



World Conference on Transport Research - WCTR 2019 Mumbai 26-31 May 2019

Introducing critical quality elements in port research: The case for port research field classifications

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Abstract

Research has still been an information consumer and producer, consuming and producing both knowledge and data which are becoming increasingly of an interdisciplinary nature. While port research is growing the last decades, there is quite no research on the quality of the knowledge produced by research. This paper focuses the quality issue in port research in a special case: port research field classifications made by a few studies since the 2000s. Some useful elements of research quality will be selected by literature review, in addition to a short discussion about the importance and role of information as knowledge in economics and (strategic) management and research quality in general. Selected research elements include the research question, objective or purpose; object and subject definition and the unit of analysis in ports; comprehensiveness or contextual approach; accuracy of some references; adequacy of reference source selection method and port research field classification method; acknowledgment of possible errors and contradictory evidence; methodological framework and rigor of analysis; selection/evaluation of references as information sources; cautious claims, conclusions and implications; accuracy of results; peer reviews; fallacies, principles, and standards. These will be condensed in ten key port research quality elements and will be related to a critical review this paper's Authors have made to a few existing studies aiming to review and/or classify port research. Useful empirical findings will serve to improve future port research, well beyond those having as objective only reviewing and classifying port research fields. Future research directions and conclusions will close the paper.

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Peer-review under responsibility of WORLD CONFERENCE ON TRANSPORT RESEARCH SOCIETY.

Keywords: Port research quality; port research field classifications; critical research quality elements; peer-review role; research question; object and subject definition; accuracy of references; adequacy of sources; methods for source selection and port research field classification; cautious claims; acknowledgement of errors and contradictory evidence; methodological framework and rigor of analysis; explanation of choices made.

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1. Introduction

Since several decades there is a growing interest in various port research (sub)fields pertaining to different port disciplines and raising useful issues for port decision-makers, practitioners, and various stakeholders. Research papers related to port issues are published either in journals ranked according to their impact factor or presented in conferences ranked according to their notoriety, both journals and conferences evaluating and accepting papers by peer-reviews. There are also papers published as working or discussion papers or reports outside journals or conferences, e.g., via institutions as universities, research institutes, etc., via edited books as chapters, or directly via various internet sources even as anonyms. The last two decades there are a few attempts by some authors to review and/or classify former port research in various fields and categories.

A close observation and analysis of papers reviewing or classifying port research revealed several fallacies and shortcomings related to some key port research and data elements. These findings motivated this paper aim that is to relate port research and port data errors and problems to quality elements that should be first searched for.

This paper first notes the importance and role of information as both knowledge and data and of research quality, then makes a review and selection of research quality elements in general and finally tries to identify the same elements and related errors or problems in the existing reviews and classifications of port research fields. By this doing, this paper tries to stimulate other researchers to move on this direction in order to increase port research quality and diminish the database of errors that should stay out of port research in the future.

Next section will focus on the importance and role of information as both knowledge and data. Section 3 will review some research quality elements in general, while section 4 will identify them and related problems in port research, especially port research field reviews and/or classifications.

2. On the importance and role of information as both knowledge and data

The term information, especially as asymmetric information has been cited two times in the motivations of 5 Nobel laureates in economics: Mirrlees and Vickrey in 1996 and Akerlof, Spence and Stiglitz in 2001. Also the paper 'The economics of information' has been written by another Nobel laureate, Stigler (1961).

“One should hardly have to tell academicians that information is a valuable resource: knowledge is power. And yet it occupies a slum dwelling in the town of economics. Mostly it is ignored: the best technology is assumed to be known; the relationship of commodities to consumer preferences is a datum. And one of the information-producing industries, advertising, is treated with hostility.” Thus argued Stigler (1961), hoping “to show that some important aspects of economic organization take on a new meaning when they are considered from the viewpoint of the search for information” and “to analyze systematically one important problem of information, the ascertainment of market price”, before concluding: “The identification of sellers and the discovery of their prices are only one sample of the vast role of the search for information in economic life. Similar problems exist in the detection of profitable fields for investment and in the worker's choice of industry, location, and job. The search for knowledge on the quality of goods ... is perhaps no more important but, certainly, analytically more difficult. Quality has not yet been successfully specified by economics, and this elusiveness extends to all problems in which it enters. Some forms of economic organization may be explicable chiefly as devices for eliminating uncertainties in quality.” Not only Stigler has considered information as synonym of knowledge, but has argued that the quality of goods, including the quality of information, has not been specified by economics.

40 years later, Stiglitz (2002) hoped “to show that Information Economics represents a fundamental change in the prevailing standard paradigm within economics ... the competitive general equilibrium model in which information was perfect, there were no shocks, no unanticipated events. ... It argued that institutions ... distribution of wealth ... and history did not matter. ... The new information paradigm went further in undermining the foundations of competitive equilibrium analysis [and] the basic 'laws' of economics. ... Each of the cornerstones was rejected, or was shown to hold under much more restrictive conditions. ... The most fundamental reason why markets with imperfect information differ from those in which it does is that *actions (including choices) convey information, market participants know this, and this affects their behavior.*” Then, he has presented a more systematic account of the principles of the economics of [asymmetric] information, constituting “a revolution in economics, upsetting longstanding presumptions, including the presumption of market efficiency” (Stiglitz 2016).

Like Stigler, but fifty years later, Stiglitz (2008) argued that he realized, as he was beginning his work on the economics of information, “that knowledge and information are very similar.” “My work showed that the standard paradigm (the neoclassical model, which argued that well-functioning markets solved all economic problems) just did not work when information was imperfect and endogenous (that is, could be affected by what individuals or firms did), and, by extension, when knowledge is endogenous (that is, when technology is changing). Adam Smith’s theory argued that individuals in pursuit of their self-interest (firms in pursuit of maximizing profits) were led as if by an invisible hand to the general well-being of society. One of the important results of my work, developed in a number of my papers, was that the invisible hand often seemed invisible because it was not there” (Stiglitz).

Asymmetric and imperfect information affects markets – up to often deny the existence of their invisible hand – and “both internal organization of firms and its external relations with labor, capital and product markets. The new theory of the firm is built on these foundations [and] has important behavioral implications” (Greenwald and Stiglitz [GS] 1990). GS focused “informational problems in a capital market, including asymmetries of information among firm managers [agents, those who make decisions] and providers of capital [principals, the theoretical beneficiaries of those decisions]” (GS 1989). “The appropriate way to look at the whole set of firm decisions – including those on employment, production, pricing, investment and *research* – is as a dynamic portfolio problem” (GS 1989, 1990).

Mattessich (1993) has analyzed the different meanings of semantic, useful, efficient, or genetic information. He argued that a signal or data (datum) might be regarded as a medium possibly carrying some information; a message might be seen as data, information, or knowledge in the communication process, whose metaphor is transportation; and the quantity as well as the *quality of information* has to be distinguished from the information itself. He recalled the history of the information economics from the pioneering works of Jacob Marschak et al., Stigler and Fritz Machlup, and considered the information economics as an extension of the decision theory, a truly interdisciplinary subject (Hansson 1994) that 'transfers' the term information from economics to the field of management science.

Porter and Millar (1985) showed how the information revolution expressed by IT advances affects competition and sources of competitive advantage and what strategies should pursue a company. IT encompasses the information that businesses create and use and a wide spectrum of techniques that process the information. It involves, other than computers, data recognition equipment, communication technologies, factory automation, and other hardware and services, affecting competition by: (1) changing industry structure and altering the rules of competition; (2) creating competitive advantage by giving companies new ways to outperform their rivals in either cost or differentiation; and (3) spawning whole new businesses, often from within a company’s existing operations. A strategic concept behind the IT competition role is the 'value chain'. It divides a company’s activities into technologically and economically distinct activities, called 'value activities', embedded in a larger stream of activities termed 'value system'. To gain competitive advantage over its rivals, a company must perform these activities either by differentiation or lowering cost, thus leading to a premium price (more value). Linkages not only connect value activities inside a company but create interdependencies between its value chain and those of its suppliers and channels, being a powerful source of competitive advantage because of rivals perceiving difficulties and trade-offs resolved across organizational lines. IT is permeating the value chains at every point, transforming the way value activities perform and the nature of linkages among them. Porter and Millar suggest 5 steps to take advantage of opportunities that the information revolution has created: (1) assess information intensity, (2) determine the role of IT in the industry structure, (3) identify and rank the ways in which IT might create competitive advantage, (4) investigate how IT might spawn new businesses, and (5) make a plan for taking advantage of IT. The importance of the information revolution is not in dispute. The question is not whether IT will have a significant impact on a firm’s competitive position; rather the question is when and how this impact will strike (Porter and Millar).

In the case of ports, the value chain and value activities are rightly the logistics and supply chains in which ports and various port activities are embedded, as Robinson (2002), Suykens and Van de Voorde (1998), etc. argued.

3. Research quality elements and considerations previously established

Research investigates ideas and uncovers useful knowledge (Litman 2012), seeking to contribute to real-world solutions (Belcher et al. 2016). Good research reflects a sincere desire to determine what is true, based on available information. It requires judgment (*discernment*) and honesty; carefully evaluates information sources; acknowledges possible errors, limitations and contradictory evidence; identifies factors that may be important; describes key

decisions researchers faced when structuring their analysis and explains the choices made; is cautious to draw conclusions, carefully avoids exaggerated claims and identifies uncertainties; and demands multiple types of evidence to reach conclusions (Litman 2012). A good research document empowers the readers to reach their own conclusions by including: a well-defined question; description of context and existing information about issues; consideration of various perspectives; evidence presentation with data and analysis in a format that can be replicated by others; discussion of critical assumptions, contrary findings, and alternative interpretations; cautious conclusions and discussion of their implications; adequate references as original sources, alternative perspectives, and criticism; and a comprehensive overview of an issue and discussion of its context. It may use anecdotal evidence, but does not rely on them to draw conclusions because examples can be found that prove almost anything (Litman). Peer review enhances research quality: this does not mean that only peer reviewed documents are useful (much information is given in working papers and reports), or that everything published in professional journals is correct (many published ideas are proven false), but this process encourages open debate about issues (Litman). Research quality is an important epistemological issue (related to the study of knowledge) to librarians (who manage information resources), scientists and analysts (who create reliable information), decision-makers (who apply information), jurists (who judge people on evidence), and journalists (who disseminate information to a broad audience). Philosophically still, Litman recalls the book *On Bullshit* of the philosopher Frankfurt (2005), adding: “People sometimes try to justify their bullshit by citing relativism, a philosophy suggesting that objective truth does not exist (Nietzsche stated 'There are no facts, only interpretations'). An issue can certainly be viewed from multiple perspectives, but anybody who claims that justifies misrepresenting information or denies the value of truth and objective analysis is really bullshitting.” Litman added also 85 logical fallacies taken from Wikipedia, where actually it is longer. Damer (2009) analyzed fallacies and faulty reasoning in his code of intellectual conduct for effective discussion, including these 12 principles: fallibility, truth-seeking, clarity, burden-of-proof, charity, structural, relevance, acceptability, sufficiency, rebuttal, suspension-of-judgment, and resolution.

RAND (R AND D) Corporation is an American nonprofit global policy think tank created in 1948 (Wikipedia). A report of RAND Europe (Wooding and Grant 2005) presented findings from a series of 9 workshops held with 142 academics and research managers across the UK, having as objective to investigate views of research quality and attitudes toward different research assessment models. Defining the research agenda by framing new research questions and advancing a field into new areas was seen as the most important characteristic of high quality research. Rigor level in the research methodology and originality of ideas were also seen as very important, along with the concept of international recognition. High quality publication, peer recognition, utility and academic impact made the top ten characteristics.

RAND (2015) used standards in the conduct and evaluation of all its studies, articulating long-standing concepts and values regarding the characteristics for high-quality research and analysis. According to RAND, the study should (A) be (1) objective, independent, and balanced; and (2) compelling, useful, and relevant to stakeholders and decision-makers; (B) have (3) a well formulated problem and a clear purpose, (4) a well designed and executed approach, (5) explicit & justified assumptions; (C) demonstrate (6) accurate, understandable, clearly structured and temperate documentation; (7) understanding of related studies; (D) (8) use the best available data & information; and (E) identify (9) findings that advance knowledge and bear on important policy issues; and (10) logical implications and recommendations, warranted by the findings, and explained thoroughly, with appropriate caveats.

4. Some critical quality elements and related problems in port research

A critical analysis this paper’s Authors made to existing studies aiming to review and/or classify single or multiple port research fields (PRFs) reveals a list of data (Table 1) and shortcomings (including the resulting interrelationships among 7 or 8 categories shown by diagrams (Figure 1, a, b), that this paper will relate to the above discussed list of research quality elements, denoting them as port research quality elements (PRQE). For space motives, this paper will exemplify 10 PRQEs and related problems. In the following list of port research works, the object of study are single PRFs as port management, port economics, port operations research (applied at container terminals only), and port geography, which denote a (unique-field) contextual approach, or triple PRFs as port economics, policy, and management and port policy, management, and operations, which denote the so-called comprehensive (limited in a triple-field) approach.

Table 1. Methodological and categorization elements decided by scholars reviewing and/or classifying port research fields (Authors).

Choices by authors of key elements in	SV (1998)	V+ (2004) V+ (2008)	Heaver (2006)	Ng (2013) ND (2012, 2014)	P+ (2008, 2010) P+ (2011)	W+ (2010a, 2010b) W+ (2011, 2012)
Methodology						
Port research field	Port Management	Operations Research in Container Terminals	Port Economics	Port Geography	Port Economics, Policy, and Management or 'port studies'	Port Policy, Management, and Operations or 'port research'
Published as	Journal paper	Journal papers	Edited book chapter	Conference & journal papers	Conference & journal papers	Conference & journal papers
Number of authors	2	3 (2004), 2 (2008)	1	1 (2013), 2 (2012, 2014)	3 (2008, 2010), 4 (2011)	3 (2010a, 2010b), 4 (2011, 2012)
Objective statement	Yes	Yes	Yes	Yes	Yes	Yes
PRF definition	Not	Not	Yes	Discussion, questions	Not (PRF, components)	Not (PRF, components)
Review/Classification	R	R/C	R/C	R/C	R/C	R/C
Objective realization	Not	Yes, no method elaborated	Yes, with few problems	Yes, with some problems	Yes, with many problems	Yes, with many problems
Port definition	Yes (Goss (1990))	CT definition	Yes	Yes	Yes (N(2006), wrong)	Not
Unit of analysis (UA)	Port, UA not defined	CT, UA not defined	Port, UA not defined	Port, 2 UAs listed	Port, 5 UAs listed	Port, 2 UAs listed
Number of selected references	21	212 (2004) 252 (2008)	116	155 (Ng), 314 (2012) 399 and 728 (2014)	287 (2008) 395 (2010, 2011)	840 everywhere
Publication sources of selected references	Various sources in port economics & policy	Various sources: mainly OR + port research fields	Various sources in port economics	Peer-reviewed journals in Geography & non-Geo	Peer-reviewed journals in the triple PRF noted above	Peer-reviewed journals in the triple PRF noted above
Number of selected journals in the field	Not important	Not important	Not important	26 (2013) and 36 (2012, 2014) in Geography**	35 (2008) and 51 (2010, 2011) in the triple PRF	125 in the triple PRF
Publication period of selected references	1973-1998	No period defined Oldest references since 1978	No period defined Oldest reference in 1887	1956-2011 1950-2011, 1950-2012	1997-2006 (2008) 1997-2008 (2010, 2011)	1980-2009
Selection approach of port research papers and other works, if any Review approach if no selection made (for review papers only)	Combining empirical findings with practical knowledge	No selection approach Former research findings in CTs and OR in CTs	Heaver claimed no scientific selection of his 116 references	Systematic screening of representative port papers published in geography journals only; ND (2014) accepted also not detailed non-geography journals	Comprehensive, systematic, blind, and rigorous review of abstracts and contents in relevant academic, without OR, journals and excluding all the other paper sources	Comprehensive, structured & temporal content analysis of relevant papers published in all academic, including OR, journals and excluding all the other paper sources
Classification approach	Not applicable	Based on CT resources and operations	Arbitrary convenience due to interdependent divisions in port econ	Careful subjectivity, former studies of P+, W+, and Heaver, and scholarly informal discussions in 2010-11	Iterative scrutiny of papers selected by subjective and some arbitrary grouping as for their topic and defining themes by independence & agreement among authors	A review process of 4 inductive and iterative rounds & cross-review among authors gives no ambiguity and exhaustive and mutually exclusive categories
Framework components*	PA objectives & tools 4 issues of port policy and economics that influence PAs	CT processes CT resources Decision problems Optimization models Logistics applications	No stated framework Heaver follows the conceptual approach of Winston (1985) in transport economics	Different spatial scales (global, regional or national, and local) 2 non-spatial scales 3 functional perspectives	Methodology, tools, results Core theme formulating sub-datasets seeking similar questions or research paths Geo-scope, commodities, coherence as citation ratios	6 methodological dimensions: research paradigm, strategy and methods, discipline base, data analysis techniques, theoretical models and concepts; 8 journal categories; port/maritime ratios
Categorization						
Number of categories		3 CT processes 4 CT resources 4 decision problems 4 optimization models	6 categories (topics) in port economics Topics in port policy and management	5 categories in total: 3 spatial categories 2 non-spatial categories	7 categories, also called fields in P+ (2008), subfields in P+ (2010) or themes in P+ (2011)	8 categories, also called research themes
Denomination and Ranking of categories	Not applicable	1.1. Ship planning, 2. storage & stacking, 3. transport and crane transfer optimization 2.1. Handling equipment, 2. operation areas, 3. CT systems, 4. HR 3.1. assignment, 2. pickup, 3. scheduling, 4. routing, 5. delivery 4.1. Exact, 2. heuristic, 3. simulation, 4. artificial intelligence/multi-agents	1. relationship of ports with ship costs 2. issues of port costs and pricing 3. industrial organization related to ports 4. competitive relationship among ports 5. assessing port performance 6. specialized studies	1. Foreland and maritime space (global) 2. Hinterland (regional/national) 3. The port (local) 4. Management, policy and governance 5. Philosophy and epistemology locational (<i>l</i>), operation (<i>o</i>), and impacts (<i>i</i>) are 3 functional perspectives	1. Terminal studies 2. Ports in transport and supply chains 3. Port governance 4. Port planning and development 5. Port policy and regulation 6. Port competition and competitiveness 7. Spatial analysis of ports	1. Port policy 2. [Port] Governance and reform 3. [Port] Management and strategy 4. [Port] Competition and performance 5. Ports in supply chains 6. [Port] Planning and development 7. Terminal operation 8. Spatial analysis of ports
Nature of (sub)categories		Port processes/resources OR methods (including decision problems) Pure port management	Port microeconomics Port policy and governance Port management	Port geography Port economics Port policy & governance Port geo-philosophy	Port economics Port policy & governance Port management Port geography	Port economics Port policy & governance Port management Port geography
Number of subcategories		CT processes 3+2+3=8 CT resources 4+2+2+3+3+2+3=19	1+1+2+1+1+4=10***	4+4+4+1+1=14*** Each of the categories 1, 2, 3 has 4 subcategories	29 in P+ (2008) 30 in P+ (2010) 40 in P+ (2011)	38 in all papers of W+
Denomination and Ranking of subcategories		Ship planning: 1. berth allocation, 2. stowage planning, 3. crane split or scheduling Storage and stacking logistics: 1. containers stuffed, stripped, goods, and stored, 2. stacks in rows, bays, tiers; import, export, special, and empty containers Transport optimization: 1. quay-, 2. land-side, 3. cranes Cranes: 1. quay/gantry (single and dual trolleys), 2. stacks (rail mounted, rubber tired, over-head bridge), 3. forklifts, 4. reach-stackers Transport vehicles: 1. passive (multi/trailers, AGV), 2. lifters (straddle carriers, forklifts, reach-stackers) Assisting systems: 1. communication, 2. positioning Operation areas: 1. quay- or water-side (many container ships), 2. Hinterland or landside (trucks of 1-3 TEUs, trains of up to 120 TEUs), 3. yard areas and/or sheds CT systems: 1. pure straddle carrier, 2. gantry cranes HR: 1. scheduling/assignment, 2. planning, 3. allocation	Only categories 3 and 6 have subcategories: 3.1. administrative organization in public ports 3.2. strategic issues in the new industrial organization 6.1. labor wage rates 6.2. economic rents in the port context 6.3. services of tugs 6.4. maritime (safety and) security	1.1. port system (<i>l</i>) 1.2. port connectedness (<i>o</i>) 1.3. port choice, competition and cooperation (<i>o</i>) 1.4. port's place in shipping strategies and networks (<i>i</i>) 2.1. catchment areas and supply chain linkages (<i>l</i>) 2.2. port, intermodal transport and supply chains (<i>o</i>) 2.3. inland/satellite terminal 2.4. port and regional development (<i>i</i>) 3.1. history and location (<i>l</i>) 3.2. evolution over time (<i>l</i>) 3.3. port operation (<i>o</i>) 3.4. port-city relation (<i>i</i>)	1. 3 in P+ (2008, 2010) and 4 in P+ (2011) 2. 4 in P+ (2008), 5 in P+ (2010), 7 in P+ (2011) 3. 4 in P+ (2008, 2010) and 9 in P+ (2011) 4. 6 in P+ (2008, 2010) and 4 in P+ (2011) 5. 4 in P+ (2008, 2010) and 7 in P+ (2011) 6. 4 in P+ (2008, 2010) and 5 in P+ (2011) 7. 4 in P+ (all versions) Only 1 subcategory within the categories 3, 4, and 6 kept original names from P+ (2008) to P+ (2011)	1. 6 subcategories 2. 3 subcategories 3. 7 subcategories 4. 5 subcategories 5. 3 subcategories 6. 6 subcategories 7. 5 subcategories 8. 3 subcategories Port papers use methodological research issues related to 6 academic or scientific disciplines: 4 paradigms (840/840) 5 out of 6 strategies (840/840) 9 methods (840/840) 22 theoretical models and concepts (207/840) 19 data analysis techniques (310 out of 840 papers in total)
Number of issues	Not applicable	Not listed, paper-based	No lists, concept-based	38 issues in multi-PRFs	100 issues in P+ (2011)	

* W+ used a stated and detailed framework, while for the other papers the framework used is resumed by this paper's Authors; ** The number of non-geography or extended port geography journals, as called by ND (2014), is not revealed by ND; *** A category not having stated subcategories will be counted for 1 subcategory, itself.

- Suykens and Van de Voorde [SV] (1998) used to review port management in a journal paper;
- Steenken et al. [V+] (2004) reviewed and classified container terminal (CT) resources and operations and their optimization through methods and techniques of Operations Research (OR), in a journal paper, updated by Stahlbock and Voß [V+] (2008) in another journal paper;
- Heaver (2006) is the unique having classified research in port economics in an edited book chapter;
- Pallis et al. [P+] (2008) reviewed and classified research papers in port economics, policy and management in a conference paper, that P+ (2010) published in a journal paper and P+ (2011) revised in another journal paper;
- Woo et al. [W+] (2010a, 2010b) reviewed and classified in 2 conference papers port research and methodologies, collecting papers in port policy, management and operations, published by W+ (2011, 2012) in 2 journal papers;
- Ng (2013) reviewed and classified port geography research papers in a journal paper, published in May 2012, revised by Ng and Ducruet [ND] (2012) in a conference paper that ND (2014) bibliometrized in a journal paper.

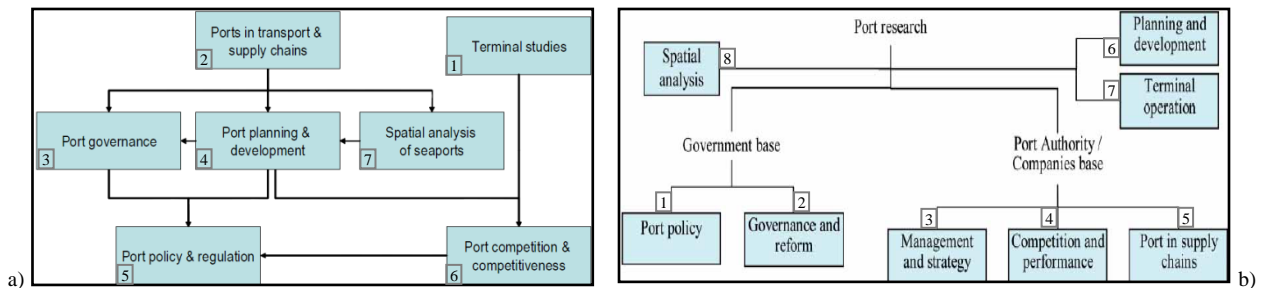


Figure 1. Relationship among (a) seven (Pallis et al. 2011) and (b) eight (Woo et al. 2012) categories of port studies (numbered by Authors).

4.1 PRQE1: Research question, objective, or purpose

All above port studies state a research question, objective, or purpose that is realized somehow. SV stated “to deal with developments in [port management,] *this area* of port economics”, reviewing port economics, policy, and governance more than port management that they consider a body incorporated to PAs more than a field of study.

4.2 PRQE2: Object definition

No one scholar or group of scholars defined the PRF used to be reviewed or classified. Meanwhile, Heaver’s chapter was part of a book that defined port economics at introduction, but Heaver recalled other authors’ definition – like Svendsen’s (1958) definition of shipping economics as “the application to sea transport of the same methods and analytic means used in economics” and his key lessons on “*the arbitrary nature of the field of port economics* and the important role of both institutions and individuals in the development of the subject” – and Ng has discussed about the port geography definition and asked the key question: what is or should be port geography?

The taken-for-granted definitions existing in the above scholars’ minds are a serious caveat casting a serious shadow over the selection process and the rest of their studies, and strongly linked to Damer’s 12 fallacies and RAND’s 7 research quality standards numbered 1, 2, 5, 7, 8, 9, and 10, which are another consideration of Litman’s good research elements (see §3). However, all these papers have been peer-reviewed, excepting Heaver’s chapter in an edited book if one follows P+ (2008, 2010) arguing that “Contributions to edited books were also excluded from the analysis, because books generally focus on specific topics and review procedures are less clear.” Furthermore, all these papers’ authors are renowned port scholars. Readers may judge on the corresponding RAND’s standards or Damer’s fallacies that relate to the other research quality elements analyzed in the following subsections.

4.3 PRQE3: Subject definition and unit of analysis

Not all cited papers have defined the port as the principal subject of their studies. While some of them variously define ports and consider port unit of analysis, SV first borrowed Goss’s definition of ports, as they borrowed his economic function for ports, then argued that “the term ‘port’ is rather problematic ...”

4.4 PRQE4: Accuracy of some references

P+ (2008) defined the port in line with Notteboom (2006). But this reference is inaccurate as it does *not* define ports. Furthermore, neither Pallis nor Notteboom answered my question about this erroneous reference used in P+. Again P+ argued to not consider port operations research papers in their database: then, how is it possible that by content analysis P+ (2011) included it as one of topics in terminal studies? On the other side, W+ referred for the classification process to Cullinane and Toy (2000) that argued contrarily to W+ for the selection process: “The database comprises a *variety of source* literature. An attempt [is] made ... to limit the analysis to *refereed academic output*. This includes *journal papers, conference proceedings, textbooks, etc.*” May these evidences be related to or called research honesty?

4.5 PRQE5: Adequacy of reference source selection method and PRF classification method

SV, V+, or Heaver reviewing or classifying single PRFs included any kind of former port research work adapted to their research objective. But, SV reviewed 21 empirical references on port economics, policy, and governance instead of port management. P+ and W+ classifying triple PRFs and Ng/ND a single PRF restricted their reference sources to journal papers, giving questionable arguments, while W+ is in total contradiction with one of their references, as said in §4.4.

Most importantly, P+, W+, and Ng/ND replaced the principle that one paper may include many research issues by the mutual exclusivity in the content analysis of selected papers. The relationship of papers with topics is not of the type 1-1 but 1-*n*, with *n* the number of topics per paper – researchers show the interdisciplinary papers increasing, argued W+. Given the aim of these works in a chosen PRF, “to obtain a *complete picture* and framework *for port research*”, as W+ explicitly wrote, important is to find as many as possible topics and papers, that is, researchers deserving time, money, and energy to these topics, not the quality of phrases using topics. It is the quantity of selected papers, not their quality that matters. Therefore, to find as many as possible research topics, the real task should be to select papers everywhere they exist, not only in peer-reviewed journals, as V+ did more extendedly than Heaver not neglecting even anonymous authors. These arguments are sufficient to consider the results of P+, W+, and Ng/ND inexact, not real, and erroneous. Moreover, not only P+ included port operations research as a subcategory of port terminal studies though excluding the corresponding papers, but they did not show the paper number pertaining to their subcategories, whose number changed from 30 in P+ (2010) to 40 in P+ (2011) for the same number of papers selected. The research honesty is still involved.

All above cited port scholars acknowledge the subjectivity of the PRF classification method. Heaver was explicit and sincere arguing that he divided arbitrarily, for convenience, port economics in 6 topics. The approach used by P+, W+, and Ng/ND was of the kind “authors know” or, for W+, “other references know”, which still give “their own opinion” without any justification. More than their own opinion or that of other referred scholars, researchers selecting research works and classifying PRFs in (sub)categories must explain the why and logical reasons where basing their opinions.

4.6 PRQE6: Acknowledgement of possible errors and contradictory evidences

P+ used a citation analysis “for measuring the coherence within and between port research categories via the analysis of citation relations”. They argued that low values of citation ratios – less than 0.069 in P+ (2008) and less than 0.087 in P+ (2010) – suggested a relatively low coherence of port studies, but concluded that citation analysis confirmed the validity of content classification of the papers reviewed. Meanwhile, citation ratios in P+ (2011) have values more than ten-folded than those shown in P+ (2010), though both tables of data correspond to the same number of papers selected (395) by P+ and cited within and between port research categories. Clearly, one of the data tables is erroneous, but this is not acknowledged by P+ (2011) which conclude that “Port studies are somewhat fragmented and lack coherence,” as P+ (2008, 2010), though P+ (2011) show citation ratios close to 1, instead of the very low values in P+ (2008, 2010), which argued that values close to 1 show a high coherence. Do contradictory evidences show research honesty? In any case, this paper’s Authors do not accept the citation ratios as a logic or

argument for confirming classification of port research papers by content or whatever else analysis. It is simply a false argument.

4.7 PRQE7: Framework dimensions of research methodology

A research methodology includes the framework dimensions of analysis used. It was the most explicit and large in W+ (2010b, 2011), with 6 dimensions observed in a 3 decadal evolution: 4 research paradigms; 2 by 3 (6 in total) research strategies; 9 research methods; 6 discipline bases: *economics* 31.54%, *geography* 15.7%, *operations research* 16.35%, *management* 13.2%, 'other' 5.65%, and 'not specific', papers with indiscernible disciplinary traits, 17.7% of 840 papers; 22 theoretical methods and concepts; and 19 data analysis techniques. W+ (2010a, 2012) used only 2 dimensions: port research place in the maritime research and 8 categories of the 125 journals where W+ selected their papers: *maritime studies*, *transportation*, *geography*, *operations research*, *planning & development*, *economics*, *business & management*, and *others* (public administration, computer science, sociology, and safety science). However, W+ used only 1 name of disciplines and 2 of journal categories, with business and management reduced from business and added uselessly by strategy (see §4.8), for labeling the 8 categories of their triple PRF 'port policy, management and operations'.

P+ (2008, 2010) used an implicit framework of 4 dimensions: (1) unit of analysis, (2) scope of port empirical research and authorship, (3) commodity, and (4) citation ratios, with the latter showing serious problems from P+ (2010) to P+ (2011), as analyzed in §4.6. There are 2 analytical contradictions and a false claim concerning the port unit of analysis.

First, it is evident that P+ accepted a given port definition – though inexistent, as in §4.4 – arguing at the same time that “port research can be classified in different categories, based on the *unit of analysis* ...”, which can be global, regional, national, port or terminal specific. Their port definition does not permit dynamic modifications from terminal to global scale: this is a serious conceptual problem of this study. Also, the term regional ranged between the terms global and national must be explained: it may be intra-regional for ports within a country’s region or inter-regional for ports within extra-national territories of at least two countries. The other contradiction is that P+ (2008) add also to their global scale “pure theoretical publications that conceptualize port management, economics and policy, without empirical analysis”, that P+ (2010) modify in “Some papers conceptualize port management, economics and policy [their triple PRF label reordered in both phrases] in general terms and do not have a precisely defined geographical unit of analysis.” These papers are clearly outside a unit-scope perspective: 25/53 papers in P+ (2008) and 33/72 in P+ (2010) are labeled as 'no sample' within the global scale, being 100% the contrary of the remaining 28/53 and 39/72 papers respectively, labeled 'large sample' within the same global scale. A conceptual paper’s scale follows the conceptualization approach taken by its author(s), going from micro scale (berth, terminal, or port territory) to meso (intra-regional), macro (national), or hyper-macro scale (inter-regional and global). It is clear that this research trick has no logical base at all.

Furthermore, the above cited claims are false. Though P+ (2008) count 25 'conceptual papers' and P+ (2010) count 33, if these papers were really conceptualizing their triple PRF, any definition of their chosen object of study or their single PRF components would have been presented, as any conceptualization brings at least one definition: but, P+ presented no definition for their triple PRF (see §4.2). Moreover, by screening the list of 394 (*instead* of 395) papers in P+ (2010), only Baird’s (2002) paper 'The economics of container transshipment in northern Europe' includes 'economics' in title: it has nothing to do with any conceptualization of port economics but an estimation of modeled costs for transshipment in Northern Europe container ports. The other 16 titles including the term 'economic' are mainly economic analysis of port impacts and performance, having nothing to do with the conceptualization of port economics. Only 1 (Everett 2005) out of 23 papers including 'policy' in title provides a conceptual framework of port policy and port planning incorporated, the rest of papers and other 3 including 'policies' being case studies for specific countries or port policy issues. Finally, 12 titles including the term 'management' are case studies in specific port management issues, countries, and scales, and have nothing to do with the conceptualization of port management if excluding SV paper already analyzed (see §4.1). By excluding the 3 duplications of 2 among 3 terms or their variants, it results that only 2 out of 49 within 394 papers is conceptual, with only one (SV 1998) in the sense that P+ understood. Even by screening the 394 titles to find the term 'conceptual' and its reduced variant as 'concept(s)' or enlarged ones as 'conceptualization' or 'conceptualize' and its

other forms, one may find only these 4 titles: 'Ship, port and supply chain security concepts ...', '... introduction of the value added concept', 'Port competition in concept and practice', and 'Developing a conceptual model for sharing container terminal resources ...', which confirm the falsity of the cited claim, as 25 (P+ 2008) and 33 (P+ 2010) pure theoretical publications “conceptualize port management, economics and policy” at the rate of only 1/287 and 1/394.

Combining commodities with geographical scope has resulted inutile in P+ (2008), as quite the half (131/287) of papers was not specified and the other half (143/287) was container-related, with the rest (13/287) distributed among general cargo, vehicles, cruises, passengers, and Ro/Ro (freight); similarly in P+ (2010), with 191/395 not specified papers, 186/395 container-related and only 18/395 distributed among the other 5 types of commodities.

4.8 *PRQE8: Explanation of choices made*

Most of the choices made by all cited port scholars concerning the key methodological and PRF categorization elements (§4.8.1) are either explained not at all or with very questionable reasons. Some questions will be added instead of other abounding evidences explained above (§4.1-7): Why cited scholars have not defined their chosen PRF? Why P+ and W+ ranked as they did single PRFs in their triple PRFs variously labeled, while producing quite the same results at category level? Why Ng argued “Heaver (2006) classified port economics research into 6 areas illustrating significant differences with his categorization”, knowing his PRF was port geography, not economics? Why W+ qualified Heaver’s review in port economics as review in port management and ranged it with SV paper and Olivier and Slack (2006) paper, the latter having reviewed 93 references in port geography and economics? In any case, no paper tried to get more profound logical reasons on which basing their PRF classification, whose some choices related to categorization elements will be more deeply analyzed below.

4.8.1 *PRQE8: Port categorization elements as a special case of choices made by port research scholars*

The classification process of PRFs in cited studies produced some key results like the number, labels or names, nature, ranking, and position of (sub)categories, and interrelationships among categories as P+ and W+ (Figure 1, a, b) and Ng/ND show or among subcategories. This subsection will select and analyze the most striking choices that scholars made on listed elements critically analyzed by this paper’s Authors (2019, forthcoming).

Single PRFs have been reviewed in SV (port management in paper’s title, a mix of port economics, policy, governance in paper’s body) and classified alone – port economics (Heaver), port operations research for container terminals only in V+, and port geography in Ng/ND – or mixed in triple PRFs as port economics, policy and management (P+) and port policy, management and operations (W+). There are also single PRF-like categories (as port governance and port policy in P+ and W+, or port management in W+) or triple PRF-like category as port management, policy and governance in Ng/ND. As it may be noted by this description, port economics and port management have not been considered as categories in P+, while port operations are not figuring out as a category in W+, though these single PRFs are part of their corresponding triple PRFs, while a triple PRF-like category is unexpectedly part of the single PRF of port geography. Meanwhile, port economics is figuring neither as part of the triple PRF to be studied nor as a category in W+, completely disappearing, though W+ found that port economics represented from 19% to 60% of their 5 out of 8 categories, therefore casting a lot of shadows over their results of disciplinary distribution in research themes or categories. A lot of questions that may be raised here are strictly related to the implicit, that is, unexplained choices made by respective scholars.

Both triple PRFs in P+ and W+ include redundant terms. Thus, port policy is part of port economics, as Heaver who used some long and blurring category names noted, while port operations is part of port management, which covers the day-to-day running or operations of ports, having no other research character than that of engineering or operations research, both being part of management functions or science. The same results in a large number of categories labeled 'policy and regulation', 'competition and competitiveness', and 'port planning and development' in P+, the latter category being also used with 'governance and reform' and 'management and strategy' by W+; and 'philosophy and epistemology' in Ng/ND. All redundancies are unnecessary duplications and wastes: the second term is part of, implied by or serves the first, for which reason one must be cut off, better the second than the first.

The nature of categories used by all scholars is either a pure appurtenance to a single PRF or a combination of 6 single PRFs mentioned above. Meanwhile, from 6 categories that Heaver called topics in port economics, P+, W+, and Ng/ND clearly kept trace of some categories with mainly modified labels, as ports’ industrial organization, port

competition, or port performance, dispersed some others in subcategories, as relationship of ports with ship costs, port cost and pricing, and maritime security, or even disappeared the rest like most of specialized studies, perhaps excepting labor issues.

P+, W+, and Ng/ND ranged subcategories as port industrial organization, competition, cooperation, performance, costs, pricing, security, etc., in various categories: 12 subcategories found in P+ are not in W+ and vice-versa. Key topics as port investments and clusters are forgotten. Ranking and position of categories create difficult information flows in P+, while W+ divided 8 categories in 2 government-based and 3 PA-/company-based, leaving the other 3 without paternity. Also, W+ considered industrial relations as part of management discipline, though it counts for 26% to port governance and 9% to port management, not including it at all, however, in their subcategories as P+.

SV and Heaver noted but not expanded the interrelations among categories. Scholars not included their former contributions in their categories, as Heaver with intra-port competition and port cooperation, or put subcategories only in 1 out of many possible categories, as Ng/ND putting 'port system' and 'port choice, competition ...' only into foreland, 'ports, intermodal transportation ...' into hinterland, and many real management problems into port and not into the triple PRF-like category 'port management, policy and governance'. Diagrams in P+ and W+ show missing links among certain categories: P+ linked 'port competition and competitiveness' only to 'terminal studies'; W+ did not link government- and PA-/company-based categories among them and loosely positioned those numbered 6-8.

Though differing significantly in labeling their PRFs and in the number and decades of their research papers selected, classifications results in P+, W+ and Ng/ND remain so close to each other, having 40 subcategories in P+ (2011), 38 in W+ and 38 issues in Ng/ND that curiously felt to compare his categorization with Heaver's (see §4.8).

4.9 *PRQE9: Peer review process - A personal experience*

This paper's first Author has a personal experience with the peer review process in his papers already accepted after being peer-reviewed in many globally renowned conferences like the World Conference on Transport Research [WCTR] and International Association of Maritime Economists [IAME] and locally known ones as the International Conference on Logistics and Sustainable Transport [ICLST] and [IMAM] International Maritime Association of Mediterranean, or in his multiple failures to publish his conference papers revised and extended in the renowned reviews as Transportation Research: Part A, B, and E [TRA, TRB, TRE], Maritime Policy & Management [MPM] and Transport Reviews [TR]. This subsection will recall some elements of these peer reviews, keeping out the name of persons involved for ethical issues, apart the unknown reviewers, but not their function, action and (missed) reaction as developed via email.

First, it is worth to distinguish the fact that only ICLST peer reviews have been structured, while all the rest was unstructured, at least by judging the answers provided, letting to the peer-reviewer's pure discretion the evaluation of papers submitted for publication. From the same Author's personal experience as a reviewer of ATRF conference papers and publishing houses as Elsevier and Cambridge Publishing reviewing book proposals or David Publishing Company reviewing journal papers, it results that all of these organisms use structured peer-reviews. However, even ICLST peer-review form contains questions like "Should the paper be extended or reduced?", whose answer yes or not is blurring the paper author if they should extend or reduce the paper volume.

Before addressing to various Elsevier's TRA-E journals, it is possible to use Elsevier's journal finder, by entering obligatorily the paper title and abstract, with two options: (1) refining the search by selecting up to three fields of research; and (2) limit the search to journals with open access options. For the paper on a contextual methodology to comprehensively conceptualizing ports as institutional and operational clusters, it was entered only obligatory and no optional information, to which data the Elsevier's system provides the following answer (Figure 2), with these matching probability rates of the proposed paper for submission to the suggested journal:

- Journal of Transport Geography: excellent (100% match). In fact, only one out of 8 contexts suggested by the proposed paper, namely the space context, matches to the suggested journal by Elsevier's system at the rate 1/8;
- Transport Policy: excellent (98% match). It was Author's choice to not be addressed to this journal;
- Research in Transportation Business & Management: excellent (98% match). It was Author's choice to not be addressed to this journal;
- Safety Science: excellent (92% match). In fact, the proposed paper has quite nothing to do with this journal;

- Transportation Research Part A: Policy and Practice: excellent (91% match). It is a long story that began since the first submission to this journal on 22 January 2017 (see below), after the proposed paper’s author submitted to TRE on 1 December 2016, by initiating another long unsuccessful story (see below);
- Transportation Research Procedia: excellent (85% match). In fact, the old version of the proposed paper accepted for presentation by and presented at WCTR 2016 was also published in this suggested journal since June 2017;
- Ocean & Coastal Management: excellent (78% match). The proposed paper has nothing to do with this journal;
- The Asian Journal of Shipping and Logistics: excellent (72% match). It was Author’s choice to not be addressed to this journal;
- Global Environmental Change: excellent (68% match). Attired by its high impact factor, the proposed paper’s author was addressed to both co-editors of this journal, having explained the results of Elsevier’s system, with the question: is your journal the perfect one for my article? One answered: “sorry, I do not think it is, try elsewhere”; the other wrote: “No. This journal puts high emphasis on 'environmental' changes”; and
- Tourism Management: excellent (65% match). The proposed paper has nothing to do with this journal.

The figure consists of two side-by-side screenshots of the Elsevier journal finder interface. Both screenshots show search results for the journal 'Transportation Research Part A: Policy and Practice'. The left screenshot shows a match score of 3.026, a CiteScore of 3.64, a review speed of 12 weeks, an acceptance rate of 23%, and a production speed of 3 weeks. The right screenshot shows a match score of 3.026, a CiteScore of 3.64, a review speed of 12 weeks, an acceptance rate of 23%, and a production speed of 3 weeks. Both screenshots show various metrics like CiteScore, Review speed, and Open access options.

Figure 2. The answer provided by Elsevier’s journal finder (Elsevier’s website: <https://journalfinder.elsevier.com/#results>).

The first address was made to TRE Editor-in-Chief [EIC] on 30 Nov 2016, asking the question: “May you ensure me for having found the right journal to publish my new paper?” The prompt answer was: “TRE does not consider any review papers (except for invited review papers). The topic of the paper is fit for TRE *if* this paper *is not a review paper*. However, it also depends on the methodology used and results. ... I am not quite sure if your paper fits in with the above conditions.” Next answer: “... you still have the right to submit it to the regular issue of TRE. I will handle it based on TRE publication criteria and standards.” Another address sent to the TRB EIC on 2 Dec 2016 was asking if the proposed paper fit with TRB; the prompt answer was: “I think your paper might better fit TRE.”

On 15 January 2017 the paper rejection has come, with the TRE EIC writing also: “I collected 2 reviewer reports with recommendations 'Reject' in common. As can be seen in the detailed comments, these reviewers had raised a certain number of major concerns indicating that the paper cannot meet the publication criteria of TRE. Overall, the reviewers pointed out two major concerns in this review round: (1) the paper’s writing quality, and (2) the paper’s weakness of clarifying its incremental contribution against related literature. Furthermore, ***TRE does not consider any descriptive and conceptual papers***, as argued by Reviewer 1. I have also read the paper, and had similar major concerns. ... Overall, I concur with the reviewers. Based on the review comments and TRE paper assessment criteria, I cannot help but reject the paper. We know that this may come as a disappointment, but *hope you can use the reviews to improve the paper*.”

After a reply to the above email, TRE EIC said: “***The paper does not fit with the style and taste of TRE***. ... my decision is based on not only reviewer comments but also my experience in handling and reviewing TRE papers. ... Nevertheless, I am still open-minded to welcome any of your excellent papers submitted to TRE in the future.”

After such a decision, the paper was revised and a certain number of changes have been made, resubmitting it on 6 April 2017 at TRE. Its EIC answered again with a rejection, writing: “After screening the paper, **I agree that the topic of the paper is interesting, and impressive.** Nevertheless, I have 3 major concerns. First, the *paper, including its topic and content, may not fit with the aim and scope of TRE.* My supporting evidence is that no related references published in TRE are cited for review and discussion to enhance clarifying that the paper is fit for the majority of TRE readers’ interests. Second, *TRE does not consider any non-analytical (just descriptive) papers, including review papers.* Third, *the research content of the paper may not meet the publication criteria of TRE. ...* Due to the above concerns, I decide not to send out the paper for further review.”

As it may be noted, the same person of TRE EIC, the first time sent the paper to 2 reviewers, rejected it hoping that both reviews can be used to improve the paper, being still open-minded to welcome any of my excellent papers submitted to TRE in future; the second time finds the topic interesting and impressive, but does not send the paper for review, deciding by himself that TRE does not consider review papers. TRE published 3 review papers at least: (1) Global supply chain design: A literature review and critique, in 41(6), 2005; (2) Information technology for competitive advantage within logistics and supply chains: a review, in 99, Mar 2017; and (3) Understanding big data analytics capabilities in supply chain management: Unravelling the issues, challenges and implications for practice, in TRE 114, June 2018. Furthermore, papers like 'Non-differentiated green product positioning: Roles of uncertainty and rationality', co-Authored by the EIC in 103, Jul 2017, see the light of publication in TRE with no relation at all to transport and logistics. What paper quality or matching criteria with TRE journal is talking about its EIC?

After his decision was replied, he answered by pointing on 5 points, where it is easy to see that he considers his role as an owner of the journal with which he can do anything. “My brief responses to your queries are summarized as follows: (1) Normally, TRE does not consider any paper revisions that had been reviewed and rejected by TRE for resubmissions to TRE. Authors are allowed to do so only after getting my approval. Normally, international academic rules have similar rules and ethics [Was not him to say hoping *you can use the reviews to improve the paper?* and *I am still open-minded to welcome any of your excellent papers submitted to TRE in future,* again written at the end of his last email]; (2) Each TR journals are independent of each other. The suggestions you got from any other EICs of TRs do not mean that the other journals should consider/accept. It depends on the EICs; (3) In some unusual cases, I may send papers out for review even if the papers did not well fit with the aim and scope of TRE. If recommendations from reviewers are positive, I may take into account for my final decisions [in our case, he did not accept to send the paper for review]. Nevertheless, it does not mean that the EIC's decision should be consistent with reviewers. Normally, I make my decisions based on my professional judgments and rich experiences in handling TRE papers. This also applies to your papers; (4) TRE rarely considers review papers. The exception is the case of invited review papers (invited by me); (5) As to the methodology you use, it can be impressive to other journals, but not TRE. You can check out TRE papers for my concern.”

In <https://www.journals.elsevier.com/transportation-research-part-a-policy-and-practice>, its website’s homepage, is written at first: “*Transportation Research: Part A* contains papers of general interest in all passenger and freight transportation modes: policy analysis, formulation and evaluation; planning; interaction with the political, socio-economic and physical environment; design, management and evaluation of transportation systems. Topics are approached from any discipline or perspective: economics, engineering, sociology, psychology, etc.” This clearly shows that the proposed paper is fitting to this journal, at a rate of 91% as for Elsevier’s system. Its section Guide for Authors, <https://www.elsevier.com/journals/transportation-research-part-a-policy-and-practice/0965-8564/guide-for-authors#20910>, Peer review subsection contains this unique paragraph: “This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles.”

While the paper was submitted on 22 January 2017, its reject arrived 3 months later, on 21 April 2017, with TRA Co-EIC decision based on two reviewer’s unstructured comments. After revising the paper according to comments made, another submission was made on 3 June 2017 to the TRA first Co-EIC who promptly rejected the paper on 5 June 2017, by saying that “I regret to inform you that **your manuscript does not fit within the scope of the journal** and we must therefore reject it. I am sorry to disappoint you with this decision and hope that you will be able to successfully submit your manuscript elsewhere. If you want to find an alternative, you can use our Journal Finder to search for other journals that could be better suited for publishing your manuscript.” The fit of the proposed paper

with the scope of TRA is excellent, says Elsevier's journal Finder, at the rate of 91%. Furthermore, the paper was submitted a third time on the same day of its reject to the TRA second EIC, to whom it was addressed the first time. It is still under review, more than 14 months after its third submission.

It is easy to note that TRA Co-EICs have different views on TRA scope and submitted papers to this journal. Also, the same Co-EIC has used only 3 months to answer the first submission by a reject, when asking more than 14 months for finding an answer that is not yet arrived to the second submission made to him.

Another version of the paper was submitted to MPM. On 18 Jan 2018 the first reject has come via email, based on 2 reviewer's unstructured comments (Figure 3). Reviewer 1 first wrote "The paper is very difficult to follow," then added: "Theories mobilized and the conceptual model are acceptable, the author declared in the abstract that a 5-stage contextual methodology examines the key models and the attributes of eight contexts, it was respected in the paper; The managerial contribution is very clear in the paper whereas the theoretical contribution is very poor; There is a contribution in the paper, but it is necessary that the author simplifies his reading and understanding; For the schedules, especially the Figure 9, the author needs to detail the interpretation of the cluster port model." Reviewer 2 said: "This study aims to explain how and why conceptualizing seaports comprehensively. In a systemic approach, a five-step contextual methodology examines the key models and attributes of eight interrelated seaport contexts condensed in two by a new framework. The proposed 6 step of A contextual methodology for the conceptualization of ports lack of theory and empirical support". And MPM EIC commented: "Both reviewers showed negative to the paper. Basically the paper is a review paper, and lack of theoretical and empirical support." By this saying, this MPM EIC is not realistic and does not understand what is writing. Not only has the reviewer 1 essentially made good evaluations with some critics, but no reviewer mentioned the reject; furthermore, a conceptual paper needs no necessarily empirical support but the references it uses to review; and, how can reviewers and himself say that the proposed paper has not theoretical support, when its support are the so many references reviewed, theories mobilized and the conceptual model, which are acceptable (said by reviewer 1 without any argument: on which basis a reviewer may freely accept or not the ideas of any author?)? In addition, clearly reviewers contradict each other as regards the theoretical support. Saying that the paper has a poor theoretical contribution as the reviewer 1 said is not at all the same with saying it lacks theoretical support as the reviewer 2 said. After making known these comments to MPM EIC, he agreed on 19 Jan for another round full review.

Referee report

General comments

- This paper presents what the author(s) call "a new methodology and framework to give an answer to how and why conceptualizing ports in a contextual and comprehensive way that models and defines ports as institutional and operational clusters". The new methodology consists of a five-step procedure.
- A first reaction is, another one! The port literature already produced quite a number of this type of conceptualization. They all refer to each other, or criticize each other. But it all remains theoretical, without any validation and/or empirical work. It also remains too much a collection of 'statements'. I often got the idea that I was reading another literature review, of, the more than 2 pages reference list.
- I also suggest to change the title, also making it more attractive. What is the most important element of this paper? The conceptualization? The clustering exercise? Methodological issues?

Detailed comments

- The first paragraph reads like a course in philosophy. I suggest to rewrite this introduction the way it should be: background, objective and research question(s), scope, expected output of the paper. It should be more than what now has been formulated as the first objective, i.e. to answer the question "How conceptualizing ports comprehensively?". It looks original, but it becomes too vague in the remainder of the paper.
- Page 2, section 2: "The five steps of the proposed procedure may be designated and structures as follows". Based on what? Alternatives?
- Page 3: "A fundamental question is: What characteristics must have a port concept to be considered a comprehensive unit of analysis?". The impression a reader gets is that the (port) concept seems to become more important than the unit to be researched, i.e. the port.
- Page 3: "This paper considers the port cluster as the most meaningful unit of analysis for individual-specific ports...". From a legal point of view? From a business-economical point of view? From a welfare point of view?
- Page 3: I would suggest not to refer to the Merriam-Webster dictionary in order to define the term 'context'.
- Some parts of section 4 read like an inventory. The author(s) should make clear what their own value added is.
- The author(s) themselves admit some 'arbitrarily selection'. I quote page 4: "These eight contexts arbitrarily selected, but necessarily for a port conceptualization, will be closely examined in a more than a century relevant port literature, showing their significance and issues.....".
- What should we learn out of section 4? It gives the impression of being structured, but it all remains a bit chaotic. Once again, make clear what the value added is!
- Too often 'non-arguments' have been used. An example page 6: "Haasendonck (2001), who first used the term, defined port cluster as an inter-organizational network of actors...". First of all: as long as I remember, the term 'port cluster' has been used the first time by the Dutch academician Hans Verhoeff (Erasmus University, Rotterdam, the former assistant of Prof. Kuisel). Secondly, this is absolutely no argument in a scientific reasoning. My advice: stick to important, scientific arguments.
- Page 8, third paragraph: please avoid quotes of 5-6 lines.
- Page 9: I would suggest to avoid referring too often to him- or herself as an author: "This paper's Author devised a property rights-based model for Gov-Ad-Man functions,". Not done!
- Table 4 refers to something published in 2008 on a topic that evolved extremely quickly. One should avoid that this paper becomes a collection of 'buzz words'. It has more to offer.
- Page 11: "The key question here is: Which between a paradigmatic approach and systemic conceptual box is most appropriate to establish the new comprehensive port concept represented by a new model and definition? Establishing 'as a target'? It all remains too much 'Tan pour tout'.
- Page 12: "However, Olivier and Slack did not present a new graphical model for nor redefine the port". I hope this is not a sin and/or an error?
- The conclusion (page 15) gives once again 'the process' of this paper, means a lot of repeating things already written before. I suggest to limit the conclusions to the own results and added value.

Reviewer: 2

Comments to the Author

The scientific contribution needs to be better highlighted and I do not believe that the proposed model and contextual framework corresponds achieved the aim of the paper.

The model looks like a stakeholder mapping in my view and the model needs much more explanations of each category.

The language and argumentation needs revision.

Editor's Comments to Author:

Associate Editor

Comments to Author:

I have collected two reviewers on this paper, both are quite negative on the paper. They pointed out that there are a number of this type of conceptualization papers already. They all refer to each other, or criticize each other. But it all remains theoretical, without any validation and/or empirical work. The five steps of the proposed procedure introduced in this paper is based on what? There is no strong empirical evidence and theoretical support, it is very hard for it to stand on its own feet.

Figure 3. Unstructured reports by 2 MPM reviewers and a comment by the Associate EIC (Communication with MPM EIC, April 2018).

While the general comments of the referee report (the MPM reviewer 1) have no critical views on the proposed paper, the second line notes: “A first reaction is: another one! The port literature already produced quite a number of this type of conceptualization. They all refer to each other, or criticize each other. But it all remains theoretical, without any validation and/or empirical work. It also remains too much a collection of ‘statements’. I often got the idea that I was reading another literature review, cf. the more than 2 pages reference list.”

How can a reviewer permit themselves to stop the interest of researchers in any kind of port issue or beyond? An example of theoretical discussion is sufficient to say stop to this kind of reviewers: there are #250 years since Adam Smith’s work on the wealth of nations that so many researchers are asking up today and will do in the future about what is economics? Also, there are so many researchers that feel and ask in many works: what is a port? But, unfortunately, there was no paper making any attempt to show how to proceed in conceptualizing ports before the proposed work, accepted in older versions in 3 conferences and unsuccessfully submitted to various journals. Not only this paper created a totally new procedure based on eight contexts for the most comprehensive view of ports, but also it provided a port definition and a first graphical presentation of port clusters. To close this comment, it is worth to recall Stigler’s (1982) Nobel memorial lecture in economics, entitled ‘Process and progress of economics’: “In every period of the active pursuit of a science, new ideas are continually being proposed. Any new idea – a new conceptualization of an existing problem, a new methodology, or the investigation of a new area – cannot be fully mastered, developed into the stage of a tentatively acceptable hypothesis, and exposed to empirical tests, without a large expenditure of time, intelligence, and research resources.” Better answer for reviewer 1 cannot be found.

In their detailed comments, reviewer 1 said: “The five steps of the proposed procedure may be designated and structures as follows”. Based on what? Alternatives?” May this reviewer imagine that any work created from scratch is called invention? It is a new procedure, as no one existed before. So, there are no alternatives. Future works may refer to this procedure as so many researchers in any field refer to others having not based their invention on others’ works. However, the devised procedure is based on 8 port contexts and models devised in each, if any, with 2 pages of more than a century references. Moreover, if any scholar must explain why the work is designated and structured as it is, this is changing the direction of initial work to another objective, but the paper space does not permit both.

Another comment is this: “The author(s) themselves admit some ‘arbitrarily selection’. I quote page 4: “These eight contexts arbitrarily selected, but necessarily for a port conceptualization, will be closely examined in a more than a century relevant port literature, showing their significance and issues.” It is the case to recall Heaver arguing: “Given the *interdependence* among aspects of port economics, identifying categories of topics involves *arbitrary* divisions. However, *for convenience*, developments and issues in port economics are discussed under six topics.” By explaining each port context significance, issues and models, the proposed paper was easily explaining their choice as related to the most comprehensive view of ports.

The last comment of reviewer 1 to be analyzed here is this: ““However, Olivier and Slack [OS] did not present a new graphical model for nor redefine the port”. I hope this is not a sin and/or an error?” What the reviewer 1 has quoted is said by OS (2006) by citing this expression of Bird (1984) right after their paper’s abstract: “A map of a seaport can be particularly misleading ...”, by which they explain in other words why have not given a graphical representation of the port that they not defined in their paper, if not in a passage of their paper’s abstract – The emergence of the port-operating TNC [transnational corporations] requires a fundamental epistemological shift in reconceptualising the port, from a single, fixed, spatial entity to a *network of terminals operating under a corporate logic* – which, as we all know, should be written inside a paper’s body to be taken in consideration. What OS did was reviewed in the proposed paper that recalled also other port conceptualizations on single or a few contexts.

The MPM reviewer 2 has made these comments: “The scientific contribution needs to be better highlighted and I do not believe that the proposed model and contextual framework corresponds achieved the aim of the paper. The model looks like a stakeholder mapping in my view and the model needs much more explanations of each category [Are personal beliefs and views arguments?]. The language and argumentation needs revision [this reviewer must read the MPM associate unique paragraph for English errors].” This reviewer made no detailed comments.

Finally, the MPM Associate Editor made their comments full of English errors: “I have collected 2 reviewers on this paper, both are quite negative on the paper. They pointed out that there are already a number of this type of conceptualization papers. They all refer to each other, or criticize each other. But it all remains theoretical, without any validation and/or empirical work. The five steps of the proposed procedure introduced in this paper is based on what? There is no strong empirical evidence and theoretical support, it is very hard for it to stand on its own feet.”

In short, the reviewer 1 based general comments on fake detailed comments, the reviewer 2 made fake general comments not based on detailed comments, while the MPM associate editor gathered some of their fake thoughts.

How can reviewers or (associate) editors of the so-called renowned journals play such a discredited game with non-structured reviews against a research work? A century literature knowledge and review, a new and so much argued methodology and framework showing how and why conceptualizing ports, as never made before, ending with a port definition and the unique model known for port clusters up to date. How can be possible that 3 older and much weaker versions of the proposed work are accepted in 3 reputed conferences as IMAM 2013, IAME 2015 and WCTR 2016? How is it possible that in WCTR 2016, the Chair of the SIG Maritime Transport and Ports, after having seen my paper presentation in an older version, has publicly suggested in the session conclusions and closure that “you must link this work to the 1990’s four papers of Richard Goss in MPM” that the late great man of port economics and management created together with IAME? By personal beliefs and views, no true arguments, even lying, and never mentioning any research element of quality herein analyzed, as totally ignored by all of them.

The proposed paper was submitted in another version to TR on 19 Apr 2018, but it has been unsubmitted the same day by the TR editorial office because it was too long, with 8500 instead of 7500 words. It is difficult to see how and why papers like those analyzed by this paper for their quality, as P+ (2010, 2011), find the necessary space for 2 versions and in a larger number of words and pages, and what may be the ideal criteria or characteristics that a paper must fulfill in order to be considered a case for more length in the same journal.

4.10 PRQE10: Accuracy of research results

Other than what is said in §4.5, the issues discussed in §4.6-8 closely relate to the accuracy of results obtained mainly by P+, W+, and Ng/ND.

5. Conclusion and further research

Research quality elements underlined by the specialized literature are reviewed, selected, and clustered in ten key elements and applied to the classification of port research fields, a decadal research calling for better quality in main methodological and categorization elements. These 10 key quality elements selected and listed here in the form of questions follow Litman’s good research elements, RAND’s standards of research quality and Damer’s fallacies in communicating faulty reasons: (1) Is research question or objective realized?; (2) Is research object defined?; (3) Is research subject or unit of analysis defined?; (4) Are references accurate?; (5) Are the methods of reference source selection and PRF classification adequate?; (6) Do research scholars acknowledge possible errors and contradictory evidences?; (7) Are various framework dimensions of research methodology respected or profitably used? (8) Are explained the key choices made, especially those related to port categorization elements as a special case of PRF classification? (9) Do peer reviews really search for research quality? and (10) Are research results accurate?

Scholars must respect fundamental values and principles of quality in defining the basic elements of research, use accurate and appropriate sources, acknowledge errors in previous versions and avoid contradictory evidences and claims, explain choices they make, and carefully select and apply methodological dimensions.

This paper’s Authors firmly believe that for the peer-review process to not become an excluding mechanism of good research and including mechanism of the so-called renowned authors whatever their research work quality be, all peer-reviewed journals and conferences should fully engage peer-review procedures based on research quality elements, be they attributes, characteristics, principles, or standards that should be structured, transparently declared, applied, and shown, in order that irresponsible reviewers, editors, conference SIG committees or whatever decision-makers may not favor or discriminate anyone.

Categorization elements show undefined PRFs, redundant labels in both triple PRFs and their categories, missed linked among categories, many subcategories placed within non similar categories or missing, altogether being similar. In any case, no paper tried to get more profound logical reasons on which basing their PRF classification.

Empirical findings in the subsections §4.1-10 call for further research. This paper should also be considered as an effort to call for future research on port research, which in the knowledge of its Authors does quite not exist. This future research may not only focus on the research papers’ elements in given port fields and issues, but also in the peer review process engaged in journals and conferences and its various aspects.

Acknowledgements

We are much indebted to our friends Xhorxhi Qirici and Sulejman Hoxha for their invaluable financial help.

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