies support that, for the activity of information exchange, shared values and a shared understanding among PCMs facilitated the development of trust between actors. Information exchange was one of the most common activities among port community members as they all depended on each other to render specific services as part of the wider supply chain they were part of (Panayides and Song, 2009). Subsequently, developing this shared understanding of each other, and learning more about the values PCMs shared already or started to adopt as part of internalising the wider port community culture was found to facilitate the development of RSC in the form of trust.

Earlier studies show similar results of CSC having a facilitator effect on RSC. Steinmo and Rasmussen's (2018) research suggests that shared understanding (CSC) between research teams when collaborating on a new project facilitates the development of trust (RSC). Tsai and Ghoshal (1998) arrived at a similar conclusion twenty years earlier, showing that shared vision (CSC) facilitates the development of trust among staff from varying business units in an intra-organisational setting. Along the same lines, Roden and Lawson (2014) found that cognitive social capital is strongly linked to the development of RSC within the context of buyer-supplier relationships.

SCD Interrelation Finding 3: Shared vision and shared values (CSC) positively influence the development of trust (RSC) in port community relationships as awareness and alignment of the former reduce the barriers for joint activities in the absence of trust. (RO 3)

As reported in this study, interaction between CSC and RSC, shared understanding, and shared values facilitating the development of trust (RSC), is supported by extant literature in various contexts.

Findings of previous and the present study suggest that the interaction of social capital dimensions is mediated by contextual elements, as discussed in the previous section. It appears increasingly likely that dimension-specific SC is leveraged by actors within the relationship setting to further develop SC dimensions they perceive as lacking but desirable. Throughout participant interviews and observations, TP1's shared vision and values were key factors for PCMs to use the port for their operations, further enabling already present PCMs to engage in repeatedly beneficial interactions which further facilitated the creation of trusting relationships (RSC). Given the repeatedly emphasised importance of trust within the maritime industry, the identification of CSC in the form of shared vision and values across cases as a facilitator for developing the former, likewise highlights the importance of generating CSC, particularly if levels of trust are perceived to be low at present.

#### **7.4.3 Interaction of RSC with CSC for additional vessel movements**

The interaction and facilitator effect of trust (RSC) with shared vision (CSC) was apparent in the experiences PCMs shared with the researcher across both case studies. Even though TP1's port community can be considered as more cohesive regarding aligned/shared vision it was equally a factor in TP2 facilitating the development of trust between COs and PSPs. The interaction of dimensions was noticeable regarding its influence on the likelihood of PSPs and COs accommodating the requests of the port authority to move berthed vessels within the port to accommodate additional vessels and increase berth utilisation rates.

PSPs expressed their willingness to accommodate vessel movements if it does not interrupt their own operations as they understand the benefit it generates for the port authority and the wider port community, increasing berth utilisation and raising cargo throughput volumes, thereby directly influencing two key port efficiency indicators (Woo, Pettit and Beresford, 2011). The shared vision of PCMs, accommodating special requests (when feasible), working in a collaborative and customer-centric fashion, encourages the behaviour while also self-regulating behaviours within the port community. Operating within the boundary of TP1 is informally understood by PCMs to

come with some degree of buy-in regarding this shared vision (and values), as elaborated in 5.4.1 and 5.5.2. Non-adherence to these values and informal agreements concerning conducting oneself within the port community would negatively impact on the reputation (RSC) and standing of the respective PCM. These shared values of placing the port community over their own immediate interests (when feasible) directly interacts with the trust they place in reciprocal behaviour by the port authority. This PSP trusts, i.e., “*knows*”, that the PA will do right by them based on the established shared values “*the way we operate here*” as shown below.

*“Well, I guess they are trying to get as much use out of their berths as possible which we don’t really mind as long as there’s still space for us. There have been times when we had to move the vessels around a bit which was annoying. [...] Then again though you know they’ll do right by you as that’s just how we operate here, it all works out well enough.” (PSP)*

SCD Interrelation Finding 4: PCMs accommodating vessel movements outside formal agreements trust (RSC) the port authority to receive equal treatment in the future, facilitating the development of shared values, e.g., “*the way we operate here*”. (RO 3)

In line with the previous section in which RSC was identified as influencing the development of CSC, the reported findings of this research show that, equally, CSC can facilitate the development of trust. This dynamic of RSC and CSC almost interchangeably facilitating the generation of each other when desired or required has been previously recognised by Steinmo and Rasmussen (2018) despite the contextual differences of the relationship settings. The strong interrelation of RSC and CSC has been highlighted by multiple studies to different extents (Nahapiet and Ghoshal, 1998; Villena, Revilla and Choi, 2011; Roden and Lawson, 2014; Hartmann and Herb, 2015). In line with findings of the previous two sections and past studies, the suggestion of one dimension of SC being leveraged to grow another appears reasonable. The port authority of TP1, exhibiting a lack of SSC, leveraged the established trust and shared culture amongst PCMs to drive its business development activity whereas in the other two settings either CSC or RSC facilitated the development of the other.



#### **7.4.4 Summary of Interrelation of SC Dimensions within the PC**

The previous section discussed how the individual dimensions of social capital interact for activities carried out by PCMs within the port community before subsequently influencing port community performance. Findings of this research highlighted three individual activities in which the interaction of SC dimensions was particularly evident. Initially, the interaction CSC of and RSC towards the development of SSC from the port authority's perspective was discussed. Between TP1 and TP2, though, SSC generation of TP1's port authority was positively influenced by CSC and RSC whereas in the case of TP2, SSC development was not perceived to be beneficially influenced by RSC or CSC. The disparity of both cases was, according to PCMs of either port community, predominantly attributable to the limited degree to which TP2 had developed RSC and CSC within their respective port community. The difference in approaches to port community management of TP1's and TP2's port authority further adds contextual elements which cannot be disregarded as influencing the interaction of SC dimensions, adding to the literature attempting to explain the dynamics of interaction (Nahapiet and Ghoshal, 1998; Steinmo and Rasmussen, 2018).

The second and third way in which the dimensions of social capital appeared to interact was the facilitating effect of CSC to RSC and vice versa. CSC to RSC interaction had been identified in previous studies (Nahapiet and Ghoshal, 1998; Roden and Lawson, 2014; Steinmo and Rasmussen, 2018) whereas Nahapiet and Ghoshal introduced the label of CSC to distinguish the relational from cognitive facets. Steinmo and Rasmussen (2018), though similar to this study's conclusions, found that RSC and CSC interact with each other and can facilitate the development of the alternate dimension. This observed relationship further lends support to the suggestions made that SC dimensions' interaction is dependent on contextual variables and individual dimensions/facets of said dimensions are leveraged to facilitate the development of social capital facets which are perceived as beneficial but lacking at present.

Concluding, the shared vision of customer-centricity and "can-do" attitude of TP1 facilitated the development of trust among PCMs to work with each other rather than side by side and allowed them to become more confident in the reliability of other PCMs as honouring informal agreements and being accommodating was perceived as "*the way we operate here*", aptly describing the interrelation between RSC and CSC.

## 7.5 Chapter Conclusion

The aim of this chapter was to further illustrate, contrast, and compare the links between social capital in port community relationships and port community performance based on the extant literature and the synthesis of both case studies. The structure of the chapter is informed by the prior established research objectives which, in turn, are derived from the preliminary literature review of the subject areas.

The initial section of this chapter discussed the findings regarding beneficial influences which social capital exerted within port community relationships on port community performance. Having identified several established port performance criteria as being influenced by the social capital configuration of the interacting PCMs involved, this study considered the meso level view of port performance management advocated by Langenus and Dooms (2015). CSC as well as RSC within TP1 are understood of significant relevance for the port community's ability to outperform market expectations. SC was identified as having beneficial effects on all themes reported throughout the case studies up to reaching the thresholds described by Villena, Revilla and Choi (2011). Identifying relationship configurations of PCMs where the aforementioned thresholds were reached, the second section compared and contrasted the "dark side" effects of the social capital of port community performance (Villena, Revilla and Choi, 2011). While this study did identify instances where excessive CSC had detrimental influences on port community performance, detrimental effects stemming from excessive RSC as reported in other studies (Villena, Revilla and Choi, 2011; Portes, 2014; Hartmann and Herb, 2015; Pillai *et al.*, 2017) were not observed. Interestingly though, the chance of occurrence was acknowledged by PCMs, and findings of both case studies suggest that some of the negative effects excessive RSC (and CSC in instances) in dyads or triads can lead to are mediated by the wider port community social capital configuration.

The third part of the chapter further attributed realised port community performance gains stemming from social capital to the individual categories of actors within the port community while considering the wider SC configuration of these actors in port community triads. Discussing and contrasting the social capital configurations of actors within these PC triads, the negative influences identified by Hartmann and Herb (2015) in service triads were not observed. However, according to case study participants, the non-occurrence of the reported effects in other studies were mediated by the social capital configuration of the port community in its entirety.

Expanding upon the conceptualisation of Hartmann and Herb's (2014,2015) model by the addition of PSPs and COs beyond the immediate triad reflects these findings and adds to the extant literature by accounting for the influence the business environment one operates in might have on relationship dynamics and performance gains.

Additionally, in the fourth section, the interaction of social capital dimensions was discussed as individual dimensions were found to facilitate each other's development in varying contextual settings. CSC and RSC have been shown to facilitate SSC in the context of the port authority's business development activities. Further, RSC and CSC were found to facilitate the development of the other in multiple settings adding to the findings of Steinmo and Rasmussen (2018) who observed such dynamics across less diverse activities. Considering the interaction of CSC and RSC when one dimension appears to be less developed but equally or more desirable for the relationships or individual actor's performance, suggests that not only contextual factors influence the interrelatedness but also the initial social capital configuration of the relationship setting which represents a development of the original model of Nahapiet and Ghoshal (1998) regarding the interaction of social capital dimensions.

Furthermore, social capital configurations and performance outcomes in port community triads of port authority, cargo owners, and port service providers, were contrasted to the previous findings of Hartmann and Herb (2014;2015). Having extended their triadic conceptual model by incorporating additional COs and PSPs of the same port community, negative effects they identified as stemming from social capital configurations within the triad were found to be mediated by the wider community's SC configurations. Finally, social capital dimensions were shown to interact in several PCM relationship settings. However, contextual differences of TP1 and TP2 as well as varying contextual aspects between individual PCMs highlighted that the interaction of social capital dimensions is at least partly dependent on these factors. Furthermore, actors were found to utilise existing facets of social capital to facilitate the development of dimensions they perceived as beneficial but lacking at present.

## **8 Conclusion**

This final chapter concludes the presented thesis and initially reviews how the research aim and objectives were addressed. This is followed by the delineation of contributions to theory as well as practice which were identified as part of this study. Subsequently, limitations and recommendations for future research are outlined. The chapter finishes with some closing remarks of the researcher.

### **8.1 Review of Aim and Objectives**

The aim underpinning this research was to develop an understanding for the influence of social capital within port community relationships and its effects on port community performance in the context of the Scottish port industry. In line with this aim, this research adopted Nahapiet and Ghoshal's (19988) definition and conceptualisation of social capital as it incorporated both resources made accessible within the immediate community through social capital utilisation as well as the external network available to individual actors within said community. In their conceptualisation, three dimensions of social capital are suggested which are relational social capital (RSC) commonly referring to the strength of a relationship which has been cultivated over repeated beneficial interactions. Second, cognitive social capital (CSC) predominantly depicted by shared values, beliefs, and visions which, in turn, could be summarised as shared culture. Last, structural social capital (SSC) which captures frequency of interaction, proximity of nodes and network reach, among others. Supporting the aim of this study, drawing from Hartmann and Herb's (2014) conceptualisation regarding the influence of social capital on service triads appeared to be a prudent choice as the setting of their research closely aligns with the present one. To accomplish the aim, the research was divided into four separate objectives. These objectives, while inherently linked, will now be discussed in turn to allow for an assessment of the degree to which each has been accomplished.

### **8.1.1 Objective 1 - ‘Identify social capital facets within the port community influencing port community performance.’**

To allow for the successful addressing of the research aim it appeared sensible to initially establish the variety of social capital facets which were perceived by port community members to impact their community’s performance. Subsequently, this action formed the first objective of this research. It is acknowledged that identifying the existence or absence of social capital (facets) within the relationships in question prior to attempting to understand their influence on performance, or even how these influences occur, is prudent (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Kwon and Adler, 2014).

To obtain an indication of the facets of social capital in port community relationships that influence the performance of port communities, all participants of this research were asked to describe their relationships with other port community members. Analysis of the information shared by all three groups of port community members in TP1 and TP2 shows some coherence regarding the positive effects PCMs perceived social capital to have on the community’s performance. However, some disparities between TP1 and TP2 exist in terms of the facets that were perceived as being prevalent in either port’s community as well as the influence the absence or existence of these could have on the community’s performance. The variations in perceived influence echo existing studies as to social capital facilitating or limiting performance in differing contextual settings (Villena, Revilla and Choi, 2011; Kwon and Adler, 2014).

Trust as a facet of RSC was identified and perceived by all participants across both trust port communities as beneficial to port community performance; however, the absence of trust in the PA in TP2 beyond contractual agreements was rather evident from the side of COs and PSPs. Contrastingly, PCMs in TP1 reported that they had experienced excessive trust into adherence to informal agreements that could equally be detrimental to performance outputs (Villena, Revilla and Choi, 2011). Reputation operationalised as trust extended to an individual or organisation based on the knowledge of their positive interaction history with a third party was found to have similar effects. The influence of a potentially negative reputation, though, was understood to severely impact the performance of individual actors and the port community.

Cognitive social capital (CSC) existing between PCMs in TP1 in the form of shared values, vision, and understanding was found to be more closely aligned compared to TP2. Whereas interviewed representatives of PCM groups in TP1 shared their belief of actors within the port adhering to informal rules and value systems across PCM triads, representatives in TP2 identified a disparity of CSC existing in relationships between cargo owners as well as port service providers with the port authority. While participants varied in their assessment regarding the degrees of CSC, its importance cannot be overstated according to interviewees. Particularly, the willingness of PSPs and PAs to move beyond contractual obligations was perceived as a key benefit and integral for various types of cargo, echoing previous work by Woo, Pettit and Beresford (2011) as well as Brooks and Schellinck (2015).

Considering structural social capital (SSC), the interviews of participants in TP1 did partially show that increased frequency of interaction is not always representative of high levels of SSC and can, indeed, have detrimental effects on port community performance. However, actors within the port community which themselves have not cultivated an extensive network of business relationships found access to the network extended via their existing relationships of significant benefit to their business endeavours. Reflecting on the previous point of frequency of interaction as not being a suitable descriptor of tie strength, this research echoes previous conclusions of Adler and Kwon (2002; 2014). The detrimental effects of infrequent or too frequent interaction are largely moderated by the nature of the relationship itself and how embedded the actors are within the wider port community.

Regarding social capital facets in port community relationships, it can be concluded that trust and reputation (RSC), shared values, understanding, and language (CSC) allow the realisation of port community performance benefits which could otherwise not be obtained through improvements of port infrastructure or similar means alone.

#### **8.1.2 Objective 2 - ‘Establish how social capital in port community triads can influence port community performance.’**

Following the categorisation and attribution of perceived facets represented by the three dimensions of social capital as presented by Nahapiet and Ghoshal (1998), in addressing the second objective, the collected data of beneficial and detrimental interactions between PCMs within a singular PCT as well as the wider port community were attributed to both

performance increases as well as decreases. These reported influences on the port community's performance were contrasted to established effects SC is understood to have on the former within dyads, triads, and group/community settings (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Oh, Chung and Labianca, 2004; Villena, Revilla and Choi, 2011; Hartmann and Herb, 2014).

With port community performance capturing the output of port community members in respect of the focal port's performance, stemming from the interactions and subsequent inputs generated of at least two of its members, both findings' chapters as well as the cross-case discussion outlined and attributed how PCMs experienced SC to influence the PCs' performance. Subsequently, in line with Demirbas, Flint and Bennett (2014) who identified long-term relationships as beneficial to port performance, the findings of this research highlight the beneficial nature of social capital on port (community) performance, realised through improved PCRs. Even though no immediate link to social capital was made in their research, their findings highlight common vision and goals, sharing of information, developing knowledge of personnel and understanding of each other's issues as integral for developing long-term relationships between PCMs, at the example of PA and steelworks. These in turn facilitate the transition from adversarial PCM relationships towards partnerships which allow for the realisation of efficiency and effectiveness gains, translating into improved port community performance. The four factors mentioned and shared with this research have been shown to positively influence port community performance in TP1 and TP2, extending Demirbas, Flint and Bennett's work (2014).

Findings regarding the question of "how" SC in port community triads influences port community performance is depicted in Table 22. It offers an overview of influences SC in PCTs was found to have on established port efficiency and port effectiveness measures which by extension improve port community performance. The "influenced how" section offers an account of how SC influenced activities with the port community or how mobilised SC allowed for activities to take place.

*Table 22: Social Capital's Influence through PCTs on Port Performance Measures*

<b>Port Performance Measure</b>	<b>Influenced by</b>	<b>Influenced How</b>
<b>Berth Utilisation – Efficiency</b>	CSC	Shared culture of "making things work" among port community triads in trust port 1 allows for new cargo owners calling in the port to be accommodated despite space constraints and additional vessel movements.

<b>Berth Utilisation – Efficiency</b>	RSC	Trust, in port community triads of trust port 1, increases the likelihood of double berthing arrangements being accommodated as port service providers trust in trust port 1's reciprocity.
<b>Cargo Throughput - Efficiency</b>	CSC	Shared understanding of port community triads business or requirements allow for anticipation of operational needs which can prevent disruptions as trust port 1's port authority can manage proactively.
<b>Cargo Throughput - Efficiency</b>	RSC	Trust among port community members in the port authority "getting things done" attracts business to the port and allows for higher cargo throughputs.
<b>Fulfilment of Special Requests - Effectiveness</b>	CSC	Shared culture of "customer centricity" among port authority and port service providers in trust port 1 increases the likelihood of accommodating special requests by cargo owners.
<b>Fulfilment of Special Requests - Effectiveness</b>	RSC	Trust, between port authority and port service providers in trust port 1 increases the likelihood of special requests being accommodated as port service providers trust in trust port 1's reciprocity.
<b>Reliability of the Port - Effectiveness</b>	CSC	Shared culture of "customer centricity" among port authority and port service providers in trust port 1 increases port reliability as individual actors are less likely to solely act in their own interest, working jointly for the customers (cargo owners) benefit.
<b>Reliability of the Port - Effectiveness</b>	RSC	Being perceived as true to their word, not having reneged on agreements, the trust in the port authority of trust port 1, extended by port service providers, grants them longer and reliable planning options which, in turn, increase the reliability of agreements cargo owners reach with port service providers.
<b>Accuracy of Information - Effectiveness</b>	CSC	Using shared terminology, understanding industry-specific language, and understanding requirements with the port community increases information accuracy between members as chances of misunderstandings are reduced.
<b>Accuracy of Information - Effectiveness</b>	RSC	Port community triads exhibiting higher degrees of trust exchange more detailed information while trust among port community members in the port authority's "straight to the point", facilitates trust in the former.
<b>Availability of Information - Effectiveness</b>	CSC	Shared understanding of port community triads' business or requirements increases the likelihood of information requirements being anticipated and appreciated. Shared understanding increases responsiveness.
<b>Availability of Information - Effectiveness</b>	RSC	Trust among port community triads increases the likelihood of information being shared openly and in informal settings beyond contractual requirements.
<b>Availability of Information - Effectiveness</b>	SSC	Utilising a wider port community triad network increases the reach and opportunities for information becoming available. Additional nodes present additional opportunities.



<b>Adequacy of Information - Effectiveness</b>	CSC	Shared understanding of each other's (port community triads) business or requirements increases the likelihood of PCMs providing the required information without the other party having to explain themselves.
<b>Reputation of the Port - Effectiveness</b>	CSC	Shared culture of "customer centricity" among port authority and port service providers is experienced by cargo owners and new entrants who, in turn, communicate positive experiences with their networks.
<b>Reputation of the Port - Effectiveness</b>	RSC	Trust in the "way of doing business" among port community members at trust port 1, facilitates the willingness of port community members with wider networks to recommend the port and its community to prospective port users.

Altogether, this table highlights the beneficial influence SC in PCTs has on port community performance. While this appears to be the first application of a social capital lens to the maritime industry, and more so the development of an understanding for the influence of PCRs on PCP, the accruable benefits stemming from PCRs exhibiting high levels of SC are, to a significant extent, aligned with SC studies in different contexts (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002; Oh, Chung and Labianca, 2004; Villena, Revilla and Choi, 2011; Matthews and Marzec, 2012; Hartmann and Herb, 2014; Pillai *et al.* 2017).

### **8.1.3 Objective 3 - 'Identify how social capital facets and dimensions interact within the port community setting.'**

Nahapiet and Ghoshal's (1998) conceptualisation of SC's three dimensions has been widely adopted by previous studies; to a large extent, though, these studies considered the three dimensions of social capital on a dimension-by-dimension (Moran, 2005; Heller, 2012; Matthews and Marzec, 2012) basis or focused on a particular dimension (Cousins *et al.*, 2006; Day *et al.*, 2013; Zhou *et al.*, 2014) altogether. This focus persists despite wider acknowledgement that SC dimensions or facets of those are interrelated (Adler and Kwon, 2002; Kwon and Adler, 2014; Steinmo and Rasmussen, 2018). Consequently, to develop an understanding of the influence of SC existing among PCMs has on port community performance, this research endeavoured to investigate the interaction of the three SC dimensions regarding PCP. This subsequently became the third research objective.

The findings, as discussed in section 7.4, identify the interactions of SC dimensions in three ways. First, RSC and CSC are found to be having a beneficial and facilitating effect on SSC, particularly with respect to business development activities from the port authority's perspective. While there was no clear distinction between RSC and CSC, in either case study, as to which element plays the leading role or is of greater benefit, the inhibiting effect the absence of either has on the development of SSC became evident by contrasting insights of PCMs from TP1 and TP2. RSC or CSC in both ports were understood to increase the likelihood of individual PCMs granting the PA or other members access to their own network or even to promote such access and thereby facilitate the network expansion of other parties. Consequently, this allowed TP1 greater access to opportunities for business development. RSC and CSC granting access to an extended network of opportunities, with SSC representing said network, is strongly emphasised in the previous seminal work of Adler and Kwon (2002;2014)

Second, CSC and RSC are understood to interact when PCMs engage in information exchange activities amongst each other. PCMs exhibiting shared values and beliefs were found to, more likely, be granted access to information, particularly when said information would need to be shared in confidence outside of contractual agreements.

#### **8.1.4 Objective 4 - “Extend Hartmann and Herb’s (2015) concept of social capital effects to port community triads.”**

Concluding the set of research objectives is the extension of Hartmann and Herb’s (2015) findings as well as the extension of their model of social capital effects on service triads to port community triads. This objective was achieved through several insights the present research generated. First, as discussed in section 7.3, findings indicate that relationships and subsequent performance outputs which are influenced by SC are further mediated by contextual factors, particularly the wider port community setting. Furthermore, having this study found that RSC, represented by trust between all members of the PCT, is beneficial for the performance of the triad of CO, PSP and PA and does not lead to the PA taking advantage of trust existing between them and COs to cut PSPs out of business development activities. This, however, was only the case in TP1; in TP2, despite trust being at reportedly lower levels, such activities reportedly took place. This variation between the influence which high degrees of SC had on performance in this study compared to Hartmann and Herb’s (2015) findings in addition to others, led to the conceptualisation of SC’s effects in PCTs on PCP in section 7.3.4.

## 8.2 Research Contributions

This thesis makes three contributions to knowledge. First, in relation to the “dark side” effects of social capital, this research adds to the understanding of their occurrence and the extent of their impact. Historically, the analysis and subsequent understanding was focussed on the focal relationship itself (Villena, Revilla and Choi, 2011; Hartmann and Herb, 2015; Pillai *et al.*, 2017) whereas the present research extended this scope with findings indicating that relationship settings within the port community, being influenced by the social capital configuration of the wider port community as depicted in section 7.3.4. Even though PCMs in TP1 reported opportunistic behaviour being anticipated and likely due to the open communication enabled by high RSC levels of port community triads, these “dark side” effects of social capital were not found to have occurred in TP1. Exhibited shared culture of the port community, facilitating port community cohesion, as well as expressed values and beliefs among PCMs, were found to mediate the materialisation of “dark side” effects.

Second, the findings leading to the previous contribution further allow for a methodological contribution. In social capital’s “dark side” focussed research, incorporating the factors describing the network relationships are embedded in is expected to reduce prevalent ambiguity regarding the occurrence of relational social capital’s “dark side” effects. The impact of the PCs environment was repeatedly described as influence by comments with *“this is not how things work here”* or, alternatively, *“this is how things work here”*. While conducting interviews and observing participants in their workplaces, the importance of delineating the individual, organisation, and community became increasingly evident and is reflected in the employed template for data analysis. Research of dyadic or triadic relationship constellations through the lens of social capital theory is subsequently encouraged to incorporate the collection of data, enabling the depiction of alignment or cohesion of SC facets within the immediate community or network. Alternatively, exploring the perceived consequences of opportunistic behaviour beyond the focal relationship but within the wider network is expected to improve the understanding and offer valuable insights as to how “dark side” effects of excessive relational social capital occur. Thereby, this research extends Hartmann and Herb’s (2014,2015) work and conceptualisations of Pillai *et al.* (2017) as to why dark side effects of relational social capital are not manifesting coherently in relationship settings of similar SC configurations.

Third, the second theoretical contribution of this research extends the existing understanding of the interrelationship between SC dimension, heeding recommendations of Kwon and Adler (2014) emphasising that contributions to social capital, are more likely to be sought by adding to the understanding of specific nuances than by revisiting its core principles. Tsai and Ghoshal (1998), conceptualising CSC in the form of shared vision, found it to facilitate the development of trust as a facet of RSC. Lawson, Tyler and Cousins (2008) further supported these findings. Multiple other studies found the inverted relationship between dimensions to be the case (Nahapiet and Ghoshal, 1998; Leana and Van Buren, 1999; Villena, Revilla and Choi, 2011). Regarding SSC and its interactions with other dimensions Zheng's (2010) findings, without identifying "*what came first*", indicate a mutually reinforcing relationship. Regularly, studies attribute the varying extent of interrelation between SC dimensions to contextual factors, e.g., age, nature, history, among others. Findings of this research indicate that an answer to "*why*" there is such great inconsistency might be owed to the existing levels of SC of any given and analysed relationship setting. Participants' comments indicate that facilitating growth of less developed but desirable facets of SC's is supported by the mobilisation of existing resources represented by other SC facets or dimensions. Leveraging existing SC of one dimension to strengthen another has been reported on multiple occasions throughout both case studies in TP1 and TP2 with section 7.4 discussing these dynamics in greater detail. This study offers a novel contribution to the understanding of SC dimensions' facilitator interrelation, offering an explanation, which can help to reduce these variations in future studies.

### **8.3 Contribution to Port Performance Management Practice**

The present study is a novel instance of port performance research, looking beyond its measurement, investigating the influence relationships amongst port community members have on PCP. The focus on SME ports in the Scottish context allows for three key recommendations to port performance management practice.

First, port authorities in their role as port managing organisations represent the port community member with, arguably, the greatest decision-making influence. Further, they possess the ability to regulate as well as exhibit cultural norms and values they want the wider port community to adopt or abide by. Findings suggest port authorities benefit from developing social capital in port community member relationships as increased levels of trust (RSC) between the PA and PCMs increase the likelihood of open communication.

Additionally, as trust in the information the PA and PCMs share grows, the reliability of subsequent planning and activities was found to increase. Reliability of actors and information was repeatedly mentioned as an influential port choice criterion, encouraging ships agents and COs to select the PA or port community exhibiting greater reliability if service offerings are otherwise comparable.

Second, developing CSC within the PC, led by the port authority, can facilitate the realisation of coherent port user experiences. The relevance of such a coherent experience became apparent after having spoken to the PA, COs, and PSPs at TP1, most of which agreed that the exhibited focus on customer centricity was instrumental for the PC's ability to outperform constraints posed by its geographical location. Even though this study refers to customer centricity or "can-do" attitude, as expressed by the PCMs of TP1 as beneficial, other shared values and beliefs were found to also have a positive influence in the performance of PCMs. The present study shows that if CSC exists between PSPs, COs and the PA, its influence is foremost beneficial for all three PCMs or their respective port user groups as represented in the port community triad detailed in section 7.3.5.

Finally, the development of SC in PCMs was perceived to positively influence the latter's performance which, in turn, is understood to improve the entire port community's performance. Of further relevance for port performance management approaches is the finding that the development of community-wide CSC and RSC can disincentivise opportunistic behaviour. PSPs acting on privileged information they obtained due to exceedingly high levels of trust, are understood to face reputation damage across the PC rather than containing the damage within the focal relationship itself. Thus, developing port community-wide social capital can reduce opportunism risk while also increasing the performance of individual PCMs.

#### **8.4 Limitations of Research**

Even though this study makes contributions with theoretical, methodological, and practical implications, it would be amiss to not consider and delineate limitations of the conducted research. A key limitation of this research relates to the extent to which interview participants truly shared their deeply held opinions and experiences regarding other port community members as part of the interview process in TP1 and TP2. In situations where interviewees highlighted dissatisfaction with existing approaches or the conduct of other PCMs, it is ultimately not possible to discern if these feelings were

descriptive of the existing relationship or potentially a representation of the most recent experience the individual had with other parties. To capture such nuances and differences in shared experiences, the researcher proceeded to conduct interviews in a conversational manner, thereby maintaining an open and relaxed atmosphere which the researcher understood to be conducive to the participants' openness.

Additionally, the author offered participants to stop the interview at various parts throughout if the former preferred something to be "off the record" which, in turn, led to several highly interesting insights. Similar instances of potentially confidential information being shared occurred after the initial interview but were not made part of the interview transcript.

Another limitation of this research is related to the inherent difficulty of obtaining access to the entirety of the port community member base. For either case study another equally sizable number of interviews could have been conducted with further PCMs which did not make themselves available for interviews. Nonetheless, the provided information and subsequent transcription as well as interpretation allowed the researcher to develop an accurate depiction of each port community's relationship configurations, particularly as synthesising views between PCMs allowed for data triangulation.

Concluding, limitations are understood to exist due to the immersive nature of the case studies, particularly the participant-observer role the researcher took at various points throughout the data collection process. As alluded to in the reflections on oneself, the researcher being perceived as an outsider, despite having been granted access to the port communities in question, could have influenced the responses of participants to interview questions as well as their general conduct in the presence of the researcher.

## **8.5 Recommendations for Future Research**

Keeping in mind the limitations outlined in the previous section as well as the conclusions the findings of this research allowed for, there are numerous trajectories for future research, some directions more well-trodden than others. An extension of the conducted research to further port communities, thereby by addressing the limited number of port communities having been investigated, appears prudent. Forthcoming research should continue endeavouring to capture as large an extent as possible of rich data of such communities. It would be recommended that an initial focus should rest on the East of

Scotland as (trust) ports can be expected to share parts of their networks due to geographical proximity as well as their part reliance on North Sea oil and gas as well as on renewable energies or decommissioning. Even though these additional case studies would be envisioned to follow similar research designs, capturing the entire East of Scotland is envisioned to allow for the generation of insights for the region itself regarding port governance and port community performance management. This, in turn, would provide a suitable backdrop for recommendations to Transport Scotland (2012) for a revision of *Modern Trust Ports for Scotland: Guidance for Good Governance*. Furthermore, regarding the facets of social capital dimensions which were found to have a positive influence on port community performance, exploring the applicability of these in all 47 trust ports in Scotland could offer further valuable insights for and update of *Modern Trust Ports for Scotland: Guidance for Good Governance* as well as the port community performance management practices of the focal port authorities. As social capital can allow for resource mobilisation or acquisition, which in its absence might have been unobtainable, it would be expected to be of particular relevance for trust ports of smaller size that cannot compete on rates alone.

More closely related to the interaction between social capital dimensions, one facilitating the generation of facets attributed to another, an exploration in line with the theoretical contribution is considered a commendable pursuit. Future studies, investigating social capital's influence on (port community) performance from a dyadic, triadic, or community perspective could endeavour to verify the suggestion of RSC or CSC being leveraged in relationships to accumulate the other depending on their individual prevalence and the desirability of developing either of them. The findings of this study suggest that PCMs which exhibited shared values like "*customer centrality*" leveraged CSC in existing port community relationships to develop trust. PCMs that were perceived as sharing the same values were considered as more trustworthy, being less likely to act against these established norms and values. Establishing under which circumstances this interaction between RSC and CSC takes place and can be linked to a conscious leveraging activity by either party of the relationship, could significantly add to the understanding of the mechanisms underpinning social capital generation and its retention.

Additionally, future studies are encouraged to test findings of this research by either replicating the present approach in as identical a setting as possible to progress the development of a framework which adequately depicts the influence of port community relationships on port community performance. More so, in reference to the methodological contribution of this research, future studies are encouraged to incorporate measures depicting the anticipated consequences of opportunistic behaviour when investigating the emergence of dark social capital effects. Particularly when investigating the influence of excessive relational social capital on its detrimental influence on relationship or port community performance. Since this study found that incorporating perspectives of focal actors on repercussions by the network or community the unit of analysis exists within might offer valuable insights as to why negative effects of excessive social capital are not emerging.

Finally, to explore and test this conclusion, future studies could employ quantitative research designs, allowing for the representative sampling of actors which experienced the occurrence of the dark side of social capital. Enabling the depiction of the wider network or community setting in which opportunistic behaviour occurs or is of greater prevalence despite high degrees of social capital could provide actors with the opportunity to better anticipate and counteract such behaviour by means of building communities of trust; thereby reducing the benefits of acting opportunistically for short-term gain as the repercussions experienced throughout the network or community are expected to outweigh the former.



## 8.6 Closing Remarks

The overarching aim of this study was to develop an understanding for the influence of port community relationships through the lens of social capital, thereby linking and extending extant social capital research while offering a novel contribution to the port performance literature. As highlighted by Brooks and Schellinck (2015) as well as Langenus and Doms (2015) port performance measurement and management literature, predominantly focusses on the context of the container shipping industry and, within that, mostly on the measurement of efficiency, with effectiveness of ports presenting a more recent addition. Furthermore, Langenus and Doms (2015) emphasise that investigations of ports at the meso level, understanding the relationships of PCMs and their effects, is scarce and warrants further research. Thus, this research focussed on the PA, PSPs, and COs as core actors within the port community, their relationships, and their subsequent influence of port community performance. To suitably depict and investigate this triadic setting, Hartmann and Herb's (2014; 2015) model of service triads was employed and extended while also allowing for the investigation of how the social capital dimensions interact within the setting when influencing activities measured by established port performance criteria.

This study utilised a multiple-case study design of two Scottish trust ports. Throughout the research 30 semi-structured interviews were conducted between the two locations. These interviews were further supplemented by field notes and observations of the researcher as well as informal non-recorded conversations between the former and case study participants. Even though these conversations were not transcribed due to either requests of the individual participant or the situation not allowing for it, they did offer invaluable insights into the port community setting and its inherent relationship dynamics.

The findings of this study show that social capital in port community relationships has a predominantly positive influence on port community performance. Specifically, the development of social capital among the PA and PSPs was found to positively influence outputs measured by port effectiveness criteria. However, moving beyond the contextual setting of Scottish Trust ports, findings of this research offer valuable insights on triadic relationship configuration and the latter's influence on performance of the triad or potentially the wider system the triad is situated within. Considering the geographic limitations of ports in terms of space, tide etc. as well as the financial constraints Trust

ports experience due to the nature of their governance structure, approaches and findings of this study further could be extended to similar settings with entities or actors experiencing resource constraints. Improving performance of the focal triad or the wider community by improving existing relationship configurations among actors presents an opportunity for organisations to improve utilisation of existing and benefits derived from existing relationships. Thereby potentially moving beyond externally imposed constraints on their organisation.

Last, this research makes relevant contributions to port performance management as well as social capital literature. Regarding port performance management, it explores the influence of PCM relationships and port community performance, emphasising that performance outputs of the port are the result of efficient and effective business interactions between PCMs which are interdependent and influenced by their relationship's inherent social capital. Regarding social capital research, this study offers an explanation as to why manifestation of negative effects within the focal relationship differs based on its contextual settings. Furthermore, the findings offer insights regarding the interaction of social capital dimensions in the process of influencing port community performance in port community relationship settings. Adding to previous work of Steinmo and Rasmussen (2018) this research further explored the endogenous relationship of relational and cognitive social capital, suggesting degrees of prevalence and relevance facilitate the process of one to develop the other, thereby providing a novel addition to the understanding SC dimensions interaction.

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## **Appendix A – A priori Template**

- 1. Structural SC**
  - 1.1. Port Community Network
  - 1.2. Port Community Group Networks
  - 1.3. Intra-Port Networks
  - 1.4. Inter-Port Networks
- 2. Relational SC**
  - 2.1. Trust
  - 2.2. Social Norms
  - 2.3. Reputation
  - 2.4. Obligations and Expectations
- 3. Cognitive SC**
  - 3.1. Shared Vision
  - 3.2. Shared Values
  - 3.3. Shared Understanding
- 4. Port Efficiency**
  - 4.1. Cargo Throughput
  - 4.2. Berth Utilisation
  - 4.3. Turn-around time
- 5. Port Effectiveness**
  - 5.1. Reliability of the Port
  - 5.2. Availability, Adequacy and Accuracy of Information
  - 5.3. Fulfilment of Special Requests
  - 5.4. Quality of Cargo Handling

## **Appendix A – A posteriori Template**

### **1. Structural SC**

- 1.1. Port Community Network**
  - 1.1.1. Frequency of Interaction**
  - 1.1.2. Network Position**
  - 1.1.3. Access Nodes**
- 1.2. Port Community Group Networks**
  - 1.2.1. Frequency of Interaction**
  - 1.2.2. Network Position**
  - 1.2.3. Access Nodes**
- 1.3. Intra-Port Networks**
  - 1.3.1. Frequency of Interaction**
  - 1.3.2. Network Position**
  - 1.3.3. Access Nodes**
- 1.4. Inter-Port Networks**
  - 1.4.1. Frequency of Interaction**
  - 1.4.2. Network Position**
  - 1.4.3. Access Nodes**

### **2. Relational SC**

- 2.1. Trust**
  - 2.1.1. Trust in Port Community Members**
    - 2.1.1.1. Positive Experiences**
    - 2.1.1.2. Relationship History**
    - 2.1.1.3. Expressed Beliefs**
    - 2.1.1.4. History of Actions**
  - 2.1.2. Trust in Port Community Organisations**
    - 2.1.2.1. Positive Experiences**
    - 2.1.2.2. Expressed Beliefs**
    - 2.1.2.3. History of Actions**
    - 2.1.2.4. Relationship History**
  - 2.1.3. Trust in Port Community**
    - 2.1.3.1. Positive Experiences**
    - 2.1.3.2. Expressed Beliefs**
    - 2.1.3.3. History of Actions**
    - 2.1.3.4. Relationship History**
- 2.2. Social Norms**
  - 2.2.1. Formal Conduct**
  - 2.2.2. Informal Conduct**
  - 2.2.3. Reciprocity**
  - 2.2.4. Amenability**
  - 2.2.5. Reliability**
- 2.3. Reputation**
  - 2.3.1. History of Actions**
  - 2.3.2. Last Experience**
  - 2.3.3. Historic Beliefs**
  - 2.3.4. Hearsay**
- 2.4. Obligations and Expectations**
  - 2.4.1. Fairness**
  - 2.4.2. Preferential Treatment**
  - 2.4.3. Differentiation**
  - 2.4.4. Reciprocity**



- 3. Cognitive SC**
  - 3.1. Shared Vision**
    - 3.1.1. Customer Focus
    - 3.1.2. Diversification
    - 3.1.3. Continuous Improvement
    - 3.1.4. Trust Port
  - 3.2. Shared Values**
    - 3.2.1. Customer Centricity
    - 3.2.2. Adaptability
    - 3.2.3. “Can-do” Attitude
    - 3.2.4. Professionality
  - 3.3. Shared Understanding**
    - 3.3.1. Customer Requirements
    - 3.3.2. Anticipation of Needs
  - 3.4. Shared Language**
- 4. Negative Effects of Social Capital**
  - 4.1. Structural Social Capital**
  - 4.2. Relational Social Capital**
    - 4.2.1. Opportunism
    - 4.2.2. Sense of Entitlement
    - 4.2.3. Relationship Lock-In
  - 4.3. Cognitive Social Capital**
    - 4.3.1. Conformity
    - 4.3.2. Groupthink
    - 4.3.3. Exclusion
- 5. Port Efficiency**
  - 5.1. Cargo Throughput**
    - 5.1.1. Diversification
    - 5.1.2. Attractiveness of Service
    - 5.1.3. Geography
  - 5.2. Berth Utilisation**
    - 5.2.1. Reciprocity
    - 5.2.2. Amenability
    - 5.2.3. Cooperation
  - 5.3. Turn-around time**
- 6. Port Effectiveness**
  - 6.1. Reliability of the Port**
    - 6.1.1. Coherent Experience
    - 6.1.2. Transparency
    - 6.1.3. Predictable
  - 6.2. Availability of Information**
    - 6.2.1. Access to Port Community Members
    - 6.2.2. Willingness to Share
    - 6.2.3. Anticipation of Requirements
  - 6.3. Adequacy of Information**
    - 6.3.1. Understanding Requirements
    - 6.3.2. Willingness to Learn
    - 6.3.3. Proactivity
  - 6.4. Accuracy of Information**
    - 6.4.1. Verification in Network
    - 6.4.2. Understanding Requirements
    - 6.4.3. Access to Knowledge
  - 6.5. Fulfilment of Special Requests**

- 6.5.1.** Amenable
  - 6.5.2.** Adaptive
  - 6.5.3.** Customer Centricity
- 6.6.** Quality of Cargo Handling
  - 6.6.1.** Understanding of Requirements
  - 6.6.2.** Customer Centricity

# Appendix C – Template Analysis Stages

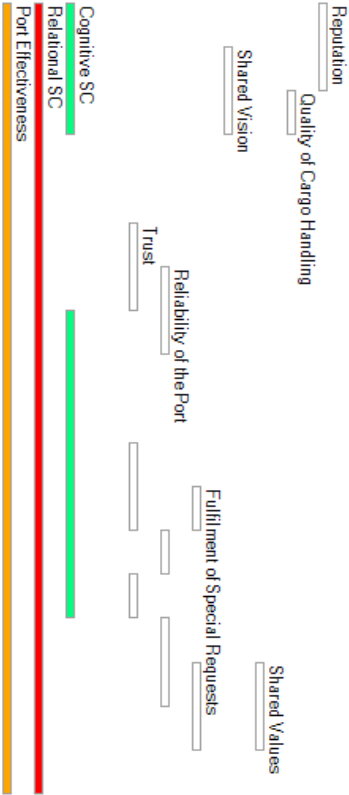
## Initial stage with top level nodes – A Priori

Absolutely, aehm our ability to get on and get a job done with Montrose because of who's there right now and the attitude they have towards the port and towards the work we want them to do for our clients that is a massive draw to the port. Aehm and we definitely look at port calls and projects on this basis and say "Okay, what is the best place to do this" and weight it all in and at the end of the day, acting as agent means we have to act in the best interest of our principals and if we have confidence and trust in what we agree upfront with a port such as Montrose then yes, that has a very very heavy bearing towards the final decision of which port to go to. We don't always have that benefit to choose or to help influence the decision but where we do it's a massive factor, it's a massive factor. Because if I get challenged by my principal to say "Okay, you had a conversation with Aberdeen and Montrose, the rates are this and this and who do you trust to work with us to get this job done, you have to go with the one you trust and is showing a willingness to be flexible and also to be realistic about what can be achieved as well and in this market the pricing is very important. The client must have a good feel for what their final costs are going to be and the fact that they aren't going to have that changed halfway through, they don't treat ships as captives. It's a common work here and we'll make it flexible, we make it good and you'll be billed accordingly but you aren't going to suddenly change a price or have an increase or have it vague so we don't really know what we'll be paying until the invoice arrives. Aehm,



Second stage with top and mid-level nodes – A Priori

Absolutely, aehm our ability to get on and get a job done with Montrose because of who's there right now and the attitude they have towards the port and towards the work we want them to do for our clients that is a massive draw to the port. Aehm and we definitely look at port calls and projects on this basis and say "Okay, what is the best place to do this" and weight it all in and at the end of the day, acting as agent means we have to act in the best interest of our principals and if we have confidence and trust in what we agree upfront with a port such as Montrose then yes, that has a very very heavy bearing towards the final decision of which port to go to. We don't always have that benefit to choose or to help influence the decision but where we do it's a massive factor, it's a massive factor. Because if I get challenged by my principal to say "Okay, you had a conversation with Aberdeen and Montrose, the rates are this and this and who do you trust to work with us to get this job done, you have to go with the one you trust and is showing a willingness to be flexible and also to be realistic about what can be achieved as well and in this market the pricing is very important. The client must have a good feel for what their final costs are going to be and the fact that they aren't going to have that changed halfway through, they don't treat ships as captives. It's a common work here and we'll make it flexible, we make it good and you'll be billed accordingly but you aren't going to suddenly change a price or have an increase or have it vague so we don't really know what we'll be paying until the invoice arrives. Aehm,



Final stage with complete hierarchy of nodes – A priori and a posteriori

Absolutely, aehm our ability to get on and get a job done with Montrose because of who's there right now and the attitude they have towards the port and towards the work we want them to do for our clients that is a massive draw to the port. Aehm and we definitely look at port calls and projects on this basis and say "Okay, what is the best place to do this" and weight it all in and at the end of the day, acting as agent means we have to act in the best interest of our principals and if we have confidence and trust in what we agree upfront with a port such as Montrose then yes, that has a very very heavy bearing towards the final decision of which port to go to. We don't always have that benefit to choose or to help influence the decision but where we do it's a massive factor, it's a massive factor. Because if I get challenged by my principal to say "Okay, you had a conversation with Aberdeen and Montrose, the rates are this and this and who do you trust to work with us to get this job done, you have to go with the one you trust and is showing a willingness to be flexible and also to be realistic about what can be achieved as well and in this market the pricing is very important. The client must have a good feel for what their final costs are going to be and the fact that they aren't going to have that changed halfway through, they don't treat ships as captives. It's a common work here and we'll make it flexible, we make it good and you'll be billed accordingly but you aren't going to suddenly change a price or have an increase or have it vague so we don't really know what we'll be paying until the invoice arrives. Aehm,

