

## ISSUES IN PORT POLICY: A LOOK BACK TO LOOK FORWARD

Mary R. Brooks, Dalhousie University  
&  
A. A. (Thanos Pallis), University of the Aegean

### Introduction

In early 2011, the authors will publish a book with Edward Elgar entitled *Classics in Port Policy and Management* (Brooks and Pallis, 2011). Its aims and scope are: (a) to include only port papers more than 10 years old, e.g., those published from 1950-2000; (b) to provide papers that are seminal to the current research appearing in port-focused journal articles; and (c) to identify appropriate reprints across the spectrum of port topics from one of two perspectives—port policy (focusing on the development of government policy and regulation as more and more governments introduced port reform throughout the 1980s and 1990s) and port management, e.g., planning and operations as conducted by port authorities and terminals.

In assembling the material for this project, we developed a very rich understanding of the history of research in port policy and management in the second half of the last century. We assembled a repository of 246 papers on the topic (see the Appendix of Brooks and Pallis, 2011). In addition, the PortEconomics group at the University of the Aegean has assembled a database of port papers written between 1997 and 2008. By combining these two databases, the authors present here a bibliographic analysis of both sets of literature, focusing on the contributions of Canadians to the port policy and management fields, and looking for themes of research in the 1950-2008 period as well as any lessons for those who might be contemplating the future of ports in Canada.

## Approach

To begin the thought process on this topic, we conducted a search of the 1950-1999 database, identifying those papers with either a Canadian author (see definition in the footnote to Table 1) or Canadian content or both. We used a typology, found in Table 1, to classify these papers. Then we used the PortStudies database (PortEconomics, 2011), to identify those papers that have any of the above characteristics and were published in the period 2000-8.

In Table 1, we identified 71 port articles published by Canadian authors in 24 different scholarly journals over the period 1950-2008. This research output represents the 13.4% of a total of 246 port studies that were published in scholarly journals during the second half of the 20<sup>th</sup> century (1950-1999) and 10.1% of the 376 relevant studies published in the first eight years of the 21<sup>st</sup> century (2000-08). In all cases, be the authors Canadian or not, and the subject Canadian or not, the growth in publications in the port field rose steadily from a paltry number in the first two decades examined to a significant field of endeavour by 2008. Neither Canadian scholars nor the Canadian port system as a study theme were absent from that development.

Table 2 provides an itemization of the Top 6 journals used for these 71 port articles. In line with the trend observed in this maturing research field, one scholarly journal, *Maritime Policy and Management*, published 24 (34%) of these papers, whereas 73% of all Canadian-authored papers appeared in six journals only. This is not inconsistent with the trend experienced for all port studies, where *Maritime Policy and Management* dominated, particularly as the field emerged in the 1990s.

It is worth taking some time to examine why this interest in Canadian contribution has emerged on our part. In 1993, Trevor Heaver of the University of British Columbia (UBC) published his inaugural address to the newly formed International Association of Maritime Economists.<sup>1</sup> In this address and subsequent paper, he noted that Bill Waters, also of UBC, had developed a full bibliography of economics

**Table 1: Typology of Port Studies**

	195 0-69	70s	80s	90s	2000 -08	Total
<b>CANADIAN* AUTHORS</b>						
Content not Canadian		2	4	11	17	<b>34</b>
Canadian port policy mentioned		0	1	2	11	<b>14</b>
Canadian port(s) in study set or used to illustrate a point		3	1	9	10	<b>23</b>
<b>Subtotal</b>	<b>0</b>	<b>5</b>	<b>6</b>	<b>22</b>	<b>38</b>	<b>71</b>
<b>NON-CANADIAN* AUTHORS</b>						
Canadian port policy mentioned				3	2	<b>5</b>
Canadian port(s) in study set or used to illustrate a point				2	9	<b>11</b>
Mentions Canada in trade or route context only		1	2	4	14	<b>21</b>
Canada mentioned in passing	2	1		1	14	<b>18</b>
<b>Subtotal</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>39</b>	<b>55</b>
<b>NO REFERENCE TO CANADA</b>	<b>13</b>	<b>26</b>	<b>62</b>	<b>96</b>	<b>299</b>	<b>499</b>
<b>TOTAL PAPERS (1950-2008)</b>	<b>15</b>	<b>33</b>	<b>70</b>	<b>128</b>	<b>376</b>	<b>622</b>

\* Defined as country of affiliation, not nationality of the author. If a Canadian citizen is working in Hong Kong at the time of publication, the paper is classified as non-Canadian.

research in the transport field, and that only 15 papers discussed ports in the period 1960–1987, six of which had been published in the *Journal of Transport Economics and Policy*, one of the seminal journals in the transport field. As we set out to undertake this research we were inspired by this UBC concern. The Waters (1972, 1988)

bibliography did not include *Maritime Policy and Management* and so we were spurred to not only identify all journals publishing port studies but to examine the role of both Canada's ports and policies as a topic and interest by Canadians in the port studies field.

**Table 2: Journal of Publication Used by Canadian Authors**

<b>Journal</b>	<b>Papers</b>
Maritime Policy and Management	24
Research in Transportation Economics	8
Journal of Transport Geography	7
Maritime Economics and Logistics	5
Tijdschrift voor Economische en Sociale Geografie	4
Geojournal	4
17 other journals	19

#### **Papers by Scholars in Canada**

The number of scholars affiliated with a Canadian institution is not small—30 different Canadian scholars wrote port papers over the period. The continuing research community (that is those publishing four or more papers in the port field) is, however, small with a cadre of seven scholars that have been involved in these publications (Slack (16), Brooks (9), McCalla (8), Ircha (6), Comtois (6), Hall (6), and Heaver (6)) producing 57 of the 71 papers.

Most recent port research is the output of collaboration between researchers. In total, 31 of the 71 articles are published by at least two authors. Only six of these collaborative papers were published before 2000. In 2000-08, 66% of the papers published by Canadian scholars were the result of collaboration with an author(s) (25 out of 38).

International research collaboration is an emergent trend in the port studies field; in the 2000-08 period, most of the papers published by Canadian scholars were the result of collaboration with an author(s) in another country. Canadian authors have collaborated with 16 non-Canadian authors from seven different countries. All but one of these

collaborators was affiliated with a European institution. These joint efforts have produced 19 different publications. Notably, 18 of these 19 research collaborations were published in 2000 or more recently. The *International Collaboration Ratio (ICR)* (that is, the ratio of papers resulting from international collaboration, compared to the total number of papers) in the case of Canada is 0.48, and that is remarkably higher than the overall ICR for the port studies published since 2000, which is 0.23 (Pallis *et al.*, 2010). At the same time, only four of 45 papers published by U.S. scholars were the result of an international collaboration. Canadian port researchers have distinguished their research style by having a broader degree of cooperation.

Not only have Canadians engaged in more international collaboration in their port research activity, but they have tended to be, in comparison with non-Canadian scholars, more involved in global studies (either proceeding to empirical or conceptual studies of global application), and less involved in the examination of a specific port or terminal (Table 3). This broader array of interest seems unusual when compared with experience in other parts of the world, where researchers are inspired by what happens at home and seek to understand it better through research. Even more interesting is that this broader interest has been persistent throughout the period, and not just in the last decade.

What was the specific thematic contribution of Canadian authors over the study period?

One dominant theme accounting for 11 of the 71 papers was spatial analysis of seaports, accompanied by nine papers on the role of ports in supply chains; enthusiasm seems to be more about ports in logistics chains and geographical analysis of ports than about terminal or port management. This is not surprising as the geographers led the charge in port studies in the early years, as noted by Brooks and Pallis (2011). Port competition was the focus of another six papers, as one would expect given the increasingly competitive nature of the port industry.

**Table 3: Approach and Unit of Analysis (Canadian Scholars)**

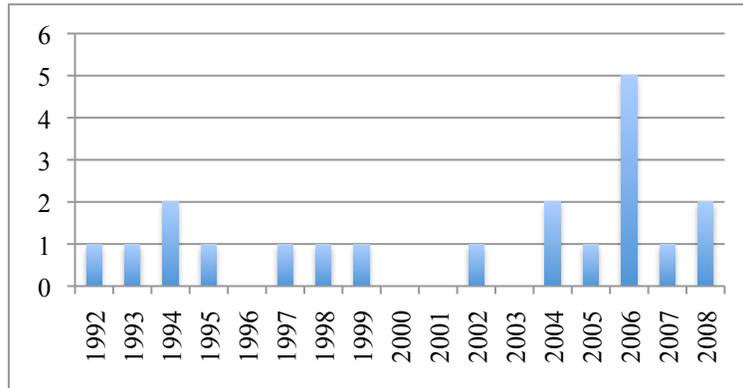
<b>Approach and Unit of Analysis</b>	<b>1950-1999</b>	<b>2000-2008</b>
<b>Global</b>	8	10
Large sample of ports with an international dimension	3	4
Pure theoretical	5	6
<b>Regional</b>	6	8
Comparison of $\geq 2$ port regions	0	1
Examination of a port region	6	7
<b>National</b>	8	12
Comparison of $\geq 2$ national port systems	2	5
Examination of a national port system	6	7
<b>Port-Specific</b>	11	8
International comparisons of $\geq 2$ ports	2	2
National comparisons of $\geq 2$ ports	4	2
Examination of a specific port	5	4
Examination of a terminal	0	0
<b>Total</b>	<b>33</b>	<b>38</b>

The most heavily researched area, with 24 of the 71 papers, was the area of port governance. Other than one paper published in 1982, the contribution appeared in the run-up to and after the discussion of the *National Marine Policy 1994* and again later after the review of the *Canada Marine Act, 1998* in 2003 (Figure 1). Not all governance papers focused on Canada (as some were comparative with other countries as well), the notable exception being Wang's (2004) paper on the governance of Shanghai's port.

At the other end of the spectrum, there appears to have been little interest within Canada on terminal studies. One could speculate that

the global terminal operators would provide fodder for studies on much larger terminals than those found in Canada. The imagination of the port community has focused those with an interest in terminals on the development of great transshipment hubs, like Gioia Tauro, Shenzhen, and Algeciras, while the local terminal studies focus on those that are the largest or the ones in developing countries, leaving Canadian terminals off the radar screen even for Canadian authors. The one exception is Heaver's (1972) article on ship size and turnaround time.

**Figure 1: Number of Governance Papers by Canadian Scholars 1992-2008**



Strategic management in ports has also been a field of limited interest for Canadian authors, with only three papers found in the time frame 1950-2008. This may be related to the nature of Canadian ports as the *Canada Marine Act, 1998* retained them as non-recourse government agencies and they have not, as a result, felt compelled to adopt fully private sector commercial practices (Brooks, 2007). On the other hand, it may simply reflect the fact that strategic management in ports has only gained traction as a port topic of global interest in the last decade (Brooks and Pallis, 2011).

In the middle are a smattering of studies on port pricing, port impact studies, port competition and environmental management of ports. Here the pattern of topics is not that dissimilar to those in the census of studies found in the PortStudies database (PortEconomics, 2011).

As citation statistics have a two-year lag after the paper has been published, we have been able to track the papers by Canadian scholars in the period 1997-2006 for their citation by papers in the PortStudies database up to 2008. Of the 31 Canadian-authored papers written in the period (a period overlapping but not the same as two periods in Table 1), 15 of the 31 have five or more citations and three have 10 or more citations. All three of the most widely cited papers are international collaborations where the content was global in two cases (Heaver *et al.*, 2000; Slack and Frémont, 2005) and about a port region—in this case Europe—for one (Heaver *et al.*, 2001).

For the same period, looking at all the papers in the database (Table 4), 72 of the 286 papers had five or more citations and 30 had 10 or more. In summary, this means that, while there is negligible difference between the impact of Canadian authored papers and those of their non-Canadian colleagues at the 10 or more citation level, more Canadian-authored papers have impact in the second tier. Furthermore, these impacts are likely to be understated as nine of the 15 papers were published in the 2004-2006 time frame and so their ultimate impact is not yet fully realized.

**Table 4. Citation Percentages for Papers 1997-2006**

Citation Category	Canadian Authored	All Port Papers
	Papers Number (%)	Number (%)
10 or more citations (incl. in 5 or more)	3 (9.7%)	30 (10.5%)
5 or more	15 (48.4%)	72 (25.2%)
	31	286

### Papers about Canada by Non-Canadian Scholars

As noted in Table 1, over the 1950-1999 period, non-Canadian scholars wrote 16 papers with Canadian content. The topical coverage was broad but the Canadian content was really quite marginal as the majority of these authors wrote of Canada with a trade or route focus (often because of our proximity to U.S. ports) or just mentioned Canada in passing.

From 2000-08, non-Canadian authors published an additional 39 papers with Canadian content, 18 by U.S. scholars (Table 5). Canadian ports are mentioned in eight port studies having a global focus—either empirical or conceptual. Two others focus on North America and examine container port capacity and productivity in the ports of the region, whereas seven examine the U.S. system and refer to Canada.

**Table 5: Types of Port Studies Authored by Canadians or Containing Canadian Content (2000-2008) Compared to All**

	Canadian Authors		Canadian Content		All Papers	
	No	%	No	%	No	%
Terminal studies	0	0%	2	5%	37	10%
Ports in transport and supply chains	6	12%	6	10%	52	14%
Port governance	15	20%	8	11%	74	20%
Port planning and development	6	12%	8	16%	49	13%
Port policy and regulation	1	2%	7	12%	58	15%
Port competition & competitiveness	2	3%	4	5%	77	20%
Spatial analysis of seaports	8	28%	5	17%	29	8%
<b>Total</b>	<b>38</b>	<b>10%</b>	<b>39</b>	<b>10%</b>	<b>376</b>	<b>100%</b>

As already discussed, peer-reviewed port papers written by Canadian scholars in first eight years of the 21<sup>st</sup> century tend to focus more on issues of port governance (20%) and the spatial analysis of seaports (28%) than other themes (Table 3). On the other hand, papers that refer to Canadian ports without being authored by Canadian scholars are more balanced during this period in terms of their content. There are almost equal numbers of papers that discuss Canadian ports when examining the role of ports in transport and supply chains or issues of port planning and development, as well as of studies examining governance or spatial issues.

Continuing to look at the 21st century (Table 5), there is a greater interest by others in terminal studies, port policy and regulation, and port competitiveness issues. The scholarly community has almost no empirical analysis or knowledge regarding any aspect of the development of terminals within Canadian ports. There are also few studies that illustrate, analyze, or measure factors of competition, competitiveness of the Canadian port system or examine related issues like port choice. Even the four studies that deal with such issues and have a reference to Canada do so very briefly without providing substantial analysis or empirical data on Canadian ports' competitiveness.

This is in considerable contrast to interest in Canada by non-Canadians prior to 2000. As noted in Table 1, there were only five papers with significant Canadian content at this time. Hoyle's (1992, 1999) work on waterfront redevelopment and community involvement in Canadian port cities accounted for two of the five. Two more were a result of Goss' interest in the diversity of port policies; as Richard Goss, the most prolific port scholar of the 20<sup>th</sup> century, had undertaken work for the Canadian Transport Commission and Transport Canada on port policy in the 1980s, he used Canadian ports to illustrate points in his analysis of port policies in two papers (Goss, 1990, 1999). The final paper in the set looked at implications that the North America Free Trade Agreement would have on Canadian ports (Heikkila, 1995). The continuing citation of the seminal works of Goss in particular has put Canadian content into

the global debate on port policy and governance of port assets within the larger port community, but only as a result of the one 1990 paper.

With the turn of the century, the international community of established port scholars and an increasing number of newcomers in the fields of port economics, management and policy, remain distant from the idea of using the Canadian port system, or perhaps a Canadian port alone, as part of their research samples. The numbers and themes of port studies increased substantially transforming a pre-paradigmatic research field (that is a research field lacking any coherence of research questions and themes), to an emerging one that is marked by an increased international collaboration and international empirical samples including ports in more than a country or port region (Pallis *et al.*, 2010). However, since 2000, Canadian ports are only sporadically included in the analysis, often as a result of studies focusing on developments in the U.S. (i.e., to discuss container port productivity competition between U.S. ports, multimodal transportation in U.S. coastal container shipping, or the absence of U.S. federal ports policy). Furthermore, a closer examination of studies mentioning Canada reveals a second group of studies that make an effort to conceptualize key developments at the world's major ports (i.e., structural changes in logistics port privatization, efficiency and competitiveness, marketing management, towage licensing). In this group, Canada is mentioned only because of reference to the work of Canadian scholars rather than because Canadian ports are among the units of analysis.

Two more studies by non-Canadians with Canadian content should be noted. Having a global theoretical perspective, one examines the presence of entry barriers in seaports, and the other the applicability of electronic markets to port governance; these papers discuss Canadian port policy issues but not due to international interest but because one of the co-authors was a visiting research scholar at Dalhousie University. One can conclude that ports in Canada are not on the agenda of modern port studies, and any real knowledge in recent years has been generated by views from within the country. When Canadian scholars go elsewhere, they do not necessarily include Canada in their scope of interest.

There is also that group of studies whereas non-Canadian authors mention Canada in a trade or route context only. Not surprisingly most of them examine U.S. ports with a few of them containing the phrase 'North American ports' in the title; a closer look finds no Canadian content. Canadian ports are hardly centre stage in the evolving of world ports studies.

#### **An Aside: CTRF Port Papers**

Conference papers and book chapters are excluded from the PortStudies and Classics databases, as the primary purpose of initial research was to focus on port papers published in peer-reviewed scholarly journals. Given the venue of this paper, however, it seems appropriate to take a few moments to examine the port papers published in CTRF *Proceedings*. As the first official *Proceedings* was published in 1983, we examined CTRF papers presented at conferences from 1983–2008. There were 22 papers in this period that would qualify for inclusion in either database had been published in a scholarly journal.<sup>2</sup> In keeping with our look at Canadian scholarly contribution, we eliminated four more as being by non-Canadian authors. Assuming that conference presentations are often the first step to eventual scholarly publication, we tracked the remaining 18 to see if they did eventually become published only to conclude that a few may have been published but not without substantive changes that converted them into different papers.

This last conclusion does not mean that CTRF's role in port studies development has not been a valuable one. Of the 18, several supported the CTRF role as a *forum* for discussion and debate. Topics were consistent with those in published journals, such as issues of governance (6), port competition and/or hinterlands (7), the use of port economic impact studies (2), the role of the port in its regions or its opportunities (2), or the relationship between ports and their urban communities (1). Given CTRF's attendees as being more broadly based than those of scholarly conferences, the debate between industry, academia and government plays a valuable role in idea development and policy formulation.

## **Conclusions and a Look Forward**

Looking to the past, we can say that Canadian scholars have been more active in the port policy and governance issues than they have been in port management and commercial port research. Their level of international collaboration and their impact has been solid and noteworthy. In recent years, however, while most of the world has focused on port competition and planning, and the role of ports in supply chains, interest in port issues in Canada has become limited to governance and ports as gateways and local engines of economic development. The interest in competitiveness seems noticeable by its absence.

Looking forward, the Canadian port research scene has become vulnerable. The majority of scholars already have retired (or are about to) and very little replacement of talent has occurred. There are few scholars and even fewer academic institutions interested in port research. Over the past 20 years, Canadian scholars reached out to collaborators elsewhere to develop ideas and research programs as a result of limited research support at home. There seem to be few new theses under way in the field in either Canada or the U.S., and we must ask ourselves if we have become bankers and miners with little interest in ports and economic development to secure Canada's role as a global trading nation. Will we have to import port expertise from Europe or Asia in future?

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## Endnotes

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<sup>1</sup> The address was to the newly formed organization in a restaurant in Lyon France, 2 July 1992 and published in Heaver (1993) the following year.

<sup>2</sup> Three more for a total of 25 had the word port in the title but would not meet the definition of a port study for inclusion, as they were about port state control, port drayage and inland ports.