“TRADE WITH SECURITY”:
HOW CANADA AND THE NETHERLANDS RELOCATED STATE FRONTIERS
THROUGH CIVIL AVIATION NETWORKS

by

Luigi Giuseppe Sulmona

M.A., The University of British Columbia, 1992

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

The Faculty of Graduate Studies

(Geography)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

April 2012

© Luigi Giuseppe Sulmona, 2012
Abstract

Since the 1980s, globalization has driven rapid civil aviation industry growth, creating enforcement issues for border control agencies and complicating passenger service. In response, airlines, airports, and the state jointly pursued trade facilitation, including Advanced Border Control (ABC) programs (i.e. Automated Border Kiosks, United States Preclearance Service, and Advanced Passenger Information Systems). As September 11, 2001 (9/11) attacks drove resurgent border control policy, the ABC programs became increasingly useful. Post-9/11 national security policy also had globalization implications, summarized in 2003 by the U.S. Ambassador to Canada, Paul Cellucci, as “security trumps trade”. This thesis therefore examines how ABC programs influenced the civil aviation industry, and the balance between trade and national security from 1985 to 2010, with case studies from Canada and the Netherlands. The methodology involved a review of the academic literature, relevant policy and corporate documents, and stakeholder interviews.

The research concludes that the civil aviation firms and border control agencies maintained continuous collaboration, despite political, business, and technical challenges. Relations did change post-9/11, especially in Canada with increased state leadership. The research thus contributes to understanding border control partnerships between agencies, airlines, and airports that worked towards a “trade with security” strategy. The research also identifies that this private and public sector coordination encouraged collaboration with the U.S. on trade and national security policies.

Conceptually, this multi-decade symbiotic state-firm “partnership” had material implications for trans-national relations by contributing to the “relocation of frontiers to
extra-territorial and virtual spaces”. The ABC program “remote-control” tools thus permit the re-working of spatial interaction, with the “re-location” of territory that redefines where the state may “perform” its sovereign duties. For globalization, this means firms contribute to “negating border controls, but not sovereign borders”, which paradoxically strengthens the ability for the state to protect national security interests through the “projection of sovereignty”.

These practices however need attention given the potential for human rights-related exclusion, along with unwarranted firm complexity. However, in looking towards a world where mobility and connectivity become paramount for societal participation, streamlined linkages enabled by sophisticated ABC programs can permit local spaces to better participate in global flows.
Preface

In compliance with University of British Columbia, Faculty of Graduate Studies requirements, the following section identifies the components of the research that was partly or wholly published in articles, was part of a collaboration, or required the approval of the UBC Research Ethics Boards.

The research project involved:

- Initial collaboration between the researcher and Dr. Ken Denike in establishing the overall research scope and project limits;
- Ongoing collaboration between the researcher and Dr. Edgington with regard to the research proposal and topic content;
- Ongoing collaboration between the researcher and Dr. Ken Denike, Dr. David Edgington, Dr. Elvin Wyly, and Dr. Antje Ellermann with regard to research methods and refining research project drafts; and,
- Obtaining from the UBC Office of Research Services, approval from the Behavioural Research Ethics Board based on the following Certificate Number H10-02019.
# Table of Contents

Abstract ......................................................................................................................... iii
Preface .......................................................................................................................... iv
Table of Contents .......................................................................................................... v
List of Tables ................................................................................................................. viii
List of Figures .............................................................................................................. ix
Glossary ......................................................................................................................... x
Acknowledgements ....................................................................................................... xiii

Part I  Research Introduction and Literature Review .................................................. 1

Chapter 1.  Introduction ............................................................................................... 1

1.1. Overview .............................................................................................................. 1
1.2. Research Scope .................................................................................................. 16
1.3. Research Hypothesis ......................................................................................... 24
1.4. Case Study Selection ......................................................................................... 32
1.5. Research Methodology ..................................................................................... 39
1.6. Research Contribution ...................................................................................... 47
1.7. Thesis Structure ................................................................................................. 49

Chapter 2.  Literature Review and Assessment ........................................................... 51

2.1. Introduction ........................................................................................................ 51
2.2. Globalization/Trade versus National Security Framework ............................... 55
2.3. Framework Assessment ..................................................................................... 57
2.4. Border Studies .................................................................................................. 66
2.5. Globalization, Trade, and National Borders ..................................................... 70
2.6. Civil Aviation Networks .................................................................................... 78
2.7. International Relations, Migration, and National Security .............................. 87
2.8. State And Private Sector Interaction ................................................................ 98
2.9. Literature Assessment Summary ....................................................................... 108

Part II  Research Topic Background and Case Study Assessment ............................. 112

Chapter 3.  Civil Aviation and ABC Program Background .......................................... 112

3.1. Introduction ....................................................................................................... 112
3.2. Research Topic Background ............................................................................. 112
3.3. Industry Wide Traffic Activity ......................................................................... 116
3.4. Case Study (Canada And Netherlands) Traffic Activity .................................... 118
3.5. Global Regulatory Framework ......................................................................... 120
3.6. Early ABC Program Developments (Pre-1985) ........................................... 127
   3.6.1. Civil Aviation ................................................................. 127
   3.6.2. ABC Programs ............................................................... 129
   3.7.2. Netherlands - Europe Developments ........................................... 142
   3.8.1. Canada-U.S. Developments ....................................................... 145
   3.8.2. Netherlands - Europe Developments ........................................... 156
3.9. Civil Aviation and ABC Program Summary .............................................. 158

Chapter 4. State-Firm Relationships ................................................................. 160
   4.1. Introduction ........................................................................... 160
   4.2. ABC Program Relationships ....................................................... 160
   4.3. State-Firm Relationship Summary .................................................. 164

Chapter 5. Supra-State and Global Private Sector Organizations ...................... 165
   5.1. Introduction ........................................................................... 165
   5.2. International Civil Aviation Organization (ICAO) .............................. 165
   5.3. International Criminal Police Organization (INTERPOL) .................. 174
   5.4. International Air Transport Association (IATA) ............................... 178
   5.5. Airport Council International (ACI) ............................................. 184
   5.6. Civil Aviation Industry Association .............................................. 188
   5.7. Supra-National Organization Summary ......................................... 192

Chapter 6. Canada Case Study ......................................................................... 194
   6.1. Introduction ........................................................................... 194
   6.2. Canada Border Services Agency (CBSA) ........................................ 194
   6.3. Canadian Department of Foreign Affairs and International Trade (DFAIT) ... 201
   6.4. Canada Public Sector Summary .................................................... 210
   6.5. Air Transport Association Of America (ATA) .................................... 212
   6.6. Air Canada (AC) ..................................................................... 217
   6.7. United Airlines (UA) ................................................................. 222
   6.8. Vancouver International Airport Authority (YVRAA) ....................... 226
   6.9. Toronto International Airport Authority (GTAA) .............................. 233
   6.10. Montreal International Airport Authority (ADMTL) ......................... 238
   6.11. Ottawa International Airport Authority (OMCIAA) ......................... 242
   6.12. Can/Am Border Trade Alliance (CABTA) ....................................... 246
   6.13. A Private Consultancy .................................................................. 257
   6.14. Former U.S. Ambassador to Canada .............................................. 262
   6.15. Canada Private Sector Interviews Summary .................................... 271
List of Tables

Table 1 ABC Program Definitions ................................................................. 3
Table 2 ABC Program Evolution (pre 1985 - 2010) ........................................ 115
Table 3 Canada–U.S. Air Route and Capacity Changes (1994 - 2005) ................ 119
Table 4 Major External Events Affecting Civil Aviation (1970 - 2010) .............. 128
Table 5 Major Biometric System Developments (1920 - 1980) ......................... 129
Table 6 Canada-U.S. Air Service Destination Changes (1994 - 2005) ............... 147
Table 7 E.U. ABK Programs (2009) ................................................................ 156
Table 8 ABC Program Case Study Summary .................................................... 327
List of Figures

Figure 1 Case Study Sites.......................................................... 20
Figure 2 Research Methodology .................................................. 39
Figure 3 Globalization versus National Security Framework ............ 54
Figure 4 ICAO Inter-State and State-Firm Decision Making Framework .......... 122
Figure 5 Amsterdam Airport Privium Kiosk........................................ 144
Figure 6 Civil Aviation Firm and Inter-State Relationships (1985 - 2010) ........... 161
Figure 7 Aruba Airport Departure Terminal Signage .......................... 312
Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/11</td>
<td>Terrorist attacks in the United States on September 11, 2001</td>
</tr>
<tr>
<td>ABC</td>
<td>Advanced Border Controls</td>
</tr>
<tr>
<td>ABK</td>
<td>Automated Border Kiosks</td>
</tr>
<tr>
<td>AC</td>
<td>Air Canada</td>
</tr>
<tr>
<td>ACI</td>
<td>Airports Council International</td>
</tr>
<tr>
<td>ADMTL</td>
<td>Aéroports de Montréal</td>
</tr>
<tr>
<td>AMS</td>
<td>Amsterdam International Airport [Schiphol]</td>
</tr>
<tr>
<td>APIS</td>
<td>Advanced Passenger Information System</td>
</tr>
<tr>
<td>AQQ</td>
<td>APIS Quick Query</td>
</tr>
<tr>
<td>ASA</td>
<td>Air Services Agreement</td>
</tr>
<tr>
<td>ATA</td>
<td>Air Transport Association of America</td>
</tr>
<tr>
<td>AUA</td>
<td>Aruba Airport Authority N.V.</td>
</tr>
<tr>
<td>CABTA</td>
<td>Can / Am Border Trade Alliance</td>
</tr>
<tr>
<td>CAC</td>
<td>Canada Airports Council</td>
</tr>
<tr>
<td>CANPASS</td>
<td>Canadian Passenger Accelerated Service System</td>
</tr>
<tr>
<td>CBA</td>
<td>Canadian Bar Association</td>
</tr>
<tr>
<td>CBSA</td>
<td>Canada Border Services Agency</td>
</tr>
<tr>
<td>CCRA</td>
<td>Canada Customs and Revenue Agency</td>
</tr>
<tr>
<td>CIC</td>
<td>Citizenship and Immigration Canada</td>
</tr>
<tr>
<td>CUFTA</td>
<td>Canada - United States Free Trade Agreement (1988)</td>
</tr>
<tr>
<td>DFAIT</td>
<td>Canada Department of Foreign Affairs and International Trade</td>
</tr>
<tr>
<td>DGHA</td>
<td>Directorate General Home Affairs</td>
</tr>
<tr>
<td>E.C.</td>
<td>European College of Commissioners</td>
</tr>
<tr>
<td>EDIFACT</td>
<td>Electronic Data Interchange for Administration, Commerce, and Transport (UN)</td>
</tr>
<tr>
<td>E-PIL</td>
<td>Electronic Primary Inspection Line</td>
</tr>
<tr>
<td>EPPS</td>
<td>Expedited Passenger Processing Services</td>
</tr>
<tr>
<td>ESTA</td>
<td>Electronic System for Travel Authorization [U.S.]</td>
</tr>
<tr>
<td>ETA</td>
<td>Electronic Travel Authorization (Australia)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>E.U.</td>
<td>European Union</td>
</tr>
<tr>
<td>FRONTEX</td>
<td>European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GTAA</td>
<td>Greater Toronto Airport Authority</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBSM</td>
<td>Integrated Border Security Model (E.U.)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization [UN]</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communications Technology</td>
</tr>
<tr>
<td>IND</td>
<td>Immigration and Naturalisation Service of the Netherlands</td>
</tr>
<tr>
<td>INS</td>
<td>Immigration and Naturalization Service [U.S.]</td>
</tr>
<tr>
<td>INTERPOL</td>
<td>International Criminal Police Organization</td>
</tr>
<tr>
<td>IRPA</td>
<td>Immigration and Refugee Protection Act [Canada]</td>
</tr>
<tr>
<td>IRTPA</td>
<td>Intelligence Reform and Terrorism Prevention Act [U.S.]</td>
</tr>
<tr>
<td>ITPC</td>
<td>In-Transit U.S. Preclearance</td>
</tr>
<tr>
<td>KLM</td>
<td>KLM Royal Dutch Airlines</td>
</tr>
<tr>
<td>MRTD</td>
<td>Machine Readable Travel Document</td>
</tr>
<tr>
<td>NDPC</td>
<td>Netherlands Data Protection Commission</td>
</tr>
<tr>
<td>NORAD</td>
<td>North American Aerospace Defence Command</td>
</tr>
<tr>
<td>OMCIIA</td>
<td>Ottawa Macdonald-Cartier International Airport Authority</td>
</tr>
<tr>
<td>OPEC</td>
<td>Organization of Petroleum Exporting Countries</td>
</tr>
<tr>
<td>OSA</td>
<td>Open-Skies Agreement</td>
</tr>
<tr>
<td>PNR</td>
<td>Passenger Name Record</td>
</tr>
<tr>
<td>PSA</td>
<td>Public Safety [and Emergency Preparedness] Act [Canada]</td>
</tr>
<tr>
<td>RFID</td>
<td>Radio Frequency Identification Detection</td>
</tr>
<tr>
<td>RNM</td>
<td>Royal Netherlands Marechaussee [military police]</td>
</tr>
<tr>
<td>RT</td>
<td>Registered Travelers</td>
</tr>
<tr>
<td>SAA</td>
<td>Schengen Agreement Area</td>
</tr>
<tr>
<td>SAA VIS</td>
<td>SAA Visa Information System</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>SARPs</td>
<td>Standards and Recommended Practices</td>
</tr>
<tr>
<td>SBA</td>
<td>Shared Border Accord (1995)</td>
</tr>
<tr>
<td>SBD</td>
<td>Smart Border Declaration (2001)</td>
</tr>
<tr>
<td>Schiphol</td>
<td>Amsterdam International Airport N.V.</td>
</tr>
<tr>
<td>SENTRI</td>
<td>Secure Electronic Network for Travelers Rapid Inspection (U.S.)</td>
</tr>
<tr>
<td>SPT</td>
<td>Simplifying Passenger Travel [IATA]</td>
</tr>
<tr>
<td>STB</td>
<td>Simplifying the Business [IATA]</td>
</tr>
<tr>
<td>TT</td>
<td>Trusted Traveler</td>
</tr>
<tr>
<td>UA</td>
<td>United Airlines</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>U.S.</td>
<td>United States of America</td>
</tr>
<tr>
<td>U.S. CBP</td>
<td>U.S. Customs and Border Protection</td>
</tr>
<tr>
<td>U.S. DHS</td>
<td>U.S. Department of Homeland Security</td>
</tr>
<tr>
<td>U.S. INS IG</td>
<td>U.S. Immigration Inspector General</td>
</tr>
<tr>
<td>USCS</td>
<td>U.S. Customs Service</td>
</tr>
<tr>
<td>USPC</td>
<td>U.S. Preclearance Service</td>
</tr>
<tr>
<td>US-VISIT</td>
<td>U.S. - Visitor and Immigrant Status Indicator Technology</td>
</tr>
<tr>
<td>WCN</td>
<td>World City Network</td>
</tr>
<tr>
<td>WHTI</td>
<td>Western Hemisphere Travel Initiative (U.S.)</td>
</tr>
<tr>
<td>WMD</td>
<td>Weapon of Mass Destruction</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
<tr>
<td>YOW</td>
<td>Ottawa (Macdonald-Cartier) International Airport</td>
</tr>
<tr>
<td>YUL</td>
<td>Montreal (Trudeau) International Airport</td>
</tr>
<tr>
<td>YVR</td>
<td>Vancouver International Airport</td>
</tr>
<tr>
<td>YVRAA</td>
<td>Vancouver International Airport Authority</td>
</tr>
<tr>
<td>YYZ</td>
<td>Toronto (Pearson) International Airport</td>
</tr>
</tbody>
</table>
Acknowledgements

The genesis for this research extends back more than two decades with inspiration from Mr. Gerry Bruno. This remarkable leader has enhanced the protection of civil society and encouraged economic development through transportation and border control innovation. This author much appreciates Mr. Bruno’s insight and persistence, with many thanks for his long-standing friendship and support.

In parallel, the development of this researcher’s intellectual capacities to undertake this work would simply not have been possible without ongoing guidance by Dr. Ken Denike. His mentoring relationship over the past twenty-seven years is reflective of Dr. Denike’s commitment to excellence in teaching and scholarship.

My appreciation is extended to the Supervisory Committee, especially Project Supervisor, Dr. David W. Edgington, along with Dr. Antje Ellermann and Dr. Elvin Wyly. Thanks also to Dr. Daniel Hiebert, Dr. Tae Oum, and Dr. Claude Comtois.

This project also required the valuable assistance in looking at the world in different ways; thus, my gratitude to Dr. Garland Chow, Dr. David Emerson, Dr. Trevor Heaver, Dr. Michael Tretheway, Dr. Bill Waters, as well as to Guy Brazeau, Claude Brunet, Kevin Caron, Deb Day, Brian Flagel, Christian Hansen, Doug Hibbins, Wayne McNeal, Natalie Meixner, Joe O’Gorman, Paul Ouimet, Jim Phillips, Henry Ristic, David Stewart, Perry Staniscia, Tony Testini, Chris Wiesinger, and Dr. Arianna Yakirov. My special thanks to Solomon Wong for his extensive support.

Finally, encouragement of family, friends, and other professional colleagues who contributed to preparing the manuscript was indispensable.
Part I  Research Introduction and Literature Review

Chapter 1.  Introduction

1.1. Overview

“Shippers are seeking international gateways that can provide services consistent with seamless logistics. This places pressure on public and private organizations, such as customs [agencies] and freight forwarders, to adopt competitive technologies and systems. Electronic data and integrated management practices enable significant improvement in border procedures. A comparison [in Canada, the Netherlands, the United Kingdom, and the United States] reveals strategic changes by custom [agencies] will enable more efficient logistics services. However, customs and [freight] forwarders are progressing at different rates”. (Heaver, 1992)

This prescient excerpt from, The Role of Customs Administration in the Structure and Efficiency of International Logistics: An International Comparison reflects on the importance of border control agencies and transportation firms working together in response to globalization and national security pressures. Although this particular article deals with the movement of goods and was prepared well before the terrorist attacks in the U.S. in 2001, the concepts identified by Heaver are informative for this thesis concerning how state-firm relations influence trans-national air passenger networks. As well, Heaver concludes that competitive advantages are available to those gateway service providers that collaborate with border control agencies to “get new infrastructure and services in place early”. Regrettably, the transportation geography literature has yet to address the spatial implications of the Advanced Border Control (ABC) programs.
As such, and central to this thesis is the role of globalization that stimulated a nearly 950% increase in air passenger traffic from 1945 to 2010 (Airbus, 2010). This increase occurred despite the shocks to the industry since formation in 1944 of the United Nations (UN) International Civil Aviation Organization (ICAO). For example, between 2002 and 2010 global air travel grew 45%, despite traffic reductions after the September 11th, 2001 (9/11) attacks that contributed to the downward trend associated with the failure of the “dot.com-bubble” earlier in 2001. Likewise, the 1995 Canada-U.S. “Open-Skies” treaty that partially liberated air service enabled a doubling of air travel between 1995 and 2005 (InterVISTAS Consulting Inc., 2005). Europe experienced similar air traffic increases (Groenewege, 2003). In parallel, states sold public assets to the private sector, including the sale of Air Canada in 1988 and KLM Dutch Airlines in 1998, in addition to gradual airport commercialization (Air Canada, 2010; KLM 2010).

The airlines and airports in the trade-dependent states of Canada and the Netherlands responded to these structural changes by adopting innovative Advanced Border Control (ABC) programs as detailed in Table 1. These collaborative initiatives involved trust-based relationships that Aoyama et al. (2007) explained are understudied in the logistics field. The thesis thus contributes to explaining why certain border control agencies accepted partnerships to enhance national security while facilitating air passenger travel in a globalizing world. However, the ABC programs are dependent on a “fluid” policy of immigration and national security controls that, when applied in a world of “space of flows” can mean accessibility for “certain” people and a space of barriers for “others”. Although the subject of this research is state-firm relations, geographers must account for these broader unsettling societal forces in explaining spatial relations.
Table 1 ABC Program Definitions

<table>
<thead>
<tr>
<th>United States Pre-Clearance Service (USPC)</th>
<th>• U.S. border control services offered in foreign airports for passengers departing by commercial airlines to U.S. destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Passenger Information Systems (APIS)</td>
<td>• Pre-journey transmission of passenger data from commercial airlines to border control agencies in order to support admissibility eligibility decisions</td>
</tr>
<tr>
<td>Automated Border Kiosks (ABK)</td>
<td>• Biometric-enabled techniques that permit self-service inspections supervised by traditional enforcement practices with some form of pre-enrolment</td>
</tr>
</tbody>
</table>


From a geographic perspective, these border control changes emphasize the notion that frontiers could be “relocated” in both space and time. Although steam-ship companies faced legislated pre-journey requirements commencing a century and half ago (Torpey, 2000), ABC programs enable a new phenomenon. In the modern era, sophisticated Information and Communications Technologies (ICT) permit private firms in partnership with border control agencies to both “virtualize” and “extra-territorialize” a core sovereign function. This thesis thus asserts that these tools permit states to reinforce control over their territorial frontiers, despite the warnings by Ohmae (1991) that globalization demanded “A Borderless World” paradigm. In the post-9/11 national security oriented environment, states have accepted “remote-control” (Zolberg, 2002) practices as important to both protect the state and to facilitate trade. As this thesis argues, in a sense, this evolving situation results in the “relocation of state frontiers” through the shift of border controls to non-territorial locations, such as to foreign airports, and/or into cyber-space through pre-journey traveler data transmissions.
As such, the ABC programs grew in parallel with the recent era of globalization and the melding of economic supply chains across territorial frontiers. For example, in 1988, in order to facilitate passenger travel from Japan to Canada, the civil aviation sector successfully pursued, with border control agencies in both countries, the establishment of the first pre-journey data-sharing program anywhere (Private Consultancy Interview, 2010). As Japanese travelers were viewed by the Canadian border control service as generally “low-risk”, this program involved the facsimile transmission of passenger manifests upon aircraft departure from Japanese airports, which during the long trans-Pacific flight were scrutinized by Canadian border control agencies for potential threats and to streamline traveler entry. This initiative, along with a parallel “green lane” pilot program for flights from Japan to select United States (U.S.) west coast major airports (e.g. Honolulu, Los Angeles, San Francisco) became the foundation for the Advanced Passenger Information System\(^1\) (APIS) which is currently adopted by numerous states (IATA Interview, 2010).

These early APIS programs were voluntary, requiring informed traveler consent. However, the APIS model evolved significantly and, in the post-9/11 era, involved mandatory access by the state to airline Passenger Name Record (PNR) databases. The situation now involves travelers providing pertinent details (e.g. passport) during reservations and/or through scrutiny during passenger check-in. The policy changes

\(^1\)APIS involves data transmission prior to flight departure including: Last name; First name; Middle name (if available); Valid date of birth; Gender; Document type; Document number; Document country of issuance; Document expiration date; Country of citizenship/nationality; Country of residence (arrival only); Address while in the United States (arrival only, visiting foreign nationals), (U.S. CBP, 2007).
related to 9/11 accelerated APIS program implementation, and, by 2006, the U.S. Customs and Border Protection (CBP) agency reported processing 87 million pre-journey records for passengers arriving from abroad by air (U.S. CBP, 2007).

Early changes to border control programs represent a facilitation-related phenomenon that became technology-enabled over time. For example, the U.S. Preclearance Service (USPC) program implementation in 1952 at the Toronto (Malton) Airport improved network reliability by avoiding arrival bottlenecks at U.S. airports. This involved the novel undertaking of relocating inspection staff to departure airports (i.e. U.S. Customs officers relocated to Canada), rather than the traditional practice of inspecting travelers on arrival, which had the early effect of “relocating state frontiers”.

The USPC program continued to grow serving other Canadian airports in addition to Bermuda and the Bahamas (i.e. Nassau and Freeport). The emergence of the North American trading space encouraged pursuit of USPC innovations (Vancouver International Airport Authority Interview, 2010). This led in 1999 to the Parliament of Canada adopting Bill S22, the Preclearance Act, which enabled the civil aviation industry to pursue international transit traffic destined for the U.S. (Karas, 2000).

In 2002, the U.S. CBP undertook to celebrate the fact that the USPC program had been in 50 years of continuous operation (i.e. including during the 9/11 period), with the following news release (2002) describing how travelers interfaced with the program:

“A preclearance inspection is the same inspection an individual would experience at any U.S. port of entry, except it is conducted on foreign territory (italics added). As a result, the individual does not have to undergo a U.S. inspection again upon arrival. Instead, the traveler merely arrives at a U.S. domestic terminal facility and either connects to a U.S. domestic flight or leaves the airport.
Passengers are afforded the benefits of making quick domestic and international connections and by having their checked luggage automatically transferred between flights by air carriers without being re-claimed. [Foreign] airports benefit by having more direct flights to U.S. destinations. Meanwhile, U.S. airports enjoy the benefit of reduced passenger delays in the international arrival area, [and airlines benefit from] increased services from [foreign] destinations”.

While this “fact” sheet contains a factual error, namely that travelers arriving at a U.S. port-of-entry from a USPC site remain subject to further inspection, the press release identifies how the program facilitated post-9/11 travel. In this regard, the operational scale is significant relative to overall U.S. air arrivals. In 2010, 27% and 26% of air traffic at the Toronto-Pearson Airport (YYZ) and the Vancouver International Airport (YVR) respectively, involved the USPC service (Greater Toronto Airport Authority, 2010; Vancouver International Airport Authority, 2010). Although the remaining USPC sites in Canada, the Caribbean, and the Netherlands (i.e. Aruba) have lower traffic levels, together, the combined level of offshore USPC inspection activity represents approximately 25% of total U.S. entries by air (U.S. CBP, 2011).

Subsequently, and of great importance to the thesis argument, as noted, 9/11 did not interrupt the USPC program trajectory, as new operations were established at airports in Halifax, Canada (2006), Limerick-Shannon (2009), and later in Dublin, Ireland (2010), encouraged by both community and civil aviation industry support (InterVISTAS Consulting Inc. Interview, 2010). Research interviewees indicated that the absence of the USPC program would have resulted in greater arrival airport congestion, higher operating costs, lower levels of customer service, and the increased risk of punitive fines for airlines for the carriage of improperly documented travelers.
As such, aviation facilitation\(^2\) is not incidental to strategy questions for the firms involved. Indeed, an alternative perspective has emerged that border controls represent a sizable interference in transport systems. In this regard, states may be pursuing a trade-deflection strategy through the deceitful application of “non-tariff barriers”. The UN Trade Facilitation Network identifies the myriad of problems that accompany trade when states do not pursue border control coordination. This might involve providing insufficient resources; limit the testing of new enforcement tools, failing to adopt international standards, lack of transparency in defining entry eligibility, avoiding coordination with other states, and the minimum political involvement in encouraging policies that serve both trade and national security interests (UN Global Facilitation Partnership, 2005). The research respondents and transport geography re-affirm these trade-inhibiting faults, as illustrated by Button et al. (2001) in *Handbook of Transport Systems*, as follows:

“In many cases the [border control] bottlenecks are…deliberate and deemed to be an effective way of meeting explicit non-transportation objectives. This does still, however, raise questions about the efficiency with which these border activities are conducted. In addition, border [control] constraints can serve as non-tariff barriers to trade of a less explicit type…[in response] there have been a number of efforts to reduce the impediments associated with border crossings. While formalization…is relatively new, there has been a steady movement to improve interoperability, interconnectivity, and inter-modality”. (p. 364)

\(^2\) Aviation Facilitation is defined as actions taken by governments, airlines, airports and others involved in civil aviation to standardize, simplify, and reduce government-imposed airport formalities. The main objectives are to improve efficiency for passengers and cargo service users and to reduce time and costs so to retain the advantage of speed inherent in air transport (ICAO Annex #9, 2005a).
However, the inherent advantages of the USPC program face hurdles. First, the program is expensive, especially concerning the cost of relocating inspection staff to airports in foreign nations. As well, the inspection throughput rate is low given the high-intensity physical engagement between the inspecting officer and the traveler. The bilateral arrangements between the host and inspecting state (e.g. Canada and the U.S.) are also challenging, requiring a high degree of political cooperation to achieve acceptance of a foreign state undertaking the inspection of travelers in local airports. However, these USPC program challenges are insufficient to discourage other states, such as the United Arab Emirates, from pursuit of favoured U.S. access, as follows:

“As part of a joint commitment to strengthen security and promote global trade and travel, Secretary Napolitano met with the Abu Dhabi Crown Prince to promote aviation security through UAE participation in the U.S. Immigration Advisory Program, as a first step toward the establishment of a passenger Pre-Clearance pilot program. While in the UAE, Secretary Napolitano also met with the UAE Minister of Interior to discuss the facilitation of legitimate trade and travel.” (U.S. DHS, 2011)

Alternatively, secure identity management systems, generally known as biometrics\(^3\), represented another form of change in border control programs, which also influenced the evolution of the civil aviation industry. These sophisticated techniques have involved Automated Border Kiosks (ABK), which have enabled a shift away from the traditional physical interaction with a border control officer, and toward an audit-

---

\(^3\)Biometrics are automated methods of recognizing a person based on a physiological or behavioural characteristic. Among the features measured are face, fingerprints, hand geometry, handwriting, iris, retinal, veins, and voice scans. Biometric technologies are becoming the foundation of an extensive array of highly secure identification and personal verification solutions. (Biometrics Consortium, 2010).
based compliance system. Initial ABK programs involved the U.S., Canada, and the Netherlands. For example, the airport in Vancouver (YVR) led a joint initiative, which in the mid-1990s enabled the Government of Canada to launch the trial Canadian Passenger Accelerated Service System (CANPASS).

Even from the early days, an optimistic view existed as to what the future might hold for these automated tools (CABTA Interview, 2010). Soon after 9/11, the U.S. and Canada agreed to link their ABK programs to permit simplified trans-border crossings. As of June 15, 2011, the joint Canada-U.S. NEXUS Air program had 560,000 Canadian citizen or permanent resident participants. These NEXUS travelers have access to a dedicated border control channel at Canadian airports for an enrolment fee of $50 USD/CAD for five years (follow-up interview CBSA, 2011).

Similarly, the CANPASS / NEXUS Land program, which uses a remote-enabled Radio Frequency Identification Detection (RFID) technology, has 3.4 million Canadian participants, representing about 10% of Canada’s population (ibid, 2011). A similar Dutch program continues to grow, and in 2009 was joined with the U.S. Global Entry ABK program (Amsterdam Schiphol Airport Interview, 2010).

The ABK programs also operate in places such as Germany, Hong Kong, and Australia (FRONTEX, 2010). Although the ABK programs represent the smallest participant volume by comparison to the APIS and USPC programs, together these systems have proven important in the practice of aviation facilitation. Nevertheless, these innovations question the future of traditional border controls. However incorrect, perceptions remain, even amongst informed academics, that these changes were driven by 9/11 policy changes. For example, Andreas (2005) observes:
"No longer able to quietly ignore [italics added] the border as was the case in the pre-9/11 era, U.S. and Canadian policymakers are now ambitiously trying to have it both ways: create a border that performs as a better security barrier and as a business-friendly economic bridge at the same time. To facilitate “low risk” border crossers, Canada and the U.S. are launching a joint NEXUS program for air travelers that includes iris biometric technology at Ottawa and Montreal airports” (p. 458).

Another common theme amongst the critical literature is the assertion that these types of facilitation tools lead to “racialized exclusion” (Inwood, 2010). According to Amoore and De Goede (2008), along with Ceyhan (2008) the introduction of “bio-political” techniques in the post-9/11 terrorist interdiction environment reflect a culture of “threat” in order enable the state to further enforce citizen control. Similarly, Salter (2006) refers to 9/11 as the catalyst for sophisticated identification and surveillance systems that extends the “relationship between the sovereign and the body”. Moreover, Crampton (2007a) in *The Bio-political Justification for Geo-surveillance* argues that the:

“bio-political use of geo-surveillance can create and sustain a politics of fear…the question is not one of identifying which areas [of society] are at risk but of seeing everything at risk, to different degrees, as measured against a background of what is normal. Geo-surveillance must be co-extensive with that risk; that is, everywhere. Blanket geo-surveillance is therefore a logical outcome of the state’s representation of its residents as risk factors who need to be controlled, modified, and logged”. (p. 389:391)

This literature provides no historical context on the pre-9/11 ABC program goals. Rather, rapid globalization caused pressures on border control agencies and civil aviation firms that encouraged a sophisticated technical response. At the same time, Pickles (1991) identified these techniques created profound implications for society through heightened “geo-veillance”. However, the expanse of critical literatures that
challenges the eminent practices of state control consistently ignores the consequences of unfettered access in the modern era that has led to trans-national coordination amongst states through the UN to thwart organized crime and mass murder by independent political actors. The typical criticism of the state invokes the following language by Crampton et al. (2007b) that makes no individual “excludable”, as follows:

“In this political activity we find the concerns of governmentality underlined by Foucault; abnormality, deviancy, moral imbecility, marriageability, patriotism, and so on the affect the quality of the “race”. (p. 232)

It is insufficient to define “race” as differences, without reflecting on the commonality of interests amongst humanity, and that “abnormality”, “deviancy”, and “immorality” are real characteristics of certain non-racialized individuals that have belligerent intent towards others, regardless of their ethnicity, gender, or faith. The naïve perspectives of organizations such as “No One Is Illegal” which promote utopianisms, such as “we struggle for a world …where people can move freely in order to live and flourish in justice and dignity” (2012), would in this researcher’s estimation make instead for a chaotic world. This organization’s critical perspective would prohibit interdiction of those “dangerous classes” that demonstrate their ability to ignore border control systems and cause mayhem amongst the very communities in need of protection.

As such, the families of the 329 passengers and crew on board the “Emperor Kanishka”, an Air India operated Boeing 747, along with two baggage handlers at the New Tokyo International Airport (Narita) have faced life-altering losses caused by simultaneous attacks on June 23, 1985. Only a flight delay at Vancouver airport prevented hundreds more from becoming victims to the world’s single most deadly civil
aviation-related terrorist event prior to 9/11. These attacks appear motivated by proponents of the Khalistan movement, whose belief system sanctioned murderous vengeance from India to the center of Canadian society (CBC, 2006).

Globally, this single act of egregious mass slaughter led to costly international conventions related to border controls and aviation security. Hence, the critical debate that denounces all forms of migration-securitization presumes that the state takes advantage of any provocation to expand its role in controlling society. Granted, states do abuse contingent situations to advance political agendas, however, trans-national mobility limitations at territorial frontiers represent more than “exclusionary” practices of an economic and/or racialized origin. Accordingly, and while acknowledging that the concerns raised in critical literature in regard to the potential for human rights abuse are valid, the absence of an integrated academic perspective that considers migration together with the real threats from trans-national non-state actors leaves a literature gap.

Moreover, these issues specifically generate questions concerning the political exigencies arising from 9/11. As such, academics have questioned whether these policy changes have rebalanced the globalization agenda away from a freer, or at least a less-impermeable border, and instead towards a policy framework that places national security interests as the highest priority. Paul Cellucci, former U.S. Ambassador to Canada at the time of 9/11 dramatically articulated this concept in the context that for the foreseeable future, regardless of political leanings of the day, the U.S. Administration, when confronted with policy choices, would make decisions based on the paradigm that “security trumps trade” (Cellucci, 2005). By contrast, this thesis
argues that in the 25 years up to 2010 Canada and the Netherlands have pursued a “trade with security” strategy that involved partnerships with the private sector to “relocate state frontiers” through virtual and extra-territorial means.

For Canada, with its long dependence on the U.S. for economic security, the reality was that the new, stark, post-9/11 worldview meant the government faced serious challenges. Sands (2006) noted the Canadian response was to seek security harmonization in a way that the Canadian public did not view as undermining sovereignty. The stakes for Canada in maintaining streamlined trade access were significant, as evident in the comments by the then Canadian Minister of Industry, David Emerson (Canada Ministry of Industry, 2005) as follows:

“Competitiveness will be driven by transportation and logistics systems. The Pacific Gateway initiative is an example of infrastructure investments, regulatory changes, and other initiatives that combine to create an integrated approach to ensuring that Canadian industry can participate in global supply chains. If you cannot play an intrinsic role in global supply chains in the economy today, in my opinion, you are at serious risk of being marginalized economically. So you can look at transportation and logistics as another key pillar, [italics added] along with technology, skills, and human resources” (Parliamentary Committee minutes).

Despite the well-publicized changes in U.S. border control priorities following 9/11, this research project documents a far more nuanced approach to state-firm and inter-state relations. The research findings also reveal a long-term set of collaborative strategies, developed over decades, intended to achieve both state national security objectives as well as permitting firms to enhance their trading strategies.

For example, the current U.S. and Canadian border control leaders reinforced this collaborative view (Canada Ministry of Public Safety, 2011), as follows:
“A commitment made by Minister Toews and Secretary Napolitano will see Canada and the U.S. working more closely with international partners, such as ICAO to enhance global supply chain security—how products are moved from suppliers to customers around the globe. Canada and the U.S. will continue to cooperate in global supply chain security initiatives designed to prevent terrorist exploitation, promote international security, and further facilitate legitimate trade and commerce to promote economic prosperity, stated Minister Toews.”

From a geographic perspective, the forces of globalization force new ways of looking at space, which become even more “uneven” and remarkably difficult to navigate for those travelers that lack the correct documentation, if they have any identity documents whatsoever (Torpey, 2000). As the political geographer Stuart Elden describes in Territory without Borders (2011) this does not mean “de-territorialisation”. Rather, for Stuart, “it is the concomitant processes of re-territorialisation—the constant making and remaking of territories—that should perhaps be more of the focus in our empirical and political studies” (p.1). Indeed, the very focus of this empirical research is to address how the uneven spaces at traditional frontiers are being “re-made” in virtual and extra-territorial locations. Hyndmann and Mountz (2008) demonstrate the damaging consequences that can apply to the traveler captured in “ambiguous spaces”, which in the case of Australia involves remote islands declared as non-territory for migrant processing purposes. Similar U.S. exclusion zones exist for foreign origin travelers connecting at Canadian airports who proceed through the In-Transit USPC service, but might find themselves barred from U.S. entry, and then must seek unwitting entry to Canada. This “unevenness of trans-national spaces” will become even more acute as the ABC programs in question further develop and become ubiquitous throughout the world’s civil aviation network.
Rapid air passenger expansion also has implications for spatial networks and the formulation of economic activity across space. In this regard, Keeling (1995) identified that “air networks and their associated infrastructure are the most visible manifestation of interactions between world cities… and airline links are an important component of a city’s aspirations to world city status”. This view is in keeping with Castells (1996) and the concept of “space of flows”. Furthermore, these arguments are consistent with World City theorists such as Sassen (1991) who identified the role of global cities as new service production centers that intrinsically depend on high quality transportation and telecommunication systems. Similarly, Taylor (2004) articulated the view that “contemporary globalization is premised upon new telecommunications and information technologies” (p. 24). In an early literature relevant to the topic, Taylor also refers to Keeling (1995) as useful in identifying broader World City Network (WCN) trajectories.

In this regard, civil aviation’s role in the “new economy” has become an important literature topic with Derudder and Witlox (2008) observing “the original paper by Keeling contained the most systematic overview of the usefulness of airline statistics in analyzing the World City Network”. As the expansion of ABC programs have contributed to globalization by facilitating trade by air, an obvious linkage exists between WCN theory and this unexplored topic of how these state territorial control methods have influenced civil aviation networks.

From a comparative basis, what makes this research different is the “focus” beyond the considerable literature attention on U.S. border control policy. In the U.S. case, the evolution of border control programs centers solely on the state. Instead, the case study assessment of Canada and the Netherlands provides insights into state-firm
relations that simply do not exist within the U.S. context. In this regard, the thesis only makes arguments applicable to Canada and the Netherlands. Thus, shifting the research focus to include U.S. advanced border control policy would be interesting, but few insights on the question of state-firm relations would be forthcoming.

Finally, the tension evident in these introductory remarks reflects the challenges emerging from the overwhelming forces of globalization that drive towards standardization and the “flattening” of differences, versus the ongoing attempt by states, communities, and locally “fixed” firms to retain differentiation for both economic and national security reasons. As identified by Grygiel (2006) in Great Powers and Geo-Political Change, considerable academic effort exists to negate “locality” and void the contingency of space – power relations. However, this researcher strongly agrees with the Grygiel’s view regarding the “premature death of geography”, as follows:

“…while the prevailing literature of international relations theory discounts the role of geography, I argue that geography continues to be a key variable shaping the grand strategy of states”. (p. 1)

1.2. Research Scope

In providing context to the research scope and without negating the tragedy of lost lives, the political and academic discourse that declares everything changed because of 9/11 is rhetoric worthy of challenge. No less a personage than Michael Kergin, who from 2000 to 2005 was Canada’s Ambassador to the U.S., proceeded, in a public address (Canada Ministry of Foreign Affairs, 2005a) just prior to his retirement from this post, to overturn “the cliché that security trumps economy had become [the]
currency of U.S. – Canada relations”. Moreover, Kergin pointed out that the Smart Border Declaration (SBD) signed three months to the day after 9/11 with 30 priorities for national security action was just part of a long-standing continuum of U.S. – Canada collaboration “made possible by the introduction of information technologies” (ibid, p. 2). More importantly, Canada’s High Representative from Canada to the U.S. noted that trade facilitation was already high on the agenda in response to significant trade expansion arising from the 1988 Canada–U.S. Free Trade Agreement (CUFTA) and the 1994 North American Free Trade Agreement (NAFTA) arrangements. In part, this research project supports debunking the myth that 9/11 initiated border control system changes, which instead commenced more than a decade earlier through state-firm collaboration involving new ways of “relocating state frontiers through civil aviation networks”.

This thesis also challenges the renewed attention in the international relations literature given to the notion that national security became an overwhelming imperative after 9/11, and thus was rightly the central debate for public policy makers. Instead, this thesis argues that despite the escalation of trans-national threats from both political and criminal sources, border control programs have more crucially adapted to the demands of globalization and trade expansion in the post-World War II era. These program changes have reflected more of a metaphorical interpretation of the “Borderless World” thesis (Ohmae, 1991) with the rapid flow of trade altering domestic economic policy.

Admittedly, evidence from both the Canada and the Netherlands case studies identified, in some cases, the dismantling of traditional border controls. In this regard, working with private firms, states were able to maintain sovereign control over territory
whilst facilitating trade and dealing with growing threats from trans-national origins. This view of globalization versus national security imperatives in the post-9/11 milieu remains untold.

As such, the research scope only addresses trans-national civil aviation activity. Notably, about 10% of all flights early in the study period involved a border crossing, which increased to nearly one-third of industry activity by 2010 (ICAO, 1988:2010). Thus, the project only assesses the involvement of major airlines that provide air services between nation states (e.g. Canada-U.S.) and major airports with Advanced Border Control (ABC) services (e.g. Aruba Dutch Antilles). As well, the research addresses a lengthy period (1985 to 2010) of civil aviation industry development.

The selection of Canada and the Netherlands is purposeful, as elaborated upon in Section 1.4. At this stage, it is simply worth noting that these states and their locally based civil aviation industry choose for strategic trade reasons to become front-runners in the early development of new methods for state control of international passenger flows. In addition, the scope of the research underlines the role of emerging virtual and/or extra-territorial border control tools, which have affected and continue to affect civil aviation firm strategy. Thus, this study is of particular interest in examining the novel forms of relations between the evolving modes of frontier control (Torpey, 2000) supported by the private sector. The decision to assess the civil aviation industry also recognized the legislation that requires this sector to act beyond the territorial frontier on behalf of the state. For example, airlines seeking entry to Canada are required to transport passengers from foreign origins in particular ways (e.g. checking passengers for valid travel documents before departure) in order to avoid non-compliance penalties.
(Canada Ministry of Justice, 2002). The civil aviation industry has also been compelled to build border control facilities at firm expense, rather than under the traditional public funding model used for other transportation modes. For example, compared to the private sector investment in international airports, the recent multi-million dollar investment in the truck crossing between Washington State and British Columbia (i.e. connecting I-5 / Hwy 99 respectively) was funded entirely by the public sector (Canada Ministry of Transport, 2009a).

Figure 1 identifies the investigation sites in this research that involved some form of state-firm partnership in support of aviation facilitation. This included the USPC and ABK programs in Canada (i.e. Montreal, Ottawa, Toronto, and Vancouver), and in the Netherlands (i.e. Amsterdam and Aruba). As the APIS program operates in virtual space, the mapped component of the ABC program is referential only.
Source: Created by and with permission from Eric Leinberger, University of British Columbia, 2012.
The first case study examines the ABC programs in Canada, with changes commencing in the 1980s arising from expanded trade inaugurated by the 1988 CUFTA and the 1994 NAFTA arrangements. Of note, Reisman (1985), the lead Canadian CUFTA negotiator, suggested that trade liberalization would lead to increased transport flows and generate border control pressures. The second case study, which assessed the Dutch ABC program evolution, is also instructive. For example, as the Netherlands prepared to devolve their overseas Caribbean territories, the opportunity arose to implement the USPC program at the Aruba International Airport (AUA). Subsequent to successful treaty negotiations with the U.S., the USPC program commenced in 1996, becoming an important catalyst for tourism from the U.S. to this Caribbean island (AUA Interview, 2010). Interestingly enough, the Schiphol Group that operates both Amsterdam and Aruba airport has a reputation amongst research respondents as a global leader in the ABC program field (Airports Council International Interview, 2010).

In both Canada and the Netherlands, the events of 9/11 re-emphasized the advantages of ABC programs. These circumstances encouraged bilateral partnerships with the U.S., and facilitated implementation of heightened national security protocols at shared territorial frontiers. Despite expanded border control regulations that followed 9/11, the facilitation contribution of ABC programs proved useful in offsetting concerns of “border thickening”, a reference made by political, and business commentators to the perceived increase in border delays and interference in routine trade activities. As explained in Part II, these requirements were not always coordinated between allied states. For example, states expanded APIS programs in ways that created inter-state conflict and state-firm issues, such as evident between the European Union (E.U.) and
the U.S. regarding the privacy of personal data for travelers destined for a U.S. airport. However, in the view of the private civil aviation firms interviewed, these circumstances did not prevent the continued cooperation between the various stakeholders over time.

Moreover, the research addresses how the state has remained dependent on civil aviation firms to implement virtual and extra-territorial border controls. At the same time, civil aviation firms require and have required state support for expanding trade linkages. In this regard, regional and local economic development interests also have had a role in this dialogue as the benefits of trade facilitation extend beyond the firm and include sub-national economies (McMaster and Nowak, 2007). While state-firm relations are the focus of this research, in a globalizing world it should not be surprising that territorial frontier controls have implications at various geographic scales. Part III addresses this multi-scalar perspective and relates to the “Borderless World” thesis by Ohmae (1991) and the changing role of the state in serving local and national needs.

For clarification, this research also relates to the growing “smart borders” literature, mainly reported on by political science and international studies scholars such as Andreas (2003), Walters (2006), and Salter (2006). Political geographers, except for Sparke (2006), have focussed on other aspects of border controls such as refugee exclusion (Hyndmann and Mountz, 2008); while economic geographers have focussed on how to overcome impediments in global supply chains (e.g. Dicken, 2007). As the conceptual focus of this thesis relates to the role of the private sector in facilitating access through border control processes, the “broader” strategies of the state remain relevant and pertinent.
Despite the literature gaps in how state-firm relations have evolved, the literature identified in Chapter 2 is useful in explaining the role of supra national and inter-state relations, together with related changes in border control practices. For example, the ICAO, the IATA, and other organizations were important in influencing border control policy at the nation state level. Furthermore, and as evident in Part II, globalization had enormous implications for the state, which traditionally had monopolistic control over its borders. While the "border-studies" literature well explains that in a globalizing world the state has little choice but to enhance its efforts towards inter-state cooperation at its frontiers, this research project identifies that in the case of Canada and the Netherlands, cooperation between the public sector and civil aviation firms was equally important.

Thus, this thesis argues, that these mutually reinforcing shifts were crucial to maintain a balance between national security interests and globalization forces. Nevertheless, national security policy did change after 9/11, which intensified border control practices even with traditional U.S. allies. This created a considerable challenge and thus the research undertakes to evaluate the validity of the famous "security trumps trade" quote by former U.S. Ambassador Cellucci by:

- providing ABC program chronology from inception during the 1980s (Chapter 3);
- explaining the relationship between supra-national organizations, states, and the private sector (Chapter 4); and
- assessing documents and interviews to show the influence of ABC programs in the period from 1985 to 2010 in Canada and the Netherlands (Chapter 5, 6, 7).

Finally, and despite the attention of both the public and private sectors to the ABC programs under study, the academic literature provides scant evidence that the
topic area is important. By contrast, the organizations interviewed for this thesis had well-considered views, both written and verbal, with highly experienced staff and consulting specialists available to support policy and corporate strategy development. Moreover, as the ABC programs serve significant volumes of travelers in new ways, this thesis will contribute to the understanding of how globalization and national security interests intertwine in the global “spaces of flows” (Castells, 1996).

1.3. Research Hypothesis

The research hypothesis fits within the economic geography sub-field related to spatial analysis of transportation systems. From a geography literature perspective, Black (2003) in *Transportation: A Geographical Analysis* identified a range of interesting questions that are relevant to the research project, including:

- Why networks are located in particular places?
- What types of flows occur over particular networks?
- How choices are made on which routes are preferred?
- Which places can be reached by the easiest method?
- What are the dominant routes and nodes in a network?
- Where activity is clustered on the network, and why?

In this regard, the societal consequences of “aero-mobility” (Adey, 2007) and the implications of ABC programs on civil aviation networks are interesting notions in themselves. However, the primary purpose of this thesis is to explain why the state and firms would collaborate to develop and implement such systems.
The context of “border studies” and the effects of globalization on “space” are also highly relevant as this particular form of mobility directly implicates inter-state relations and control of people movements across frontiers. As such, Friedman (1999:2000) identified these new ways of seeing the world as involving the important debate regarding the forces involved in creating the overarching level of global integration. Friedman also identified that such an interwoven fabric led to circumstances where local threats and opportunities were dependent on the degree of state and firm connectivity at a global level. Friedman further explained how the dynamic changes that enable “information technology, properly harnessed and liberally distributed, [would have] the power to erase not just geographical borders, but also human ones” (p. xvi). According to Harvey (1990), serious issues emerge from this “general speeding up of all kinds of events that intensify the turnover of capital and that implode on human existence as substantive levels of stress”, which is interpreted by Janelle (2001), as:

“The transcendence of global capital over local domains thrives on shortened time horizons and on the ability to eradicate distance as an inhibitor to exchange and dominance. The ability of capital to shift resources to different places easily, and often with impunity to the disruption of life at the local scale, suggests that time-space compression may denigrate the importance of place in human society. It is in the inherent mobility and speed of such possible actions that time-space compression challenges any attempts to define the time-space nature of society too rigidly”. (p.748)

Arguably from this researcher’s perspective, the globalization-driven changes observed by Friedman and Harvey depend on more than the “virtualization” of space, and the ability to interact in “real-time” through the spread of “fibre-optic” networks. In a world that were to become divided by impenetrable border controls that frustrated global
mobility, the “virtualization of power-relations” would become a fallacy (Boonstra, 2009) as the threat of power dissipates without the potential for real “performance”. By contrast, the facilitation of “fast [aviation] transport” systems (Castells, 1990) through advanced border control techniques permits the rapid physical presence of the “body” in far-flung locales to interact with local economic and societal forces. Thus, the “research problem” evident to the researcher is that the modern study of geography, which is intimately involved in explaining this type of spatial interaction, does not sufficiently explain the causes of the impediments (i.e. border controls) that retard global “circulation” and mobility, and the corresponding actions by the state and firms to overcome such “barriers”. Albeit, credit is due to Keeling, and others, for demonstrating that the civil aviation industry does matter in understanding globalization.

In any event, this thesis hypothesizes that the pioneering efforts to develop ABC programs to expand trade and protect national security interests represents a new form of state-firm relationship in Canada and the Netherlands that materially affects spatial relations across territorial frontiers. In order to determine the validity of this hypothesis, the research will seek to answer the following primary question:

“As states have pursued ABC programs which virtually and extra-territorially relocated frontier controls, did this affect the relationship between civil aviation firms and the state?"

Thus, the research aims to determine whether, and to what extent did the state adopted policies concerning ABC programs that affected (a) civil aviation industry development, and (b) international travel expansion, which caused (c) iterative policy and operational interaction with the private sector. The assessment of these questions
involves reviewing (a) state policy regarding ABC programs, and (b) firm strategy in dealing with border control imperatives.

The thesis considers other related topics that are especially relevant to the academic debate on the globalization of production and consumption, and to what degree these forces are diminishing state control over domestic policy (Glassman, 2011). No doubt exists that this is occurring; however, as firms seek markets and supplies beyond territorial boundaries, major efforts have been required to negotiate access to “international spaces”. In the case of civil aviation, and despite the global scope of this industry, no international access is possible without serious state intervention (Smith, 2000). In such non-local spaces, firms no longer could rely on the advantages arising from the “customs, practices, and strategies associated with navigating the domestic milieu”, and often sought state trade promotion and facilitation assistance (Helliwell, 2005).

This attention to how firms remain “dependent” on the state generates a further question of importance with regard to how ABC program development affects state-to-state relations. Although a secondary focus, the research routinely identified the importance and influence of effective inter-state relations for the implementation of ABC programs, especially as all program forms have some trans-national element, including the Automated Border Kiosks (ABK) when expanded to involve citizens of partner states. Thus, the influence on inter-state relations is central to the research query.

From a civil aviation industry perspective, maturing domestic markets demanded new strategies in order to engage with foreign opportunities that required favourable trade policy (Tretheway, 1994). Foreign expansion also necessitated a domestic policy
response at territorial frontiers. For states, higher traffic volumes placed pressure on budgetary constraints and, at the same time, sophisticated trans-national political and criminal threats were creating higher enforcement demands. It is worth noting that states did make explicit choices on how best to deal with these issues, and in the case of the U.S., solutions to border control problems remained mostly within the public sphere. For example, civil aviation firms in the U.S. were generally reactive to legislative directives rather than adopting a pro-active stance with mutual sharing of responsibilities for facilitating trans-national air travel. For this reason, the research addresses why airports and airlines in Canada and the Netherlands proceeded with a collaborative response, permitting the emergence of some degree of co-dependence between border control agencies and the civil aviation industry. As detailed in Part II, these public policy choices came into stark relief in the post-9/11 environment.

Although this thesis does not assess the advantages and disadvantages of the ABC programs, these systems do relate to broader debates of the role of the state in a globalizing world. Instead, and consistent with Friedman (2005) who asserted that Information and Computing Technologies (ICT) contributed to the “flattening of borders”, the ability for ABC programs to virtually and / or extra-territorially relocate borders should act as a catalyst for globalization. As such, with two decades of public and private sector efforts, the research will assess whether these programs in Canada and the Netherlands have made a material, or at least a symbolic difference, in reducing border-crossing impediments for the civil aviation industry.

Part III assesses these questions and those previously noted. As such, the research findings will provide a contribution to the transportation geography literature
regarding the relationship between the state and civil aviation firms. Moreover, for civil aviation firms in a globalizing world, these questions relate to how best to formulate corporate strategy when dealing with complex trade relations in the face of heightened national security policy. For Black, these impediments to trade represent another form of the "friction of distance" that impedes "spatial interaction" (ibid, p. 67:119).

However, another reason exists for underscoring the questions from Black that relate to the lack of attention to the role of border controls. As well, with a little attention to the sophisticated ICT based techniques under study, the transportation geography literature would become more robust and relevant to academic discourse. For example, Docherty et al. (2004) identified how states in the globalization era have pursued liberalization and deregulation of transport systems. However, this literature provides no reference to how the newly privatized firms interacted with border control agencies that previously occurred at the inter-departmental level (i.e. national security, finance, infrastructure, operations, etc.). Closely related to the research case studies, Dion et al. (2002) discussed how the world economy influenced the transfer of Canadian ports and airports to the private sector. The results of this research identify the challenge for these local organizations to participate in global trade but no reference exists to how border controls enabled or impeded access to foreign markets. Similarly, Goetz and Graham (2004) referred to the inter-relationships that interconnect stakeholder strategies in the differing U.S. and E.U. geopolitical contexts. However, and despite acknowledging the impacts of the post-9/11 crisis, the authors do not focus attention on border controls as relevant. In addition, the literature by O’Connor (2003) on the geography of airline passenger traffic only acknowledged the role of aircraft technology as the major
influence on travel networks and provided no explanation as to how airports were actually “relieving congestion”. Finally, while Weber and Williams (2001) conceptually identified that traditional barriers (i.e. borders) to trans-national interaction have influenced airline network development, this reflection remained empirically unexplored in the *Drivers of Long-Haul Air Transport Route Development* article. Chapter 2 contains further detailed examples of this literature gap.

The literature also does not appear to have engaged with how transportation systems influence globalization. For example, the Canadian Minister of Industry, David Emerson (Canadian Ministry of Industry, 2005) indicated that trade facilitation supported the growth for domestic enterprises. The view from Emerson was similar to Krugman (1991) who explains that effective trade systems depend on “good harbours”. As such, understanding the domestic milieu (Helliwell, 2005) is also highly relevant in the rapid period of globalization in North America given the 1994 NAFTA and the 1995 Canada-U.S. “Open Skies” agreement. As such, it is worth noting that from 1992 to 1997 Emerson held the post of Chief Executive Officer at the newly autonomous Vancouver International Airport Authority (YVRAA). In this pre-Ministerial private sector role, Emerson had considerable strategic influence in how the USPC service and ABK programs expanded at one of Canada’s major airports. Thus, the assertions by Emerson in his Ministerial role a decade later, on the need to overcome “trade frictions” through investment in transportation and ICT, was learned and certainly influenced state policy and its accompanying firm strategy, at least in the Canadian context.

Moreover, the continuing debate between Canadian and U.S. stakeholders on whether U.S. national security policies were causing “border thickening” makes this
project even more pertinent. For example, John Manley, the then Deputy Prime Minister responsible for Canada’s 9/11 response recently challenged the effectiveness of the 2001 “Smart Border Declaration” (SBD), which is detailed in Part II. Now in private life, Manley has made a number of public complaints, including:

“the smart border concept has been largely abandoned in favour of what some would call a ‘stupid border’…The security-transfixed U.S. government has been compromising economic security in favour of perceived-but unproven-threats to physical security on a daily basis. While Europe and Asia build economic blocs that are broader, more efficient and multinational, North American borders have become stickier, constituting barriers to trade and obstacles to efficiency for those companies whose businesses are integrated across the border”. (Manley, 2008)

The U.S. disputes this claim although acknowledging the continuing challenges in state efforts to facilitate trade flows, as identified in an unverified cable released by WikiLeaks from the former U.S. Ambassador to Canada, David Wilkins:

“When It Works (which It Usually Does), It Works Well; When It Doesn’t Work, It Is Awful: In general we found a disconnect between the rhetoric of a ‘thickening border’, in which longer lines and bureaucratic delays make border crossings more difficult, and the reality the border in most places runs smoothly. There are situations when the border simply can't handle the traffic volume, however.

Progress or Modernization Has Been Significant, but Piecemeal: There has been a vast amount of border modernization by both countries. There have also been significant advances in facilitating crossing and travel, like combining air, land, and sea components of the NEXUS trusted traveler program. But the progress has not been comprehensive and has rarely been part of a strategic plan, instead depending on local or regional initiatives”. (U.S. Department of State, 2007, based on Wikileaks release)

This degree of contingency was noted by Nicol and Gault (2005) as “while territory and power are embodied within borders, permeable borders do not negate
sovereignty but may, in fact, be instrumental in extending and revitalizing national legitimacy beyond the context of geographical territory” (p. 415). Thus, the question of trade enhancement versus national security is also relevant in Europe where the migration-securitization debate represents a source of major policy contention. While the European debate differs in scope from those dominant in North America, the essential question remains the same; to what degree should national security policies have precedent over the movement of people across frontiers. As such, the recent literature on “smart borders” represents an interesting and entirely new policy paradigm (Andreas, 2003). While the conceptual and empirical issues that arise need attention, they extend well beyond the scope of this project. For example, the 1995 Canada-U.S. Shared Border Accord (SBA) addresses only three of the 30 identified priorities.

In concluding this section, it is necessary to establish what the research would need to find to invalidate the hypothesis. As such, should the research conclude that civil aviation firms only responded to efforts to innovate border control systems arising from state legal directives, this situation would be consistent with the existing literature concerning the theory of the firm under regulation. Moreover, should this situation arise, the theorization of the “trade with security” paradigm would not be supportable.

1.4. Case Study Selection

The literature on border studies considers the case study approach as an acceptable and reliable method of enquiry. For example, political geographers Purcell
and Nevins (2005) explained the pre-9/11 border control changes in *Pushing the Boundary: State Restructuring, State Theory, and the Case of U.S.–Mexico Border Enforcement in the 1990s*. This useful literature traces the history of the U.S. engagement at the Mexican frontier primarily during the 1990s, both in terms of enforcement practice changes, and in terms of the political actions that created a broad tension between the citizenry and would-be Mexican migrants. Relevant for this research project are the insights that confirm that “border studies” benefit from both a longitudinal approach and a holistic analysis that addresses broad issues that come together at the territorial frontier, as noted:

“…one cannot understand the [U.S.] boundary build-up that took place in the 1990s without taking into consideration longer-term developments and the thinking that informed them” (p.221).

Similarly, Ackleson (2005) extended this longitudinal analysis in *Constructing Security on the U.S.–Mexico Border*, which addressed the period before and after 9/11. Thus, the research enquiry parallels the conclusions from Ackleson that suggests:

“This article has also demonstrated that the line between societal and state security in the U.S. has gradually been blurred over the past two decades, particularly vis-a-vis the U.S.–Mexico border. This trend continues, albeit in slightly different ways, in the post-9/11 period under concerns about ‘homeland’ security in the face of terrorism” (p.180).

However, the rationale for selecting the countries of Canada and the Netherlands relates to a different set of forces that were evident in the U.S. or in Australia, states also involved in early ABC program development. First, and as noted by Purcell and Nevins (2005), case selection must consider the broader economic and societal setting,
which have considerable parallels when considering Canadian and Dutch histories. As such, both states are highly trade dependent; both countries utilize their trading skills to build gateway networks; and both states have strategically adapted their trade and national security policies to the dominant influence of U.S. and E.U. neighbours. The other bi-national parallel is the shift from public to private operation of gateway transportation services, which became the catalyst for supporting the evolution of territorial frontier control practices.

By contrast, other states pursued different approaches in the face of globalization-wrought changes. As such, despite three decades of airline liberalization, all major U.S. airports remain controlled by the state. For example, the City of Atlanta owns and operates the world’s busiest airport, Atlanta-Hartsfield International (City of Atlanta, 2010). As well, U.S. airport involvement in ABC programs is incidental to the overall border control approach by the U.S. administration. Although Australia shares similar trade-dependent attributes, with the domestic airports and airlines have become fully private over the past few decades, but as in the U.S. it would appear no evidence exists that Australian firms pursued ABC program partnerships with the state.

Accordingly, the specific set of spatial-relations in Canada and the Netherlands reinforces why the events in these two states represent a unique form of private and public ABC program partnership, and thus forms the basis for the research hypothesis. This specific context also generates the question of whether ABC developments in these two states were representative of a larger pool of countries. As explained in detail in Part II, this was not the case as the respective border control agencies and civil aviation firms in these two trade-dependent states were leading pioneers of the ABC
programs under study. Part III assesses the implications for not just these two states and their airports and airlines, but the broader implications arising from 9/11.

 Granted, it would be inappropriate to leave the impression that other states did not contribute to ABC program development. The U.S. began early trials of the INSPASS program, were receptive of early APIS development, and long-supported the USPC program, although these efforts were pursued on a unilateral basis with border control agencies maintaining a considerable distance from the private sector. Moreover, and despite the importance of civil aviation and the breadth of leading technologies readily available in the U.S., it is somewhat surprising that the U.S. government did not involve the private sector in delivering ABC programs prior to 9/11 when trade facilitation was a higher priority. As identified in Part II, this is in contrast to the efforts of U.S. based airlines that were actively engaged in implementing the USPC program at Canadian airports more than 50 years ago. Similarly, during the 1990s, U.S. airlines were strong proponents of ABC program adoption elsewhere, but this did not translate into partnerships with the U.S. government before 9/11 and certainly not afterwards. In addition, the U.S. government sources technology and other support services from the private sector through typical procurement methods, but only in recent years has private sector funding emerged for border control infrastructure. For example, in 2007, the expansion of the congested San Ysidro land port-of-entry between California and Mexico involved a public-private partnership (California Department of Transport, 2007).

 As well, this view does not suggest that leading states like Australia, or other states such as Macau, the United Kingdom, the Republic of China (Taiwan), and the U.A.E have not participated in ABC programs or had no interest in this leading-edge
topic. Rather, these states did not follow the public-private sector partnership path of the Netherlands and Canada. Although this research project did not extensively study these other programs, the researcher is familiar with most ABC programs. In only one case did a similar level of private sector involvement become evident. Commencing in 2006, the private-sector oriented Dublin Airport Authority (DAA), which operates the major airports in Dublin and Limerick-Shannon, undertook to obtain approvals for the establishment of U.S. Preclearance Service (USPC).

For further elaboration, the original research scope included a complete assessment of this private-sector involvement in the Republic of Ireland. The rationale for including Ireland was similar to the Canadian and Dutch cases: that is, civil aviation firms in these small trade-dependent states pursued aviation facilitation to foster transnational activity. Accordingly, an early thesis draft contained the full Irish site research findings, but the document assessment and interviews conducted with the Dublin Airport Authority (DAA), British Airways, and the Irish government did not provide any particularly new insights. As well, since the USPC operations at the Shannon – Limerick and Dublin airports commenced towards the end of the research period, no comparison is possible with the pre-9/11 period. As a result, the final manuscript did not include the Ireland case study results.

In any event, where appropriate the case studies provide insights from other relevant actors. For example, while the Europe case study involves the Netherlands, the European Union (E.U.) itself has emerged in the post-9/11-era as an important player in the ABC program field (European Commission, 2009). As the European Commission (E.C.) is the supra-state organization responsible for continent-wide immigration policy,
extensive coordination occurs between member states. Accordingly, useful learning arises from the E.U. Schengen Agreement Area (SAA) program, which provides for relatively unobstructed [immigration] border controls between Austria, Estonia, Greece, Latvia, Slovakia, Belgium, Finland, Hungary, Lithuania, Norway, Slovenia, France, Italy, Spain, Germany, Netherlands, Luxembourg, Poland, Malta, Portugal, and Sweden, together with unaligned Switzerland. Moreover, the SAA already represents a significant form of extra-territorial border control as citizens and “third-country” nationals entering via participant E.U. member states may enter another participant state without further controls, subject to certain limited exceptions. Furthermore, it is important to understand the SAA Visa Information System (SAA VIS), which forms the backbone of border control to address common national security threats, given that the E.U. plans to implement an APIS program in the next few years (ibid, 2009).

Another case selection challenge dealt with addressing the interests of those states not in a leadership role but subject to the ABC programs of the case study states. In order to resolve this issue, the research engaged with the ICAO, which is a speciality UN agency responsible for advising member states on air policy, including facilitation. The ICAO also has delegated authority to manage international travel document standards and identity systems including biometric protocols. The ICAO is also responsible for regular revisions to a treaty on the research topic, known as “Facilitation Annex #9”. As the ICAO operates on a consensus basis among states, although heavily influenced by powerful members (i.e. U.S. and E.U.), contact with this organization provided a broad view of the topic. In addition, given the advisory ICAO structure, the
research interview and document assessment were confirmative rather than leading in nature.

The final case study selection question that needs attention is whether these particular Western trade-dependent states were reflective of circumstances where cross-border economic activity was less pertinent. The fact that few states pursued ABC programs prior to 9/11, regardless of trade inclination, somewhat answers this question. For example, the only major state, besides the U.S., that had a leading ABC program role prior to 9/11 was Australia. In this case, ABK and APIS initiatives were state-led, including pioneering efforts involving the development of a highly sophisticated pre-travel approval program in 1998, namely the Electronic Travel Authorization (ETA) program (Australia Department of Immigration and Citizenship, 2011). Australia has continued to develop sophisticated border control programs in the post-9/11 period, but Hyndman and Mountz (2004) explained that these efforts represent questionable practices to thwart undocumented immigrant arrivals from reaching Australian territory for processing. Furthermore, Australia pursued these innovations at the state level, with little direct industry involvement.

In summary, Canada and the Netherlands arguably represent a unique form of partnerships in a field that traditionally has exclusively been the realm of the state. This particular set of spatial circumstances warrants attention and explains the selection of the two states for intensive assessment.
1.5. **Research Methodology**

Figure 2 depicts the research methodology utilized to complete the thesis.

**Figure 2 Research Methodology**

"TRADE WITH SECURITY": HOW CANADA AND THE NETHERLANDS RELOCATED STATE FRONTIERS THROUGH CIVIL AVIATION NETWORKS
In keeping with the methodology depicted in the previous figure, the research project used qualitative, rather than quantitative reasoning to draw conclusions from the literature, interviews, and the documents reviewed to assess the research questions. According to *The Dictionary of Human Geography* (Johnson et al, 2000), the common theme of qualitative methods is a concern for a shared system of meaning. The primary goal of qualitative methods is to provide access to the “aspirations, motives, and power relationships that help shed light on how places, people, and events are made and represented” (ibid, p. 660). Qualitative reasoning also allows for more diversity in respondent responses and the flexibility to address any problems that arise out of the research process itself.

Likewise, it was important that the research method not rely on generic document reviews or mail-back survey responses from border control agencies, civil aviation firms, and other actors. For this reason, the traditional sample survey approach has far fewer benefits than a focused interview. Given the paucity of states and private firms involved in the two-decade long ABC program deployment, the research interview process was effective in interviewing nearly all relevant actors.

However, this method of interviewing elites has limitations (Berry, 2002). First, the agency of such individuals must not be discounted as this generates a powerful capacity to counter-act researcher enquires through their sophisticated understanding of the topic field. Thus, and in keeping with the admonitions from Herbert (2000) that requires attention to circumspect responses from interviewees, the analysis involved a process of cross-referencing the interview results with the publicly available documents.
Second, careful attention to the researcher’s professional engagement in this field required that the documentation of meeting and document requests with elites, which provides clarity and transparency of the research method. This approach proved successful as interviewees routinely requested clarity on the use of their inputs, which assisted the organization in determining its willingness to participate. For example, a prominent global private sector organization made an explicit decision to participate in a public manner after internal consultations, as follows:

“The questions are focused on a specific entity and its responsibilities/reactions to government mandates. Our responses to these questions would have to be based on impact on the [overall] industry - which is probably ok in context of the overall study. I will need to speak with XXXX concerning how our responses would be handled i.e. either quoted directly as XXX or under confidentiality clause. Should have decision tomorrow, as XXXX is out of the office today” (Interviewee Response, 2010).

Berry further identified the engagement criticism concerning “most commonly, elites in a particular institution are chosen at random” (2002, p.679). In order to address this problem, the process involved target selection of interviewees. For example, the interviews excluded certain elites from a state organization as these particular individuals had only recently become responsible for ABC programs and thus were unable to provide a reliable chronology and interpretation of historical events. Instead, as this organization has an extensive public record of its involvement in this field, the research involved a review of these documents (see bibliography for details). Admittedly, engagement with this organization would have been useful, but given the frequent staff turnover when combined with the wholesale re-organization post-9/11, it
undertaking interviews with these individuals for the sake of completeness appeared unproductive.

As well, even if a quantitative method had merit, a qualitative method for identifying key variables for further study would have been initially necessary. As such, a quantitative analysis involving passenger opinion surveys of experiences with ABC programs would not have addressed the relationship between the state and civil aviation firms, nor would it have identified the broader linkages between trade and national security. First, while CBSA reports high-levels of CANPASS participant satisfaction, these routine traveler surveys only involve operational questions relating to service reliability and benefits. The purpose of asking participants questions regarding the policy and corporate decisions involved in delivering this ABC program does not appear particularly useful. Second, the USPC program is subject to routine passenger surveys by airport authorities, although the results of such surveys are not public for competitive reasons. Third, as the Passenger Name Record (PNR) data is confidential and protected by national privacy laws in Canada and the Netherlands, the how airlines collect this information and the manner in which border control agencies use the PNR fields are not directly observable by the public.

Furthermore, the authoritative Global Airport Performance Benchmarking Project, authored by aviation management academics and led by Oum (2011) did not refer to ABC programs in its publicly available reports. Moreover, the comparison of “Total Factor Productivity” measures between airports is fraught with methodological challenges, and therefore comparisons of airport systems are useful only as general indicators of performance (Gillen and Lall, 2000). Consequently, and even if relevant
productivity data become available, which would assist in determining ABC program efficacy, this field of academic enquiry is not in keeping with the research hypothesis.

Even with these potential weaknesses in the research method, interestingly, the research results were generally consistent across the state agencies and civil aviation firms, despite the respondents being located on two different continents and reflecting on activities spanning more than 20 years. For further explanation, Appendix A contains the detailed methods used for the interviews of public and private sector experts.

Furthermore, to develop sufficiently reliable findings, the research method required engagement with field experts and analysis of relevant documents, such as archival materials. One of the goals of the qualitative interviews was to record the views of professionals who were chosen for their knowledge in the field. As the research topic is widely documented, another expectation from the interview process is to search for elaboration, recognizing that given the challenging world of border controls and civil aviation networks, important concepts may remain hidden in the document sources.

However, a drawback to the qualitative reasoning approach used in this research project was the need for the researcher to be aware of the drawbacks associated with social construction and the meaning of language, as well as the potential for misinterpretation of a holistic analysis approach. This was not a small problem given that part of the research touches on highly sensitive national security matters, which are not generally available for broad public discourse. Even more problematic is that since 9/11 states have adopted many undisclosed policy changes that remain opaque to public scrutiny to avoid adversaries from gaining insights into border control tactics.
It is also important to define the critical lens for interpreting the accumulated data. Without reiterating the main epistemologies, this research project attempted to engage with events as they unfolded over two decades on two continents. Thus, the learning is incremental and relational to broader changes in the theory of the state and the firm. Yet, with a primarily realist approach, understanding the weaknesses of this knowledge process is necessary. Accordingly, the interplay between events, mechanisms, and structures must account for global changes. For example, in assessing the national security related policies, especially post-9/11, the findings address the contested views of how advanced border controls create serious social justice issues, with views from Agamben (2004), Sparke (2006), Hyndmann and Mountz (2008), and others. As well, given the sensitive nature of the topic, some relevant materials may not have been available in the public domain, which will have created some analytical gaps.

Within this framework, the assessment of the Canadian and Dutch situation involved an overview of the relevant state and private sector organization’s background, an explanation of documents, and then a description of interview observations that indicate the degree of cooperation. Of note, the research results identified similarities within regional groupings (i.e. Europe compared to North America) which led to the thesis structure that follows. In particular, airline feedback generally supported the effectiveness of the ABC programs with a preference for global standardization. This contrasts with feedback from Dutch and Canadian airports interviewees who typically indicated that localized perspectives and programming efforts were vital in dealing with local market and supply circumstances. Thus, some difficulty existed in categorizing the interviews. This situation reflects the messy reality of the global level of international
airline (e.g. Air Canada, KLM) engagement, which is often in conflict with how firm
strategy might affect local airport hubs in their host state. While this view certainly fits
within modern globalization literature, the local versus global dichotomy has long
challenged civil aviation firm strategy.

The qualitative method also demands the exposition of the researcher’s own
views. Thus, for transparency purposes the manuscript routinely identifies the
professional involvement of the researcher in certain case study sites. In particular, this
researcher was involved as a civil aviation and ABC program professional from the mid-
1980s to just prior to 9/11, and on select projects in the post-9/11 era. For example, the
researcher was an advisor to the DAA in its efforts to obtain USPC approvals from the
Irish and U.S. governments.

As such, the question arises as to what degree does a “participant observer”,
defined as an assessor of events through direct engagement in the activities of study,
influence the outcomes of the research (Kawulich, 2005). This type of engagement is
not new and represents “a staple in anthropological studies, especially in ethnographic
studies, and has been used as a data collection method for over a century” (ibid, 2005).
According to Demunck and Sobo (1998) the advantages of this observatory approach
include access to particular cultures, rich descriptions and interpretations, flexibility in
dealing with contingent circumstances, and Dewalt and Dewalt (2002) “add that it
improves the quality of data collection and interpretation and facilitates the development
of new research questions or hypotheses” (p.8). Of course, this type of intimate
participation in research practice has disadvantages when undertaken by “biased
human[s] who serve as the instrument of data collection” (ibid). From an ethical
perspective, the foregoing identifies that no researcher can claim freedom from prejudice, or has the ability to remain at all times impartial in reporting on evidence that might be contrary to fundamental beliefs the researcher might hold. From this researcher’s perspective, transparency assists in the reporting process so that the construction of the analysis can become evident to others.

Moreover, the case study research is replicable to the degree that the documents used and interviewee accounts, in all but one case, are identifiable to other researchers. Finally, in the field of human geography, this type of “ethnographic” research represents an important source of data, and Herbert (2000) made the compelling case “For Ethnography”, which is the title for a recent article in *Progress in Human Geography*. This literature concludes with the following advice:

“This is not to say that ethnography is a flawless methodology. I have reviewed three potent and sometimes accurate criticisms leveled against ethnography. Yet these criticisms are not fatal if their admonitions are taken seriously; the careful ethnographer can acknowledge these pitfalls and produce work that simultaneously considers the micro and macro levels, work that informs us of both the particulars of a given group and the general, theoretical lessons the group can teach us”. (p.564)

Finally, Appendix A identifies the research methodology details. Appendix B contains the interview details with individual names protected from disclosure for privacy reasons. Appendix C contains the interview question set.
1.6. Research Contribution

The analysis of ABC programs over the last two decades has not been subject to academic analysis, and thus this research represents a unique contribution to the evolving geographies of air transportation systems and border studies. At a conceptual level, the research deals with important globalization-related questions with regard to the changing relationship between the state and the firm. As such, in this era of global connectivity the case studies demonstrate that during the early part of the research period, a cooperative and integrated approach existed between states and firms that enabled the mutual advancement of both national security and trade-facilitation objectives. The policy changes arising from 9/11 placed a much greater emphasis on the securitization of border controls. Despite this urgency to address national security weaknesses, the states and firms involved did not materially change policy and/or corporate strategy direction in a manner that negatively affected air passenger trade. These continued efforts towards civil aviation facilitation respected the migration - securitization policy priorities but within the context of preserving access to global supply chains and offshore markets. While many legitimate complaints have emerged regarding the implications of intensified border controls resulting in some loss of economic activity, in the grand scheme, the drivers of globalization remain largely intact.

The research also identified how the civil aviation firms and states involved adopted a “trade with security” strategy. The firms contacted for this research expressed the view that partnership efforts that addressed national security would also generate commercial advantages. For the state itself, national security and trade-facilitation
objectives demanded integration with the civil aviation firms that were principal international supply chain actors. As such, the Netherlands and Canada pursued a relatively balanced public policy that actively mitigated the potential for civil aviation networks to become conduits for illegitimate activity at their frontiers but in a manner that did not relinquish territorial sovereignty to the firms or allied states involved.

Finally, a few public and private sector leaders responded to the request for input on the final draft manuscript. The response from an industry association was that the results were “good” and well captured “the implications of leading-edge border control practices on air transport over the past few decades”. Another private sector professional responded that this work represented “a good essential finding and I support the conclusions”. This individual also suggested that the multi-national element of the topic would become increasingly important. As such, “just as multi-national industries transcend borders, so too does the [policy] instrument of border movements occur on bilateral or even multi-lateral basis, which will have enormous consequences for the economic relationship between multiple countries”. In addition, a public sector professional commented that in a globalized and multi-state world, it is important to reinforce the view that both civil aviation firms and states have an inherent interest in achieving the "trade with security” paradigm. These insightful remarks reiterate that in a globalized world the traditional notions of national security become integral to the progressive and outward looking formation of economic policy.
1.7. **Thesis Structure**

The structure of the thesis originally anticipated distinguishing between the various ABC programs as depicted in Table 1. However, this proved to be ineffective in practice when considering the interview results. While the interview questions dealt with specific ABC program topics, the responses from both state and private sector informants tended to refer to the totality of policy or corporate strategy. This perspective shift recognizes that state policy and corporate strategy are generally reflective of a consistent set of organizational goals, although as explained in the case study findings, some discrepancies did emerge during the discussions. As the interviewees were at the most senior level involved in the research topic, such individuals consistently demonstrated a broad and integrated view across their own responsibilities and those of related organizations. This breadth of insight became most apparent when considering how the various organizations dealt with the highly contentious topic of pre-journey data sharing (i.e. APIS) between firms and states. In considering the foregoing, the thesis structure is holistic, which is consistent with the theoretical concepts that acknowledge border controls, national security, and trade facilitation are not discrete and separate topics. While this complicates the analytical process, the result is a better understanding of how states and firms approach this complex topic.

Accordingly, Part I of this research project contains two chapters. Chapter 1 outlines the overall scope of the research project and explains the case study choices, followed by the research methodology. Chapter 2 identifies and assesses the relevant literature for framing this study and analyzing the various research-related documents,
along with interviews of private and public sector professionals. The literature itself
draws from “border studies”, economic globalization, transportation geography,
international relations, migration - security studies, and state-firm relations.

Part II includes the background overview and the case study research findings.
Chapter 3 provides a brief history of the civil aviation industry and the ABC programs
from prior to 1985 up until 2010. The subsequent four chapters explain the substantive
component of the research over these past few decades, which involve the assessment
of documents and interviews with key professionals at the supra-national level, in
Canada and in the Netherlands, and with a relevant analysis of border control policy in
the U.S. and the European Union.

Part III contains the research assessment (Chapter 8) and the thesis conclusions
(Chapter 9). This involves examining the implications for existing theories of relations
between the firm and the state, along with addressing the broader conceptual issues
that arise from the interplay between national security and forces of economic
globalization. The concluding chapter identifies future areas of study that are relevant
for academic attention, as well as for policy and corporate strategy consideration.

The research project also contains an extensive bibliography and appendices
that provide details of the research methodology.
Chapter 2. Literature Review and Assessment

2.1. Introduction

“It is possible to see that today’s most important geo-surveillant resources are bio-political technologies that include not only the well-known border fences…but a new generation of mapping technologies. The kind of security desired by the U.S. and other countries depends on a whole suite of digital spatial mapping and so-called locative technologies. These locative technologies allow people and objects to be geo-surveilled; that is, to be tracked, marked, noticed, and logged as they move from one place to another. It comprises RFID chips, location-based services, cell phones, GPS, and many other locative technologies. In effect, then, this adds a new dimension to surveillance (Crompton, 2007).

These new ABC program techniques are not without ethical controversy and reflect an expansion of efforts by the state to interdict and exclude various trans-national travelers, although what is routinely forgotten is that these interdiction efforts also apply to citizens, and not just the “foreign other”. Establishing such exclusionary practices in a manner that utilizes commercial traveler data to “spatially-track” travelers across both space and time is also problematic for the civil aviation industry. Indeed, the researcher would articulate a criticism of the state to the effect that the legislated use of private civil aviation assets for “remote-control” purposes (Zolberg, 2002) arguably reflects an “abuse of power” that could be eliminated through the full undertaking of border controls with travelers. This does not resolve the “bio-intensification” of technological control of citizens and others, but removes the potential for firms to purposefully, or otherwise, contribute to state encouraged “terror” (Bobbitt, 2008).
Thus, this chapter identifies and assesses the literature that can assist in understanding the linkages between civil aviation development and advanced border control strategies. Unfortunately, this particular topic is underdeveloped in the literature by comparison to traditional studies of “borders”, globalization, trade expansion, transportation, and trans-national migration.

Furthermore, while economic and political geography literature influences the research approach with particular attention to the transport geography sub-field, adherence to these academic perspectives would be insufficient to capture the breadth of issues related to civil aviation firm and border control agency relations. Thus, the thesis incorporates literature from a broader stream of thinking, as reflected within the emerging “border studies” field. This framework incorporates a range of relevant topics including inter-state relations, national security, and securitization - migration concepts, with much of the current literature addressing the challenging topic of how local places and regions are responding to powerful globalization forces (Brunet-Jailly, 2007).

However, the “border studies” debate, rich as it is, gives little attention to the actual modalities for crossing borders, and instead treats the transportation system as a subcutaneous element of the geographies that permit spatial interaction. Indeed, a core rationale for this project is to assess, at least in the civil aviation mode, the implications of advanced border control strategies for the evolution of transportation networks.

Admittedly, border studies have begun to deal with transportation. For example, this topic was dealt with in the “Border Regions in Transition” (BRIT) forum, which convened at the University of Geneva, in September 2011, for the first “Mobile Borders”
conference. Consistent with this researcher’s view that transportation is under studied
the conference poster included a relevant passage:

“The notion of mobile border embodies a larger dimension when considering the evolution of border functions the location of which is no longer constrained to the limits of national sovereignty areas, but on the contrary tend to be pushed back and forth, projected, multiplied, diffused. The control function can notably be disseminated within a national territory, and no longer fixed at its entry point. Biometric, numeric, or smart borders illustrate that tendency.

Borders are more and more organised as networks, therefore promoting the idea of reticular borders located within communication hubs. Whether in airports or train stations, or following mobile teams of officers, migration and transactions are now controlled through “mobile borders” (p. 2).

In this regard, Figure 3 provides an interesting structure to explain the diversity of literature pertaining to civil aviation and border control. The following section explains how this literature applies to the framework, followed by an assessment of the depicted relationship.
2.2. Globalization/Trade versus National Security Framework

The twin pillars in Figure 3 illustrate the careful balance between state and supra-state policy regimes that enables globalization and trade expansion (left-hand side), while at the same time recognizing often contradictory policies that serve national security interests (right-hand side). The figure also provides examples of the literature necessary to understand these complex arrangements between states, and with the firms conducting commerce between states.

With regard to the left-hand side globalization pillar, civil aviation must operate within a global trade framework established between states. In particular, the creation of the International Civil Aviation Organization (ICAO) provides states with economic and technical advice to permit global industry coordination. As explained in Chapter 3.4, the role of the ICAO has grown in importance because of the industry’s growth trajectory towards international markets. With the combination of globalized markets and supply-side liberalization, the literature (e.g. Porter, 1990; Ohmae, 1991) that addresses global economic policy change becomes relevant for this thesis. Within this context, states pursue advantageous commercial arrangements with other states through various trade agreements. In the case of civil aviation, this involves explicit treaties, known as “air bilaterals” that enable air service operations between states.

Therefore, important literature (e.g. McCallum, 1995; Helliwell, 1996) relevant to this topic relates to the potential impediments to these types of cross border movements. States must also make economic policy decisions on the manner in which firms compete in domestic markets, which is often the foundation for international
expansion. In this regard, the relevant literature (e.g. Keeling, 1995; Black, 2003) addresses the changing structure of civil aviation networks in global markets. Finally, each firm must adopt its own strategy and thus the literature related to relations between the state and the firm, becomes relevant (Mintzberg and Quinn, 1988).

The right-hand side pillar relates to state and supra-national security priorities, which of course have escalated in the post-9/11 period. Yet, the overall structure of national security relations between states and their influence on civil aviation firms has not changed in the modern era. In fact, Torpey (2000) identified that the 19th century steam-ship firms crossing the Atlantic organized on-board accommodation, in part, on how inspections would occur for arriving immigrants at U.S. ports-of-entry. As such, states have adopted trans-national arrangements for mutual security protections, and a large volume of literature (e.g. Slaughter, 2004; Brunet-Jailly, 2007) exists regarding the evolution of these inter-state agreements. These overarching frameworks provide constructive guidance (e.g. ICAO Facilitation Annex #9) for bilateral agreements on dealing with regional or even local security issues. Thus, a range of literature (e.g. Bobbitt, 2008; Napoleoni, 2008) exists on bi-national security arrangements that explain these global arrangements. Although states have many choices as to border control implementation practices, the literature (e.g. Andreas, 2003; Sands, 2006) primarily focuses on the inter-state relations rather than on private sector integration efforts. As the thesis denotes, some academics have begun a literature base (e.g. Koslowski, 2004c; Sparke, 2006) on this topic.

Finally, as indicated in Chapter 1, this research contributes to the literature regarding the new linkages between globalization and state choices regarding national
security. Thus, the introduction of ABC programs over the past two decades has become a central component in Figure 3 that involves new forms of state-firm partnerships. Moreover, while considerable literature exists on the role of the private sector in providing traditional state services, such as privatization of water systems (Yu and Danqing, 2005), this literature generally deals with commercial for-profit undertakings. For Canada and the Netherlands, engagement by the public sector with the private sector involves operational and facility planning co-dependence, rather than the traditional pursuit of alternative delivery mechanisms that deliver public cost saving benefits. Thus, the current literature does not address this type of interaction, nor explain why states would accept the delivery of core sovereignty-related services through such partnerships with civil aviation firms.

2.3. **Framework Assessment**

The most crucial element of the framework identified in Figure 3 relates to the “Firm Border Control Strategy” component that exists on the right-hand side at the base of the national security pillar. In contrast to the significant attention to migration-securitization issues in the literature, the occurrence of firm strategy, including an explicit national security policy objective, has not received attention in the literature as to why such a relationship between firms and states would evolve, and does not generally appear in other passenger transportation modes. This thesis argues that this phenomenon represents a new form of state-firm relation that has emerged in response to globalization opportunities. In the absence of these new relations, that were further
stimulated in the post-9/11 policy era, the balance inherent in Figure 3 becomes more susceptible to reaching a “tipping point” that can destabilize the equilibrium and tilt towards much heavier border control intervention in firm activities. As identified in Part II, a number of case study interviewees commented that the work done in building ABC program confidence in the previous decade had enormous benefits for Canada-U.S. relations, and permitted the early resumption of reasonably normal trading relations, albeit at a much higher level of border control scrutiny.

Fortunately, literature is emerging concerning how firms have adapted to conflicting inter-state policies. For example, in *Redefining global strategy: crossing borders in a world where differences still matter*, Ghemawat (2007) acknowledged that political and cultural boundaries matter in developing firm strategy. Furthermore, the changing forms of border control are challenging the traditional distinction between economic analyses of cross-border flows from the inter-state issues that emerge from border control functions. This involves two different sets of knowledge, the first involving economic theories and globalization, the second emphasizing the political at a national and trans-national level. As well, the ICT investments that enable the ABC programs have required intensive state-firm cooperation. For example, the international airlines identified in Part II noted that while APIS began as a voluntary data sharing arrangement to facilitate “low-risk” travelers, this became mandatory after 9/11. This in turn required significant alteration of the programming architecture of airline data systems developed for customer service purposes. These state controls now extend beyond airlines and have influence over choices made at the airport level, as many
airport operators are investing in sophisticated ICT systems to support airline operations that then become subject to state data handling mandates.

However, not all these changes have been problematic for firms. As will also be detailed in this thesis, state policy changes have contributed to the formation of strategic partnerships with civil aviation firms that viewed these technology-based innovations as an opportunity to facilitate trade through the reduction of border control impediments. Albeit, a challenge for this cross-disciplinary project is to avoid the literature review becoming a litany of diverse publications without indicating how the concepts fit together. As previously identified, this problem is not just contextual but must account for the evolving dynamic of state and firm ABC program interaction over the past few decades. Accordingly, to determine causality involves understanding and accounting for the numerous other changes in the form of relations between states, with travelers, together with transportation firms over this lengthy period. Nevertheless, these complex circumstances demonstrate that a static and unchallenged view of the historical literature would be problematic, and thus a modern literature should address how states and firms have cooperated to simultaneously enable civil aviation expansion, achieve national security objectives, and balance these frequently conflicting priorities through sophisticated trade facilitation practices.

In this regard, the relevant literature that explains civil aviation expansion involves economic geography and globalization theories that have enabled a liberalized private sector, controlled by public regulation. As noted in Chapter 1, these changes to the civil aviation industry became a catalyst for broad economic change, especially by enabling developing states and sub-national communities to better participate in trade.
This literature is generally robust, and thus the literature review will identify those issues that relate to the influence of ABC programs on trans-national economic activity.

As for the manner in which the state manages national security interests, including temporary migration that represents the vast majority of cross-border travelers, most of the relevant literature deals with inter-state relations policy. However, little information exists on the role of virtual and/or extra-territorial border controls in influencing transportation firm strategy. Accordingly, this component of the literature review draws on related topics to assist in formulating sound perspectives.

The third element of the literature involves understanding the choices available to states and firms to achieve their objectives, which for both parties involve facilitation. As such, the literature is replete with important 9/11 related policy changes that prompted heightened territorial scrutiny, and created serious consequences, arising from widespread adoption of national security mindsets by Western policy-makers. As such, this thesis does not argue that this literature is unimportant, or that 9/11 was nothing short of a “watershed” event that will alter the course of global society for the near future. Instead, from this researcher’s perspective, what is of interest here is the reality that the 9/11 tragedy brought to light major gaps in the national security analysis and the resulting policy formulations introduced to deal with trans-national non-state actors that arose during the rapid era of globalization. This view is not new, espoused most notably by none other than Richard Clarke, the Special Counter-Terrorism Advisor to President G.W. Bush at the time of 9/11. In this regard, Ward (2004) reports that:
“In Against All Enemies...Clarke recounts how the U.S. Administration was asleep at the switch, not taking proper stock of repeated warnings or those of the C.I.A., which that summer was receiving escalating intelligence reports of Al-Qaeda activity. In Spring 2001, Clarke sent [Secretary] Rice and N.S.C. [National Security Council] an e-mail saying Al-Qaeda “was trying to kill Americans, to have hundreds of dead in the streets of America”.

Furthermore, investigating the evolving co-dependence between civil aviation firms and trade-dependent states is useful in understanding how states can maintain the balance between national security and trade expansion goals. For example, Potter and Biukovi (2011) provided a contemporary assessment of trade mediation literature in Globalization and Local Adaptation in International Trade Law. The foreword by Potter deals with relevant international commercial law matters, and provides a promising reference to the importance of “trans-boundary transportation” (ibid, p. 9) in resolving the challenges from globalization at the local level. The Canadian Airports Council expressed a similar view that border control agencies “privilege” resources towards traditional gateways at the expense of smaller communities. This thesis therefore argues that an entirely new border control paradigm can emerge through the adoption of Information and Communication Technology (ICT) as a component of the broader “Smart Border” policy imperative. As such, ABC program tools can eliminate economically unfair disparities between historically endowed international gateways and emergent local centers of innovation and creativity that require direct access to “spaces of flows” without the enormous friction caused by intermediary transport nodes.

From an empirical perspective, Part II addresses this issue, and explains the critical role the International Civil Aviation Organization (ICAO) plays as a tool for
mediating the challenges of inter-state border control conflicts, although positive state-firm relations represent the dominant mode of cooperation in the case studies. However, Part II also identifies major differences within the civil aviation industry with airlines tending to prefer border control harmonization at the global level, while local serving airports generally must focus on the needs of nearby travel markets.

In considering how trade and national security forces influence each other, from a conceptual perspective, two principal forms of power emerge from examining these inter-linked policy arrangements. The first involves economic interaction driven by globalization efforts, and the second deals with national security interfaces between states. On the economic side of the scale, the focus is on globalization as liberalization enables firms to become oriented towards trans-national forms of commerce. These arrangements require trade agreements between states that permit the efficient functioning of commercial transactions for airlines and airports across territorial frontiers. In the modern era, ICT techniques have become the functional enablers of these types of spatial interaction that permit civil aviation firms a global reach.

A similar pattern exists with national security objectives that involve international transportation coordinated at the level of the UN and other related inter-state institutions (e.g. INTERPOL, NATO). These arrangements can involve formal multi-state agreements including conventions on halting the narcotics trade, the prevention of human smuggling, terrorist detection, and countering illicit WMD transport (i.e. Weapons of Mass Destruction including radiological, chemical, and biological munitions). Slaughter (2004) indicated that these formal agreements often arise from historical

62
informal arrangements that evolve over time between professionals working across organizational divides, rather than from state-to-state negotiations alone.

However, the national security arrangements identified in Figure 3 are not typical of how states address trans-national threats at other frontiers. Although the state retains and implements most aspects of border control policy, in the air transportation sector the state has developed a high degree of dependence on civil aviation firms to provide information and facilities that have traditionally been state functions. As noted in Chapter 1, regulatory requirements exist for private firms to develop strategies and implement components of border control functions. Invariably, the ability of ICT networks to displace border controls to virtual and extra-territorial locations has enabled states to act through private assets, generally without compensation.

In further explaining Figure 3, and despite the supra-state level of aviation policy cooperation, this has not necessarily manifested itself in effective integration of national security and trade policies. Instead, competing pressures have become evident. On one side of the scale, states suppress threats at territorial frontiers through rigorous inspection protocols that in the past two decades have become virtual and/or extra-territorial. On the other hand, trade-oriented states have pursued multi-lateral trade arrangements that abound with discrepancies. For example, the 1999 Canada-U.S. USPC agreement permitted a program called In-transit Preclearance (ITPC). This program permitted international transit passengers to directly access the USPC facilities at Canadian airports without the traveler first seeking admission to Canada). However, the economic trade approvals (i.e. air bilateral agreements ) for Canadian airlines and airports to serve this very transit traffic to the U.S. was not agreed to until 2005. These
circumstances challenge the frequent contention in critical literature that globalizing firms have undue influence over economic policies at the state level.

These kinds of trade and national security tensions became particularly evident in the post-9/11 world with considerable debate as how to maintain the balance between these mutually valid state priorities. For example, Chertoff (2009) articulated that the state must manage national security risks within their territories in order to avoid the export of threats to allied states. The failure to act in this self-disciplinary manner will lead allies to take offensive action beyond their territorial frontiers to thwart damage to domestic interests. This view is conceptually similar to Boulding (1962) who pointed out in Defence and Conflict that ineffectual efforts to protect sovereign territory will lead states to take forward positions for defensive purposes. However, Boulding as a peace activist in the early days of the intercontinental ballistic missiles disquiet articulated for the benign use of remote forms of sovereign protection, which appears fundamentally different from the “active pre-emption” views expressed by Chertoff as the second Secretary of Homeland Security for U.S. President, G.W. Bush.

However, from a literature perspective, caution is necessary in placing too much significance on the ABC programs in achieving the optimum balance between trade and national security. While routine in facilitating air travelers, these programs do not fundamentally alter the careful balance between the twin policy objectives of trade and national security. Instead, the ABC programs are just another component that contributes to trade flows by permitting greater domain awareness for national security interests, especially in the post-9/11 environment.
Rather, the literature misses the collaboration between border control agencies and civil aviation firms. As detailed in Part III, the research has identified something new for the literature: Specifically for these particular cases, the role of Information and Communication Technology (ICT) has enabled partnerships in augmenting both national security and trade facilitation objectives in a mutually beneficial manner.

Furthermore, states must often make hard choices on how best to pursue national security involving unilateral, bilateral, or multi-national methods. A well-developed literature exists in this policy sphere that recognizes that threats from civil aviation sources was evident as early as four decades ago and did not find its first tragic expression on 9/11. However, it would appear that in 2001 the previous levels of inter-state cooperation were insufficient to mitigate the apparent negative externalities from trans-national crime and political violence. However, according to Manley (2008), the reprioritization of U.S. border control interests has gone too far, and has slanted the trade and national security balance in an inappropriate way, although growing levels of international air traffic question this supposition.

Finally, for states to improve the trading platform for domestic firms, this involves aligning economic policy at both the national and supra-state levels. As described in Chapter 3, the International Civil Aviation Organization (ICAO) decision-making framework provides a robust process for states to achieve a multi-lateral consensus on civil aviation development. Conflicts remain, such as the APIS dispute identified in Chapter 1, yet the ICAO has a reasonably consistent record of accomplishment in supporting its member states in finding common policy supported by industry. Yet, the conflict of global standardization versus local aspiration remains in abundance.
2.4. **Border Studies**

Traditionally, “border studies” have focused on those concepts evident in the following passage from *Theorizing Borders: An Interdisciplinary Perspective* (Brunet-Jailly, 2007):

“borders emerge as the historically and geographically variable expressions of human ties (agent power of agency), exercised within social structures of varying force and influence. It is the interplay and interdependence between individuals’ incentives to act and the surrounding structures (constructed social processes that contain and constrain individual action, such as market forces, government activities, the culture and politics of a place) that determine the effectiveness of formal border policy, and particularly of security policies. In short, in the face of increasing border security priorities, policy-makers have to recognize that the porosity of borders depends on the relative degree and form taken by human interaction across borders” (p. 1).

First, a basic definition of a “boundary” is needed, which reflects the dividing line between one spatial unit and another (Johnson et al, 2000). Cohen (1985) defined “boundary” as the perception of one party that distinguishes itself from others. Cohen further refined this concept to the material and symbolic divisions between peoples, groups, social practices, and knowledge disciplines. Simmel (2007) went further by indicating that human spatial boundaries are core to the functioning of social interactions, and thus socialization is inherently a spatial activity. As such, conflicts will arise when boundary ambiguities arise and / or where social behaviour explicitly appropriates or otherwise penetrates boundary demarcations. As Pile and Thrift (1995) identified, “the real existence of spatial boundaries testifies to the degree to which space is never a totally fluid medium in which mobile subjects dwell” (p. 374). Kolossov and
O’Loughlin (1998) extended this view, identifying “border studies” as concerned with understanding the relationship between multiple scales of interaction and tension between various actors. The authors also indicated that globalization is driving the state to adopt “open” borders to enable the freer flow of commerce, people, and services.

Newman (2006) provided an excellent summary of pertinent geographic writings on the topic, noting the “study of borders has undergone a major renaissance during the past 15 years”. In this regard, the evolution of border controls are not simply questions of how the demarcation of territory is changing, as some strains of international relations theory might suggest. Instead, this researcher agrees with Newman that the “methodological and conceptual framework” that defines the meanings of “boundary” must account for the dialogue across various interest groups, including those private firms that become less territorially bounded with globalization.

As well, Brunn et al. (1999) identified the paradoxes within border discourses, asserting the existence of “parallel universes”. As such, boundaries can be deconstructed and have virtually no influence when considering ICT capabilities. On the other hand, border securitization has made the social construct of territorial limits more meaningful than ever, which echoes Nicol (2005). Amoore (2006) identified this trajectory as the “Biometric Border” which “implicates us all in the governing of mobility and in the profiling of suspicious behaviour”. However, Amoore did not posit this view with reference to an integrated approach involving ICT and human judgement, nor did the author admit that the traveling public scrutinizes border controls given widely evident concerns about biometrics. While Amoore’s critical attention relates mostly to technology vendors, this represents a small component of ABC program direction.
Instead, the research focus has been to airports and airlines that have major influence over the level of industry cooperation with the state on managing territorial frontiers.

Another issue is identified in _The Neo-Liberal Nexus_ (Sparke, 2006), which discussed the Canada–U.S. NEXUS program. The view emerges from Sparke that “openness” policies create new forms of citizenship as well as facilitating trans-national travel. For Sparke, this paradigm shift is “moving beyond anachronistic, methodological, and nationalist categories, and instead considers the new ways the state is re-creating identity to serve globalization purposes” (p.152). As such, the U.S. positioned NEXUS as a “Trusted Traveler” (TT) program. From this researcher’s perspective, in keeping with this view from Sparke, the TT definition is problematic as it creates undesirable new divisions, within which all other cross-border travelers are “less-than-trusted”.

Other academics view these techniques as far less than benign for society. In explaining the reason for not visiting the U.S. to lecture in 2004, Agamben compared biometrics to the tattooing of prisoners at Auschwitz, and indicated that this creates a “new normal bio-political relationship between citizens and the state” (Agamben, 2004). With particular attention to border control applications, Agamben explained:

“It wouldn’t be possible to cross certain thresholds in the control and manipulation of bodies without entering a new bio-political era, without going one step further in what Michel Foucault called the progressive animalization of man which is established through the most sophisticated techniques. Electronic filing of finger and retina prints, subcutaneous tattooing, as well as other practices of the same type are elements that contribute towards defining this threshold. The security reasons invoked to justify these measures should not impress us: they have nothing to do with it. History teaches us how practices first reserved for foreigners find themselves applied later to the rest of the citizenry” (italics added) (p. 2).
Furthermore, the modern era of hyper-mobility, enabled by ICT and “fast-transport” systems is straining definitions of boundaries between states and causing demands for elimination of impediments to both economic and social interaction across frontiers. As such, these new forms of spatial linkages at the trans-national level enable the modern state to relocate frontiers through virtual and extra-territorial methods. Addressed primarily outside the field of geography, the relevant literature includes Andreas (2003), Koslowski (2004a, b, c, d), Lahav and Guiraudon (2000), Lloyd (2003), Robertson (2010), Sands (2006), Torpey (2000), and Zolberg (2002). Within the field of geography, although the study of borders and territoriality has received much attention in recent years, this research topic is only indirectly addressed by Agnew (2005), Hyndman (2004), Hyndman and Mountz (2008), Mountz (2004), Newman (2003:2006), Newman and Paasi (1998), Paasi (1999), Nicol and Gault (2005), and Sparke (2006).

In this regard, and according to Newman and Passi (1998), the manner in which globalization affects global power relations and the view of modern state frontiers will take multiple generations to re-orient local attitudes towards a different view of identity and territory. Indeed, Taylor and Flint (2000) suggested “open” borders and cross-border cooperation discourses may be running well ahead of actual shifts in performance. The authors also noted the multi-decade European integration project still generates considerable political resistance that certainly became evident in the case study discussions in the Netherlands. These authors also contradicted Amoore (2006), with the observation that improved biometric-based identities have made little contribution to the E.U. debate on the acceptance of the “other” into local communities.
In summary, the debate on how boundaries have evolved is positive for academic geography and provides a useful frame of reference for this research project. Although some “prevailing IR theory discounts geography”, Grygiel (2006) put it well in identifying that “states must account for locality when considering relations with others”. In returning to Brunet-Jailly (2007) who suggested a theory of border studies, the notable elements raised are the interfaces between multiple levels of government, market forces, and trade flows, along with the engagement with communities affected by border politics. Moreover, while Brunet-Jailly admitted the difficulty of documenting all these elements, this literature suggests that “empirical testing will demonstrate the strength of this theory” (ibid, p. 644). Thus, this thesis has taken on this challenge.

2.5. Globalization, Trade, and National Borders

The enormity of this topic necessitates specific attention to how globalization, which refers to the various forms of trans-national human relationships, has influenced the civil aviation industry in confronting territorial controls in the process of operating across non-local spaces. Even with the rapid modalities offered by civil aviation to enable connections between disparate markets, the continuation of border controls between states remains an oft-debated element of globalization (Ohmae, 1991: Yeung, 1998). Open trade advocates, including Bhagwati (2003), have expressed concern that these persistent impediments continue to hamper demand, trade, and travel flows. This discourse also notes that frictions applied to transportation networks undermine the contribution that globalization can make to societal development. Hence, and in relation
to Figure 3, attention in the literature is necessary to identify how these tools and techniques can moderate the challenges arising from stricter border control policies. As well, multiple case study interviewees explained that the civil aviation industry has any expectation that national security policies are less important than the “corporate interest”. Instead, the industry desires a more cooperative arrangement that permits both pillars to achieve legitimate objectives in a balanced manner.

Yet, the globalization of travel flows is not the only issues confronting states at their sovereign frontiers. Porter (2000) identified the formation of new economic clusters as dependent on the ability of suppliers to establish themselves at optimal locations based on a global approach to corporate strategy. This view is in keeping with Porter’s earlier argument that exhorted governments to liberalize industry and establish a new role for themselves, as explained in The Competitive Advantage of Nations (1990):

“Firms Compete in Industries, Not Nations
Government cannot create competitive industries; firms must do so. Government’s role in competition is inherently partial, because many other characteristics of a nation bear on it. Government policies that succeed are those that create an environment in which firms gain competitive advantage rather than involve government directly in the process, except in nations at early stages of competitive development” (p. 619).

Without question, government shape and influence the context and institutional structure surrounding firms, as well as determining to what extent firm advocacy forms a component of policy deliberations. However, and as explained in Chapter 3, while many states have enabled civil aviation industry liberalization, all too often states have failed to undertake the parallel changes to the “institutional structure surrounding firms”, that is, of ensuring that border controls do not become a trade impediment. This is not to
suggest national security interests are secondary to the objectives of trans-national corporations as claimed by some neo-liberal theorists. Rather, Figure 3 depicts the need for a careful balance between these urgent public policy goals.

In this regard, the UN published the World Public Sector Report, Globalization and the State, which addresses some of these issues and was prepared “to review major trends and issues concerning public administration” (UN Department of Economic and Social Affairs, 2001). The most significant trend identified was the role of ICT, which “promises to make the information and knowledge base of humankind available anywhere, anytime, in any language” (ibid, p.8). The report also recognizes the importance of transportation in re-shaping the global economy, with particular emphasis on air travel that has led to such a greater mobility. The major catalyst for this change was the seven-fold reduction in consumer fares in real terms from 1930 to 1990. The UN further identified that “the threat that international crime, particularly terrorism and drug traffic, poses to the world and the increased interdependence brought by globalization should not be overlooked” (ibid, p. 26). The report also acknowledged the important role of the private sector in a globalized era and the potential for better outcomes as “markets and states should not be seen as adversarial forces, but as truly complementary” (ibid, p. 68). The report also identifies the need for a continued role for a competent public sector, especially when concerning the capacity to deal with human security risks from trans-national threats. From a conceptual perspective, the UN report provides a parallel framework to many of the issues addressed in this thesis, albeit with less attention to private sector interests.
As noted, the growth in global circulation has generated policy issues as states seek the least trade-intrusive manner to manage the sovereignty related demands of territorial controls. For example, Torpey (2000) observed that with globalization the state faces a serious challenge in maintaining sovereign control, which puts into question the traditional role of the state. In this regard, in Restructuring Territoriality, Ansell and Di Palma (2004) explained how the state must be re-thought. While this view involves a redefined geographic boundary, it also recognizes that the “logic of territoriality, while significantly repositioned, is not easily discarded”. Ansell and Di Palma also suggested that in order to understand the newly re-worked state, it is necessary to:

“recognize the presence, in the political space below and beyond the state, a variety of territorially relevant collective actors including some private, some public and legal (or illegal), and some constitutionalized. These relations are not sorted out neatly along the conventional territorial divide between domestic hierarchy and supra-national anarchy /intergovernmentalism, as states can no longer predictably operate as exclusive authoritative gatekeepers of the divide” (p. 259).

Ansell and Di Palma further noted that the role of the private sector in defining territoriality has grown with globalization and which is a subject of considerable critical academic debate (Grant, 2000). Nevertheless, Hufbauer and Vega-Cánovas (2003) identified the need for the state and other stakeholders to find the means to overcome national security threats at joint frontiers in order to reduce the risk of future calamity and in order to maintain “open” borders for economic security purposes.

According to Black (2003), modern trade theories have shortcomings, and “the body of international and interregional trade theory” is insufficient. Black’s view is that trade theory must deal with rapid economic changes; the necessity of removing barriers
between states; barrier-free conditions at territorial frontiers; and the re-emergence of trade inhibiting behaviours by the state and even from firms attempting to protect markets from foreign competitors. It is worth noting here that the improvements to ICT and “fast-transport” systems have reduced the “friction of distance” so that traditionally protected local markets now often face global exposure. In any event, while Black correctly identifies factors that need further attention elsewhere, missing from this analysis are the implications arising from global transportation networks for national security priorities. This issue was raised by a case study interviewee with the notable concern that in the post-9/11 era “firms ignore national security concerns at their peril”.

In *National Borders Matter: Canada-US Regional Trade Patterns*, a work seminal to the discussion of borders and trade, McCallum (1995) challenged Ohmae’s *The Borderless World* view that “borders have effectively disappeared” (1991, p. 172). Although McCallum attends to the goods movement sector, this research demonstrated how locational factors explain trade flows. As such, McCallum observes, “the Canada–U.S. case may be particularly interesting because the two countries are so similar in terms of culture, language, and institutions”. This study concluded that even with the relatively unimportant Canada-U.S. border, the existence of the shared frontier continued to have “a decisive effect on continental trade patterns [suggesting] that national borders in general continue to matter” (McCallum, 1995, p. 615).

Similarly, in “How Much Do National Borders Matter”, Helliwell (1998) addressed the trans-national mobility of both goods and people. In the chapter dealing with migration, Helliwell observed that the empirical literature identifies a strong relationship between trans-national migration and distance effects. The evidence is challenging as
Helliwell argued that the standard gravity model would predict greater levels of migration than observed in typical flows between states. Helliwell explained this as the “border effect” which is based on the difficulty of understanding the benefits of accessing distant locations; the “psychic costs” of distances away from host family and business relations; lack of destination information; and absence of sufficient networks of previous migrants in the receiving state. Despite these frictions, Helliwell concluded, “some degree of openness has a positive effect on economic growth”.

In “How Much Were Canadian Exports Curtailed by the Post-9/11 Thickening of the U.S. Border?” Gray (2008) specifically addressed the export travel services by air. While acknowledging border control factors that caused confusion for travelers, such as the Western Hemisphere Travel Initiative (WHTI), the overall affect was relatively minor with an overall traffic dip (e.g. leisure and business travel) immediately after 9/11, which recovered in less than two years. The most significant downward shift related to business travelers, a group that would be more knowledgeable about border crossing requirements, although Gray theorized that the major influence in the overall reduction in trade related to pre-9/11 economic conditions. Another major change during this period was the sizable appreciation of the Canadian dollar that made travel to Canada less affordable for U.S. citizens, and enabled Canadian citizens to travel farther afield on the strength of an improved currency exchange rate with other foreign states. Overall, these results are consistent with Globerman and Storper (2006) who provided empirical evidence that 9/11 did negatively influence Canada–U.S. trade, although the explanatory factor is minor by comparison to other econometric-related causes.
Unfortunately, McCallum, Helliwell, and others interested in trade flows did not address the implications of border controls on the various transportation actors involved in negotiating territorial access. For example, Napoleon (2008) observed that what remains unexplored in the economic literature is the parallel growth of trans-national threats from criminal and political violence and the consequences for legitimate trade and travel flows.

Furthermore, as access to border control services is not ubiquitous but limited to certain ports-of-entry associated with historical gateway urban conglomerations, this often generates circuitous routings between hinterland production centers and foreign markets. Helliwell considered none of these factors in the “border-effect”. Similarly, Zook and Brunn (2008) explained, “while place and location matter, economic activity is increasingly being influenced by the relative location on a network [e.g. airline] as opposed to continuous geographic space”. Despite an otherwise well-articulated discussion on the supply and demand factors influencing international air service networks, these authors fail to account in any manner for territorial controls, even when discussing transport costs. This is even more remarkable as the authors cited an extensive industry liberalization literature, with the research pursued well after 9/11, when the linkages between national security and civil aviation have received enormous attention.

It is worth noting that some globalization literature is useful in explaining the implications of transport networks to trade flows. For example, Krugman (1991) summarized this perspective well, as follows:
“favourable aspects of location, such as availability of a good harbour, typically have a catalytic role: they make it likely when a new [economic] center emerges, it will be there rather than some other location in the vicinity” (p. 58).

From a critical perspective, Strange (1996) observed that globalization has encroached on the traditional role of the state. Strange goes further, discarding much of the academic literature in place of a ubiquitous rationale explained by “the common-sense of common people” (p. 3). Despite this anti-establishment view, Strange correctly identified that the often “neglected factor” of globalization involves physical technology advancement (e.g. transportation systems), and specifically the recent ICT revolution. Furthermore, Strange observed that the role of the state has evolved from seeking territory to capturing export markets. These neo-liberal approaches can involve the transfer of state assets to the private sector that in turn become a conduit for international market expansion, or states adopting economic policies that facilitate trading firm activities beyond the territorial frontier. Invariably, this leads the private sector to engage with the state in favour of achieving market outcomes, even if this must subsume other societal objectives. Strange also stated that the “territorial boundaries of states no longer coincide with the extent or the limits of political authority over economy and society” (ibid, p. ix). From this research project’s perspective, the use of ICT based ABC programs may have been an important catalyst for these broader changes, especially as states extend their legislated reach beyond the territorial limit.

While Strange raised important conceptual challenges that are beyond the scope of this project, relevant to framing this research is the evolving dynamic between the state and firms as both attempt to pursue their objectives, some of which coincide and others that
are in conflict (e.g. civil aviation firms required to provide pre-journey data without commensurate facilitation benefits).

In summary, the gap in the globalization literature relates to how civil aviation firms are required to navigate through border controls to connect international spaces. Even Krugman (1991) failed to acknowledge this issue, as there is little point in having a “good harbour” without sufficient border control tools that permit the timely passage of travelers in a manner that does not create national security risks. As such, it is somewhat surprising that the economic globalization literature has not engaged the migration - securitization and related literature, given the trans-national nature of many threats to state authority (Bobbitt, 2008: Napoleoni, 2008).

2.6. Civil Aviation Networks

Aoyama et al. (2006) identified the “critical role of logistics functions in the contemporary economy”, and then explained, “the logistics industry is an implicitly accepted yet seriously understudied area of research in contemporary economic geography” (p. 328). A particularly useful insight emerges from the literature that identifies the struggle faced by transportation firms to adjust strategies to meet global markets and competition, but recognizes that “it also remains one of the most localized and embedded industries of all” (p. 335). For Adey et al. (2007) in an interesting article “Flying lessons: exploring the social and cultural geographies of global air travel” the authors noted that “increasingly sophisticated methods have accordingly allowed geographers to visualize the uneven networks of air traffic, with passenger and freight
data utilised to reveal the scale and scope of [the] global air transport network” (p. 774). Moreover, this literature argues that it is necessary for transport geographers to go beyond the quantitative traditions, and consider the geographies of “aero-mobility”.

While the “spaces of flows” (Castells, 1996) has certainly generated interest in trans-national mobility, the literature certainly does not provide evidence to support Urry (2000) who argued that:

“There is a ‘mobility turn’ spreading into and transforming the social sciences, transcending the dichotomy between transport research and social research, putting the social into travel and connecting different forms of transport with the complex patterns now taken by much social experience conducted at-a-distance”. (p. 157)

In any event, this literature did prove useful as it highlights the “uneven global aero-mobilities”, which alert “us to some of the key issues of power and identity” (Adey et al.2007). For travelers, this can mean a degree of subjugation that is unusual in modern life, as Gary Marx (2005), “urges us to consider how ‘border crossing tools…rely on extending or constricting the senses’, channeling sensory stimuli, in order to sift and sort specific feelings and emotions”. In a similar vein, Walters (2006) indicated that transport geographers can no longer remain within the realm of network analysis, and must address the broader conceptual issues that are inherent to the discipline:

“the imposition of borders at the airport is less and less about commercial regulation or even military security, and more and more about instruments for the policing of a variety of actors and objects pathologized by their deviant Mobilities”. (p. 147)
For Adey et al. (2007), the combination of globalization and national security interests has had material implications for industry, and thus they argued that:

“Unlike the airport of the past, which Walters suggests may have been a point of arrival, reception, and integration for migrants (i.e., the gateway to a nation), the airport is now merely one node within a series of [global] sorting points”. (p.781)

As such, and as abundantly evident in Part II, the civil aviation industry faces similar difficult choices as globalization drives airlines to focus corporate strategy on a broad scale. For locally fixed airport operators, attracting airlines requires the provision of globally relevant facilities and services, while at the same time tailoring services to the needs of the nearby catchment area. These circumstances are complex enough, but this research adds another challenging layer by considering the role of Advanced Border Controls (ABC) on civil aviation firm development.

However, Rimmer (1988) observed that the transport geography discipline must become less circumspect and avoid esoteric debates that remain unconnected to larger bodies of literature. Instead, Rimmer advocated that transport geographers must engage with forward-looking issues, contribute to policy debates in a practical way, and identify how transport system gaps influence real-life globalization challenges. From this researcher’s perspective, another crucial dimension is how “fast-transport” and ICT systems have generated societal implications far beyond questions relating to global economic integration, preeminent at the time of Rimmer’s contribution. As Napoleoni (2008) observed two decades later, the preferred travel mode for political and criminal trans-national actors appears to be via civil aviation networks. Thus, in keeping with
Rimmer’s advice, the very purpose of this research project, which combines the otherwise unrelated transport geography and “border studies” topics is to enable a better understanding of the interplay between modern border control policy and civil aviation firm strategy. As such, the researcher makes no apology for the heavily empirical focus, although ensuring that this thesis contributes to the literature remains an equally valid objective.

Within the context that geography explains the variation in human activity that increasingly involves trans-national spaces, this researcher, amongst others, argue for serious attention to the study of how transport systems depend on efficient border control systems. In this regard, Black (2003) identified that:

“if there were no variation from place to place all places would be much the same and as a result there would be no need for transport and travel beyond local areas since there would be nothing in the rest of the world different from where we are at present. Everyone and every place would have the same resources and capabilities” (p.3).

Black rhetorically demonstrated how the world is full of differences, and the interaction across space is only possible by transportation systems, which in the modern era involves parallel ICT networks. This perspective reflects the history of trading relationships that have closely paralleled the development of transportation technology. For example, Black pointed out that the Phoenicians built the first merchant ships; the Romans designed all-weather roads; the steamship enabled “fast” oceanic crossings; the railroad transformed industrial production; and civil aviation networks connect global markets (p, 12). In this regard, and without repeating network theory
basics, Ullman (1954) identified the principal determinants of spatial interaction, which assist in understanding transport network development, as follows:

- **Complementarity** relates to the availability of supply in one area that matches demand in another area;
- **Transferability** refers to the maximum level of costs that permits transportation between spatial locations; and
- **Intervening Opportunities** relates to the predominance of trade between the least cost locations, even with the existence of transferability to other locations.

According to Black (2003), Ullman did not consider “the political factor” that can override the above noted key determinants of spatial interaction. Black explained that even where complementarity and transferability exist, together with the absence of intervening opportunities, trade flows might still face interruptions. This political factor can be viewed as a “cost” that trading partners are unable to pay, and thus becomes an impediment to otherwise legitimate trade flows. This particular view parallels the findings from McCallum (1995) and Helliwell (1996) that borders between nation states represent a “friction” that can impede trade flows. These concepts are relevant in understanding why civil aviation firms in Canada and the Netherlands undertook to pursue partnerships with the state to develop ABC programs. For these firms, overcoming “politically” constructed impediments, namely territorial frontier controls, proved to be a reasonable strategy that was “less costly” than the alternatives.

Black (2003) also identified why geographers are interested in transport studies. This relates to a better understanding of the changes necessary to enable the optimal functioning of links and nodes within a transport network. In the case of civil aviation, links refer to airline services and nodes refer to airports. However, Black did not allow that in the absence of border control programs at nodes, transport networks would need
to remain within the domestic economy. In a globalizing world, limiting access to
domestic destinations can harm economic and societal progress. The problem of
insufficient access to border control services is especially problematic for smaller and
remote communities. In these circumstances, localities can become dependent on
intervening gateways, which will increase costs and reduce access to global markets.

Academic attention to the changing relationship for transportation firms employed in
global commodity chains is growing in importance with the fall of trade barriers.
However, Aoyama and Ratick (2007) correctly observed that “relatively little is known
about the [logistics] industry’s organizational dynamics, inter-firm relations, and the role
that information technologies play in its industrial transformation” (p. 160). Although this
particular literature deals with those firms involved in the goods movement trade, the
parallels to passenger transport are most useful to the trans-national nature of this
research topic. Moreover, the authors identify the different forms of relations and the
benefits associated with trust based relationships between firms that “reduce
transaction costs and foster successful collaboration”.

From a contemporary perspective, Keeling (2007, 2008, and 2009) prepared a
comprehensive analysis of the state of transport geography. Keeling distinguished
between trans-national, regional, and local patterns of studies, all of which have
implications for wealth creation and distribution. At the global level, Keeling argued that
transportation advancements are globalization’s life-blood. At the same time, Keeling
recognized the work by Krugman (1991) that argued that connectivity within trading
areas is equally important to external trade development. With the rise of urban
agglomeration, Keeling concluded that transport geographers must also become
engaged in urban development, sustainability, and social accessibility issues as foundations for external competitiveness. Unfortunately, in what is otherwise a fine collection of transportation geographic thought, Keeling did not identify the topic of border controls and their influence on transportation systems.

Even where the topic of civil aviation development is the focus of academic attention, for example in the *Journal of Transport Geography, Special Edition on Airline Industry Liberalization* (July 2009), the evolving role of border controls plays no part in any of the research works. For example, in the airline spatial network analysis by Derudder and Witlox (2009), this scholarship indicated that air service liberalization at European airports resulted in higher levels of international traffic. However, the elaborate analytical framework contained in this literature does not address the major border controls changes such as the Schengen Agreement Area (SAA), or the Automated Border Kiosk (ABK) programs at various European airports.

In the same journal edition, Grubesic et al. (2009) focussed on airport hierarchical development on a global scale based on the allocation of airports in a region to a central node. This is based on the assertion that “since air transportation is often hierarchically organized with sets of smaller airports feeding into larger hub airports, the concept of delineating nodal regions is highly relevant” (ibid, p. 265). Not surprisingly, this analytical approach contained no reference to border control considerations, even with the allocation of airports from different states to the same central node region, as if the sovereign concerns of states did not exist. It is worth noting that an advantage of the ABC programs under study, especially the USPC program, is the reduction of constraints to where airlines may operate across
international spaces. This realization alone requires that researchers account for border control developments, as otherwise the analysis of airline network flows purposely ignores an inherent constraint, which became more pronounced in the 9/11 period.

These wanting circumstances are evident in other influential articles. For example, the U.K. strategy of privatized airports led Humphreys and Francis (2002) to conclude that regional airports had a role to play in national capacity constraints. However, these authors have not acknowledged the parallel changes required by U.K. border control agencies to serve these smaller airports. For transparency, the researcher has recently provided professional advice to the U.K. civil aviation industry.

In a similar analysis of regional French airports, Thompson (2002) failed to explain how the adoption of the SAA by France and other major European states, which removed the border control impediments, had a major influence on the growth in regional air travel. Unfortunately, the same gap emerged from Feldhoff (2002) who explained Japanese regional airport policy, and that the “internationalizing of regional airports” at cities such as Hiroshima, Sendai, or Nagoya was simply a matter of transport policy, with no indication that such practices could not occur without commensurate investment in border control facilities and services. This gap is even more serious with regard to the ABC programs under study, as in recent years Japan has introduced a range of new border control policies that utilize technologies to facilitate air travel, including the collection of fingerprints from foreigners on arrival at international airports (Japan Ministry of Justice, 2007).

Furthermore, this failure to account for the limitations imposed by border control programs on civil aviation networks also has an empirical component. In particular, the
“peak hour flow rate” is a crucial measure for determining transport network capacity. As noted in the IATA Airport Development Reference Manual (2004), border control capacity limits have significant and broad implications on both airport and network system capacity. Accordingly, any analytical assessment that does not account for this sizable constraint to network optimization will produce less than accurate results.

Despite these literature gaps, a few geographers have indirectly referred to the research topic. For example, Newman (2001) noted, “as changes in transportation technology become increasingly sophisticated…borders are removed from the territorial periphery of the state into the heart of main metropolitan airfields” (Ibid, p. 145). Sparke (2006) dealt with the U.S. NEXUS program, albeit with a focus on the link between the program and neo-liberal corporate agendas. Building on the “spaces of flows” concept from Castells (1996), Dodge and Kitchin (2004) identified the ICT implications and argued that “air travel has become a real virtuality par excellence, seamlessly blending the material involving travel and virtual networked communication”. This particular work provides an interesting lesson that also emerged in the case studies regarding the potential abuse of technology, as follows:

“one of the prime uses and effects of code/space is the creation of a panopticon which enables and enforces a regulatory environment in which passengers (and most staff) are rendered, in Foucault’s terms, docile bodies: bodies that pass through the system in an orderly, non-complaining, compliant manner” (p. 199).

In a related perspective, Cresswell (2006) suggested that, “transport geography and migration theory have never been more central to the discipline”, although the author does not identify the broader implications of this statement for the literature. For
Hall (2010), the approach to future work must recognize that “much transport research is undertaken within an inter-disciplinary framework”. Hall also observed, “in a wider context, geopolitical issues of travel resource access are likely to become an important focus of global tension and potential conflict”. Much of this research project deals with the challenge of enabling trade and the increasing flows of trans-national travelers in a manner that does not impose large risks to national security interests.

In summary, the role of border controls as a major influence on transport network development remains absent from the literature. Also not evident are references to how the ABC programs are changing airline and airport strategies that permit new network linkages, which in some cases permits the by-pass of traditional gateway nodes. In a world where international connectivity becomes paramount, the availability of expanding network linkages through advanced ICT systems that permit the delivery of territorial controls in different ways will influence how local spaces participate in global flows. The case studies identify the importance of these issues for further academic attention.

2.7. **International Relations, Migration, and National Security**

A major challenge for states, even before-9/11, was managing the flow of economic migrants, convention refugees, trans-national criminals, and those travelers who purposefully avoid ports-of-entry (Bobbitt, 2008). In a globalizing world, where trans-national mobility is crucial for economic and societal reasons, international allies have come in conflict regarding how best to deal with such travelers. In the modern era, the potential exists for even further conflict as states begin to use virtual and extra-
territorial border controls methods. This section reviews the conceptual issues surrounding international relations, migration, and national security. As for Figure 3, the serious policy considerations that arise from both legitimate and illegitimate transnational travel have of course received much attention in the post-9/11 era, with major consequences for both sides of the globalization/trade and national security debate.

First, the trans-national aspects of the civil aviation industry are dependent on coordination at the inter-state level, as detailed in Chapter 3 of Part II. In this regard, the theories of liberal institutionalism identify extra-national organizations as essential to the functioning of inter-state relations (Slaughter, 2004). From this view, supra-national or wide-regional agreements can overcome narrow state interests. Kahler (1995) furthered this view and explained that “strengthening international institutionalism” was a critical element of achieving “explicit harmonization”. Kahler viewed such institutions as having the potential to open borders and re-assemble sovereignty through joint actions. However, there are inherent weaknesses in these approaches as states can surreptitiously act to serve their own interests, with repeated evidence that states do not pursue collective action that might generate wider benefits. In this regard, the ABC programs under study have already created challenges for the international cooperation evident in other areas of civil aviation development (IATA Interview, 2010).

From a competing perspective, the international relations theory of “offensive realism” views that the state must ensure effective territorial control in order to achieve “hegemonic” goals, which can be achieved through projection of power beyond the territory (Mearsheimer, 2001). This outward looking concept is similar to the theory from Boulding (1962) regarding the “loss of strength gradient”. According to Boulding, states
establish forward protection zones beyond the territorial frontier to overcome the inherent weakness of delivering force over physical distances. This practice of positioning power in a foreign state can limit the ability for the host state to project power beyond their territory. These circumstances can create jurisdictional overlaps between states and thus create the potential for inter-state conflict. These outward protection concepts are relevant to this research as the common feature of the ABC programs is the commencement of the inspection process prior to the traveler reaching the territorial frontier. As the concept suggests, conflicts have emerged concerning the inter-state dispute over pre-journey data sharing, as detailed in Part II.

Nevertheless, the various liberal concepts that identify the advantages of inter-state cooperation are more relevant for explaining why the ABC programs under study involve lengthy periods of cooperation between the states involved. For example, in the case of the USPC program, the U.S. and Canada are now approaching six decades of continuous engagement on the relocation of U.S. frontier controls onto sovereign Canadian territory. However, the literature does not address the role of the private sector as principal agents within these traditional inter-state relationships.

In turning to the concepts related to migration and national security, states are facing tremendous growth in temporary migration associated with leisure, commercial, and personal travel. This is in keeping with the growing evidence from trans-nationalism studies that demonstrate that a continuous form of global circulation has emerged for both short- and long-term “sojourners” (Ley, 2003). For example, the UN World Migration Organization (2009) reported that in 2008, nearly 214 million permanent migrants crossed borders by all modes. By contrast, the IATA (2010) reported that
about 952 million passengers crossed a border by air in 2009, out of 2.4 billion air travelers. In the era of globalization, the growing volume of temporary international migration is of considerable economic importance. For example, the UN World Tourism Organization (2003) reported that:

“international tourism receipts represent approximately 6% of worldwide exports of goods and services. When considering service exports exclusively, the share of tourism exports increases to nearly 30%” (p. 1).

This degree of hyper-mobility is consistent with Castells (1996) definition of the “spaces of flows that [link] up distant locales around shared functions and meanings on the basis of electronic circuits and fast transportation corridors”. Furthermore, Koslowski (2004) argued that advances in transportation and ICT could permit states to adopt, on a multi-national basis, an international migration regime that integrated global travel and residency policies permitting greater levels of circular travel patterns.

However, the benefits of migration remain contentious, even in the face of obvious economic gains. Conceptually, the necessity for states to establish border controls reflects the inherent risk of territorial boundaries open to the “other” (Bobbitt, 2008). These concerns are heightened in the modern era were technology-enabled development generates the “Connectivity Paradox”, which holds that while the era of electronics permits an unheralded collection and dissemination of knowledge, no substitute exists for physical engagement for establishing and maintaining relationships (ibid). This paradox arises where the need for this greater connectivity also allows a greater level of systemic danger, as damage in one part of the globally connected world will quickly create harm elsewhere. However, Bobbitt warned that neglecting to “develop
habits of greater vigilance, including especially the inspection of travelers” can lead to the collapse of legitimate authority which in turn can make “the state the source of terror itself” (ibid, p. 97:401). Unfortunately, the question of whether ABC programs under study might themselves contribute to state oppression is beyond the scope of this work. Nevertheless, Bobbitt explicitly linked the role of the state in promulgating sophisticated national security strategies in the face of trans-national threats, with the manner in which states should engage transportation firms in the control of international passenger movements. These perspectives are highly reflective of the concerns raised by the private firms and associations interviewed for this research project regarding the significant risks for the civil aviation industry that is increasingly finding itself on the front line of state interdiction practices in both virtual and extra-territorial spaces.

Torpey (2000) theorized that the state self-interest in citizen security represents the core function that defines the state. In this regard, Torpey viewed that only in this way would an individual enable the collective interest and share sovereignty with others. Similarly, Waever et al. (1993) indicated that the modern concept of “society” is correlated with the existence of the state, and how risks for the national “society” authorizes the state to intercede in order to protect from foreign threats. Thus, and long before-9/11, travelers became subject to significant levels of scrutiny at frontiers that placed the economic objectives of trade liberalization in conflict with national security priorities. Although Castells and others have anticipated ICT and “fast-transport” networks as enablers of global mobility, the existential threat to the state from belligerent travelers has enabled national security policies to use these same networks to control travel through offshore interdiction.
Joppke (2001) suggested an alternative hypothesis regarding the security - migration conflict arising from underlying societal tensions formed by economic threats. Thus, Joppke viewed the security - migration threat nexus as a demonstration of the weakened societal bond exacerbated by globalization. In this regard, the Netherlands case study revealed that legal immigration policy has come under heated public debate, in part for economic reasons related to migrant access to labour markets. The consequence of this policy conflict has been to increase border control scrutiny, even if not warranted by the national security risks associated with “third-country” nationals.

However, in the post-9/11 era, the concepts that explain migration as a threat to societal security are most relevant. This rationale for intensified border controls arose multiple times during the case study interviews. In particular, North American participants raised the inter-state conflicts that emerged when a Syrian-Canadian (Maher Arar) transited a New York airport from a family vacation in Tunisia en route to the traveler’s Ottawa home. The U.S. Customs and Border Protection (CBP) agency apprehended the traveler, and then transferred this individual to Syria for imprisonment. A subsequent human rights abuse hearing by a Canadian parliamentary committee received considerable evidence of alleged torture of Maher Arar during his custody. The U.S. CBP explained the rationale for the traveler’s interdiction (Kutty, 2007):

“[Maher] Arar has been placed on the terrorist watch list because he was suspected he might be a member of The Muslim Brotherhood. The tenuous link was made well after he moved to Canada; Arar’s mother’s cousin had been a member. Additionally, the U.S. learned from Canadian Police that “lease on Arar’s apartment had been witnessed by a Syrian-born Canadian who was believed to know an Egyptian-Canadian whose brother was allegedly mentioned in an Al-Qaida document” (p. 9).
While inter-state and human rights questions emerged from this incident, relevant to this thesis are the consequences of the underlying trans-national, data-sharing protocols. This event brought to public attention the types of data shared between states. After a public enquiry, the Canadian government established new data-sharing protocols that had implications for the APIS program and for the types of information shared between the U.S. and Canada (Canada Ministry of Foreign Affairs, 2007).

According to Kydd (2005), national security concerns arise because of a lack of knowledge about the intentions of external parties that creates a “lack of trust”. This question of “trustworthiness” can reflect on more than the relationship between the state and the individual traveler. Kydd observed that negative associations that do not necessarily arise from a foreign state could undermine the prevailing level of inter-state trust. For example, the case studies identified serious trust questions between the U.S. and Canada concerning the erroneous belief in the American public and senior U.S. politicians that the 9/11 perpetrators entered from Canada (Moens and Gabler, 2011).

Similarly, Lloyd (2003) theorized that states have developed a basic lack of trust regarding persons outside the territory, whether they are citizens or other, and thus states have adopted policies that persons entering the territory, or leaving, in some cases, should face a high degree of scrutiny. In the case of the ABC programs, states have adopted new practices to improve the identity of individuals through biometric technologies, and have used pre-journey data sharing to enable a more-informed decision on whether the traveler can be “trusted” to enter the territory. Absent from the literature is the role of the private sector in providing these tools and information, and
how the necessary partnerships to enable such actions change the relationship between border control agencies and civil aviation firms.

While national security conflicts naturally arise with international travel, for states to participate in the advantages of globalization there must first be some degree of “openness” (Helliwell, 1998). As Cornelius et al. (2004) indicated in the “gap” hypothesis, such openness, when exploited, will become a source of policy friction between the state and its citizens and thereby generate a “security stigmatization”. This society-wide phenomenon occurs when a persistent gap exists between official policy and actual migration outcomes. For example, the admission by U.S. border control agencies after 9/11, that the perpetrators had repeatedly entered the U.S. despite the various watch-lists, fuelled the public reaction for a corrective policy change (National Commission on Terrorist Attacks upon the United States, 2004). One of the objectives of the ABC programs is to eliminate this policy gap, providing for better information upon which to make enforcement decisions prior to the territorial frontier in order to avoid public questions regarding border control effectiveness.

The issue of how states attempt to avoid migration policy “gaps”, which can create domestic political challenges, directly relates to the virtual and extra-territorial techniques under study. For Hyndman and Mountz (2008), these extra-territorial practices of “neo-refoulement” are geographically based strategies of prevention that have become a form of forced return. Butler (2004) characterized this approach as part of a broader tactic to “neutralize the rule of law in the name of security”. Amoore and de Goede (2008) pointed out that “government practices of border control do not simply defend the inside from the threats outside, but continually produce our sense of the
insider and outsiders in the global political economy”. Finally, Razack (1999) viewed the policing of the border as intrinsically linked to the policing of racialized populations already inside the border.

This critical literature raises important issues, as the involvement of the private sector in ABC program operations places firms in a difficult and conflicting role. For example, passengers are not potential threats to the state, but rather are customers and the source of firm revenues. However, the historical “Law of the Sea” made ship-owners and their operating commanders liable for the carriage of contraband and improperly documented travelers as a major disincentive against participation in the act of smuggling. Legitimate civil aviation actors face similar obligations, and thus airlines and airports inherently pursue strategies to avoid the fines, and even potential imprisonment, associated with improper border crossings by their customers. Thus, better understanding why states and firms jointly developed the ABC programs can contribute to better understanding how the implementation of these innovations can avoid human rights abuse through the “transfer” of border controls to private firms.

Furthermore, these critiques of ABC programs recognize the challenges that ICT and national security policies create to the rights of individuals. Pickles (1991) identified these types of geo-spatial concerns as “geo-veillance” that involves intelligence, threat assessment, and interdiction at forward perimeters. Hyndman (2004) also identified these techniques as gendered, creating various mobility and categorization problems. These authors also relate their views to Foucault (1991) who identified how early 19th century thematic mapping was used as a preventative state measure to identify the places that could be categorized as dangerous against a set of societal norms. As
Foucault theorized, these techniques of “governmentality” enabled the normalization of space and territory through political discourse. In keeping with this view, according to Amoore (2006) the discourse of ABC programs attempts to normalize certain travel flows with new terminologies, such as “trusted traveler”. As such, a new set of literature that considers these kinds of human rights issues should emerge addressing the marketplace imperatives that drive civil aviation firms to collaborate with the state, especially in the post-9/11 era.

In concluding this section, it is necessary to provide a broader context and assess the Western national security agenda driven primarily by the U.S. and evident well before-9/11. Some of the useful political geography literature concerning U.S. security policy evolution includes Nevins and Purcell (2005), Coleman (2005), and Ackleson (2005), along with Bialasiewicz, L., et al. (2007) in Performing Security: The Imaginative Geographies of Current US Strategy. The work by Bialasiewicz et al. is particularly insightful by recognizing the historical elements of the current “war on terror” paradigm, which also underpins core elements of U.S. border control priorities. As argued by this thesis, the intensity of modern border control efforts arose in parallel to changing geo-political circumstances and globalization, which is re-affirmed as follows:

“To understand the power of the imaginative geographies guiding current US strategy it is important to look back at the recitation, reiteration, and re-signification of previous strategic formulations. During the Clinton years, a number of figures who had been involved in various guises in previous Republican administrations wrote widely on the geopolitical opportunities and threats of a post-Cold War era. From specifications of the threat posed by international terrorism, ‘failed states’ and ‘rogue regimes’, to the dangers posed by cultural/civilizational conflicts. (ibid, p.409)
This particular discourse, and other critical assessments of U.S. geo-politics, identify that policy formulation involves constituting or “performing” the threats from the “other” as necessary to validate the national security policy deliberation in the first place. For example, and relevant for this research, is the contradictory U.S. “performance” that encourages trade and globalization, while at the same time positing that the U.S. must be ever vigilant, as noted:

“Abroad, one contradiction between the moral cartography of terror and the spatiality of globalization can be found in the attention US national security discourse pays to the deepening connectivity between domestic US space and burgeoning circuits of computer communication, electronic transaction, and organized criminal activity. Significant here is the US military’s discussion of the risk of cyber-terrorism; their efforts to clamp down on transitional financial dealings of alleged terrorist sympathizers; or their analyses of the biological pathogens which routinely flow around the world's airline and shipping systems…” (ibid, p.418)

In summary, for both conceptual and empirical reasons, the migration - securitization conflict has become fraught with difficulty. This has created enormous challenges that position the civil aviation industry in the midst of the tense political debate between states, and between states and their citizens; a situation not addressed in the literature. This is not to suggest states and firms should ignore important societal issues in order to advance private sector interests. Instead, further research is necessary to assess how tools such as ABC programs contribute to legitimate mobility objectives, and can be “implemented in a manner that [does not] waste taxpayer dollars, infringe on privacy and civil liberties, and misdirect the valuable time and energy of [the] national security community” (Jonas and Harper, 2006).
2.8. State and Private Sector Interaction

Globalization has driven firms to adopt strategies that are outwardly oriented, and conceptually the continuing engagement with the state on domestic policy matters has become less important (Porter, 1990). Yet, as described in Chapter 3 in Part II, the manner in which the civil aviation industry is structured demands significant intra- and inter-state involvement to enable firms to participate in international air service markets. Furthermore, the domestic policy response by states to the trans-national threats at territorial frontiers has had major implications for the civil aviation industry for more than four decades (Koslowski, 2004a). As such, civil aviation firms have a long history of interaction with the state, creating a symbiotic relationship of sorts. These influences increase the complexity of state-firm relations, and generate interesting theoretical questions that require attention in the literature. Figure 3 identifies these interactions, and this thesis argues this represents a new form of state-firm interaction.

First, globalization has encouraged the state to alter policies that often involve new forms of regulatory and investment control (Viscusi et al., 2005). A strategy related to this research project involves the conversion of public enterprise operations, typically driven by social welfare maximization objectives, to a private enterprise model that includes explicit economic regulation. For civil aviation, this has meant a structural shift in the past two decades away from state investment and control. As Brooks and Prentice (2001) noted, the changing role of the state from the owner of major components of the civil aviation industry (e.g. airports and airlines) to the regulator of private sector assets, removing state control over strategic decisions became a highly
relevant public policy debate during the early part of the study period. Second, as suggested by Viscusi et al. (2005), the conceptual rationale for the state to continue with policy intervention over private assets relates to the following issues:

"substantial externalities…from economic behaviour and the information gaps that can result in systemic hazards not being sufficiently addressed at the firm level". (p. 8)

In the case of the civil aviation industry, the principal externalities relate to the absence of incentives to promote a system-wide approach to safety and security management, as firms only benefit when they avoid internal physical losses and damage to their private trademarks. Similarly, civil aviation firms have no incentive to support broad public policy goals such as enhancement of national security, especially as the industry becomes "footloose", becoming less territorially bounded in regard to both operational scope and national ownership. However, while airlines gather passenger information for their own purposes, the combination of private data with public sector intelligence can lead to the identification and avoidance of national security threats.

As firms would have no market incentive to share commercially sensitive information with third parties without a reciprocal benefit, the regulatory imperative becomes a de facto state tool. Kwoka and White (2004) identified how the theory of private regulation addresses these kinds of market failures. However, serious difficulties have emerged for civil aviation firms when states implement border controls beyond the territorial limit. For example, on October 29, 2010, Air Canada became the victim of an elaborate foreign conspiracy at the Hong Kong International airport involving a
convincingly disguised traveler destined for Cana (Air Canada Interview, 2010; CBSA, 2010). Accordingly, while states implement regulations to require firms to meet a wide range of public policy objectives, in this case the airline failed to successfully perform a required quasi-state function of pre-clearing travelers at a foreign airport, without the tools, staff, or necessary training to detect this sophisticated criminal activity. As such, the question arises to whether the extra-territorial border controls maybe an abuse of state authority to regulate private activity, when the regulatory compulsion directs firms to perform acts beyond their legitimate role and capacity.

Third, in the pioneering analysis by Polachek (1980), this work “substantiates with evidence a strong and robust negative association between conflict and trade”. Polachek referred to Russett (1967), who defined conflict not just as threats and/or actual violence towards other states, but also “includes retaliatory tariffs, quotas, embargoes, and other trade prohibitions”. These concerns become evident in the case studies, which revealed that as states implemented pre-journey data sharing, tensions became evident between origin, transit, and destination states. However, in the case of the other ABC programs, and despite differing national security protocols, the states involved were able to find solutions to inter-state and state-firm interests.

Other academic perspectives support the notion that states will make significant efforts to mitigate inter-state conflicts in order to avoid negative implications for trading firms. Alesina and Spolaore (2003) similarly contended that where states come into conflict, trade suffers, prompting considerable implications for economic activity. For example, the Government of Canada identified, in an unclassified report, the negative economic impacts on the civil aviation industry of the national security measures
introduced after 9/11, which included the expanded APIS requirements (InterVISTAS Consulting Inc., 2005). The response by the Canadian government was both outward in forming new security relations with the U.S. (Sands, 2006), and inwards with financial support for national security related investments serving Canadian private sector transportation infrastructure (Canada Ministry of Transport, 2009b). For these reasons, the literature needs to give attention to these new forms of border control partnerships that have formed between the public and private sector.

However, these arrangements are not the traditional kind of private - public partnerships where the private sector enters into for-profit agreements to deliver services to, or on behalf of, government. Siemiatycki (2011) provided an excellent summary of these traditional frameworks for repeat state-firm collaboration. This type of literature does not address firms participating in state service delivery that is an incidental component of the transportation function. While Siemiatycki observed that “throughout the world, public-private partnerships have become increasingly popular as a strategy to deliver large transportation projects, such as roads, bridges, tunnels, railways, seaports, and airports”. (Ibid, p. 310), but what remains unchallenged is why airports would construct border control facilities on their own volition, or even proceed to lead on the development of ABC programs. As observed by civil aviation firms interviewed for this thesis, the desire to support ABC program development involved a combination of competitive advantage and regulatory compulsion. In this regard, these unusual private - public partnerships were not applicable to other modes where the state pursues border control implementation at state expense.
While the foregoing has mostly addressed state interests in dealing with firms, how and why a firm might adopt a cooperative strategy with the state on sovereignty-related responsibilities warrants attention. Mintzberg and Quinn (1988) re-stated this question in conceptual terms as “who should control the organization” (p. 389). The authors further explained that where states transfer assets to the private sector, the state still has direct and indirect tools to influence firm strategy. Although the state can pursue various strategies, including nationalization, the most relevant concepts herein relate to the regulatory model and strategic partnerships.

Accordingly, Mintzberg and Quinn (1988) identified that the common form of organizational control was the theory of the firm under regulation. Under this model, the state establishes constraints that the firm must comply with through strategy and practice. As the authors noted, “the problems are legendary, including limited resources, lack of information relative to the regulated industry, regulator cooptation, etc.” (p. 395). Robertson (2010) also observed that for expediency reasons the state has long required private firms to support pre-journey inspections. This pattern of remote border control continued into the modern aviation era. From a practical perspective, as firms undertake the carriage of travelers across frontiers for profit-oriented reasons, the regulatory compulsion becomes necessary to obtain support from firms in delivering national security related public goods.

The specific modes of regulation (Dunford, 1990) also require attention as the adopted border control techniques have considerable influence over private and public sector relations. Knox, Agnew, and McCarthy (2003) suggest that as the contemporary economy involves interrelated forms of “production, consumption, and income
distribution”, the form of “government-business relationship” must operate “within wider national and international” trading spheres. From this perspective, traditional regulatory controls have become less effective in influencing flexible production systems and global commodity chains (p. 204). Storper and Harrison (1991) explained that these types of flexible specialization concepts could not remain beyond state influence as the state still has a powerful interest in maintaining the local economic, political, and institutional arrangements necessary for the firm to navigate through international production systems. In considering these concepts as they apply to the organization of civil aviation firms, while the industry may operate at a global scale, firm cooperation with the ABC programs remains grounded in domestic regulation.

Although the regulatory model has significant merit, Mintzberg and Quinn (1988) believed that where the regulatory technique fails, persuasion can “provoke corporations to act beyond some base level of behaviour” based on means that are “informal, flexible, and focused; hence, it has been highly successful” (p. 396). The suggestion that the firm can be “trusted” without strict adherence to legal text and compulsion is likely to receive considerable rebuke from some academic quarters. The authors responded that trust must be accepted by the state as a tool in achieving negotiated outcomes; however, this must be within limits, as some elements of business practice simply have no place in societal development. In a globalizing world, the state has no choice but to consider employing all legitimate ways to engage firms, recognizing the trans-national sphere of influence that firms must navigate.

The concept of state-firm trust therefore becomes an important consideration in this research. This concept of mutual reliance and bilateral acceptance is useful in
understanding ABC programs and implications for the complicated interplay between state-to-state and state-to-firm relations. Game theory and the prisoner’s dilemma are also useful in explaining the formation and maintenance of “trust” (Kydd, 2005). In a globalizing world, where the firm and the state are under intense scrutiny at the local and global levels, “cooperation can be sustainable if the players care enough about future payoffs” (p. 10). Notably, these concepts do have some weaknesses when considering the problems of uncertainty over time and power-relations between the parties in a transaction. Nevertheless, Hardin (2002) argued that maintaining trust is possible where “the source of this interest is the desire to keep mutually beneficial relationships going over time”.

This concept of state-firm trust assists in explaining the high levels of interaction evident in the case studies, despite the significant differences in objectives for private transportation firms and border control agencies. For example, Ellermann (2006) explained that through a “conflict pre-emption” strategy, which in this case involved the state using pre-journey border controls to prevent national security risks from reaching the territorial frontier, both parties have much to gain. Similarly, Schattschneider (1957) argued that, “one of the most conclusive ways of checking the rise of conflict is simply to provide no arena for it” (p. 934). For the firm, corporate strategy principles encouraging cooperation with regulators can build goodwill on other matters of importance, and can contribute to forming competitive advantages. Integrative strategies also reduce the risks of the firm participating in socially unacceptable activities: a circumstance that can have negative consequences for both the state and the firms involved. Thus, cooperation in such a high-risk environment is not surprising.
Admittedly, in other fields involving state intervention outside the territory, these activities involve no private sector participation. However, in the case of transportation provided by private firms, the interface between border controls and this commercial activity is inherent to the trans-national form of this endeavour. Thus, the ability for one party to act without cooperating with the other is improbable, especially when attempting to undertake complex forward inspection operations where partnerships are likely to achieve better outcomes for both parties. As well, with the expectation that states act rationally to achieve their objectives with the least public controversy, the use of firm assets to support pre-journey border control techniques provides the state with the opportunity to “hide the costs of regulation” (Ellermann, 2006). As identified in the case studies, these public service obligations do remain, although “hidden” through the transfer to the private sector in a discrete manner and without compensation.

In any event, firms must determine their response to state priorities that create undesirable constraints to the achievement of corporate objectives. In the field of relations with the state on border control policy, the case studies identify that bargaining to achieve negotiated agreements remains the most viable approach. This bargaining process involves the firm persuading the state and other stakeholders to accept corporate propositions. Dixit and Nalebuff (1991) also contended that in a globalizing world, the firm faces “multi-dimensional bargaining where culturally diverse parties will identify and value objectives differently” (p. 294). Furthermore, Rugman and Verbeke (2003) indicated that in order to achieve a negotiated settlement, the relative costs, and benefits of solutions must recognize local specificities, creating considerable difficulty for multinational enterprises in establishing successful global strategies. The literature
on civil aviation firm development identifies these foregoing issues, but not in relation to
the powerful national security interests that have emerged, especially after 9/11.

Dixit and Nalebuff (1991) also observed that where the state has developed
policies aligned and linked with other states, the firm would need to consider the
position of competitor firms, and their own corporate strategies on a cross-jurisdictional
basis. This leads to firms forming trade associations involving similarly interested
parties, typically with competitors in the same market space. These inter-firm
collaborative approaches can lead to private - public sector bargains that involve jointly
implemented solutions. Interestingly, private associations can create opportunities to
constrain undesirable state action by harnessing disparate voices and extending
advocacy across frontiers.

In considering the disparate forms of firm and association linkages established to
influence state and inter-state policy objectives, these relationships are influenced by
the corporate and broader national milieu in which the firms are “embedded” (Helliwell,
2005). Without repeating the breadth of corporate culture literature, a few observations
are relevant for this research project. First, historical relations between organizations
and individuals can have material implications for the evolution of modern relations
between these parties. For example, Smith (2000) explained in the case of E.U. and
U.S. relations that these threads of connections and linkages are evident and in:

“the tangled story of airline alliances and the transatlantic airline market, it
has been possible to see historical linkages such as those between Britain
and the USA, institutional linkages between competition policy authorities,
regional linkages and competition between airline 'hubs' and clearly the
complex interconnections between governments and public or privately
owned flag carriers”. (p. 819)
Smith further observed that relations between states do not neatly fit within the scope of international relations theory. This literature noted the influence of the private sector in commercial relations, specifically pointing out that, “private corporate networks, for example in the aviation industry, have profound implications for the pattern and outcomes of E.U. - US negotiations” (ibid, p. 820). Similarly, Graham (2010) noted that the geo-politics of global air transport remains a strong element in inter-state relations and contrary to what globalization theorists might suggest, the:

“historical regulation of air transport does, however, still impose significant constraints on the sector’s ability to respond to globalization and fragmentation requires the implementation of liberalized air service agreements”. (Foreword)

Furthermore, as revealed in the complaints from small airports in Canada identified in the research, this territorial “rootedness” creates serious obstacles for the diffusion of economic activity in a globalizing world, as the:

“major network carriers thus tend to remain firmly fixed into a nation-state framework despite the dispersal inherent in globalized network economies, [and is] one reason why national capitals also tend to be the pre-eminent national hubs”. (ibid)
As well, Dicken (1998) indicated that civil aviation firms remain highly dependent on the state, facing the struggle between globalization and localization, as follows:

“Despite the revolution in air transport and other communications technologies, all economic activity is grounded in specific locations, ‘both physically, in the form of sunk costs, and less tangibly in the form of localized social relationships’ (p. 11)
The final observation regarding cultural perspectives on state-firm relations has to do with differing responses to violent tragedies, which was certainly evident with 9/11. In an account of the 1988 attack on Pan Am 103 by agents of the Libyan government, Pinsdorf (1991) explained that how “the multinational (Scotland, U.K., West Germany, United States, Israel, Finland, and several Middle Eastern) investigations were conducted revealed deep cultural differences” (p. 41). The manner in which Canada and the Netherlands responded to 9/11 also reflected cultural differences, which in turn influenced the trajectory of state-firm relations in the ABC program field.

Thus, the state-firm relations literature has much to offer, addressing the forms of relations and bargains between the parties that for two decades have pursued an extensive level of cooperation. However, the literature does not address the levels of co-dependence between the civil aviation sector and border control agencies in pursuit of the twin objectives of improving trade flows and national security priorities.

2.9. Literature Assessment Summary

In concluding, Brunet-Jailly (2007) admitted that border studies were an evolving topic, requiring attention to multiple scales and different conceptual perspectives. In the modern era, these studies must address ICT and “fast-transport” systems (Castells, 2001), which is core to this research. New security techniques that include biometrics have begun to draw critical academic attention. However, the recent literature focuses mostly on state-citizen relations, rather than concern for state-firm interaction. The
literature also acknowledges that local and regional political issues have considerable influence on border controls, with the ABC programs influencing the frontier landscape.

Second, globalization theories support the changes in the civil aviation industry concerning both market expansion and the structural changes that have enabled the reorganization of traditional public assets to privately operated airlines and airports. The result has been rapid growth in air travel markets, which created tremendous pressures for border control agencies. Torpey (2000) and Ansell and Di Palma (2004) observed that these changes are raising questions regarding the role of the state in managing these extra-territorial interactions. As McCallum (1995) and Helliwell (1996) articulated, borders have a considerable influence over trade flows, and thus state efforts at enabling “openness” can contribute to economic development. This research extensively deals with the globalization issue as the expansion of ABC programs could only have occurred with explicit inter-state and state-firm agreements.

Even though the transportation geography literature identifies the framework for network development (e.g. Black, 2003; Keeling, 2009; Hall, 2010), how the civil aviation industry has responded to the virtual and extra-territorial border control programs remains under studied. Furthermore, this lack of attention to national security, inter-state relations, and migration has gaps parallel to those in the civil aviation literature. While much debate, especially after 9/11, has dealt with inter-state conflicts that arise with temporary and permanent migratory pressures at state frontiers, the interests of the private sector and public agencies cooperatively engaged at territorial frontiers remains understudied. As these virtual and extra-territorial programs expand, and enable further state penetration into the territory of other sovereign jurisdictions, the
potential for expanding conflict (e.g. U.S. - E.U. APIS) will only grow making this topic ripe for further engagement.

Interestingly, relevant literature (e.g. Butler, 2004; Hyndmann and Mountz, 2008) has emerged regarding how states and firms cooperate to manage migrant flows beyond the reach of traditional legal protections; practices that can create serious human rights issues (e.g. the Maher Arar incident). Moreover, the research project identified that among some interview participants these issues were of importance. States and firms should encourage this discourse to identify solutions, which is necessary to avoid the ABC programs from coming into disfavour from unchecked levels of societal harm.

Finally, the literature that addresses state-firm relations was useful in identifying the evolving roles of the private and public sectors in a globalized economy. Of particular interest was the literature dealing with conflict and trade that revealed that firms and states desire reduced inter-state conflict, as upsets will impede trade activity. As such, the ABC programs under study are foundational to civil aviation facilitation, contributing to the flow of international travel activity across territorial frontiers. The literature on "conflict pre-emption" (Ellermann, 2006) also assisted in understanding why firms and states would cooperate on contentious virtual and extra-territorial border controls. What remains in this topic area for the research to explain is why states and firms have extended their relationships into forms of co-dependence that clearly are fraught with political and economic risks. This question is especially poignant when considering that the state-firm relations evident in the Canadian and the Dutch case
studies involve direct engagement with the sensitive post-9/11 U.S. national security regime.
Part II Research Topic Background and Case Study Assessment

Chapter 3. Civil Aviation and ABC Program Background

3.1. Introduction

Part II of the thesis contains the empirical evidence to address the questions identified in Chapter 2. The relationship between civil aviation activity and economic growth is explained in this chapter, along with an explanation of the global regulatory context, and the leading industry and ABC program examples based on the periods: prior to 1985; rapid international growth from 1985 to 2000; and post-9/11 to 2010. Chapter 4 then highlights the key relationships between the state and firms involved. The subsequent three chapters (i.e. Chapters 5, 6, and 7) provide the case study details, commencing with the global context, then Canada, followed by the Netherlands.

3.2. Research Topic Background

“Border security has been high on public-policy agendas in Europe and North America since the September 11, 2001 attacks…Governments are now confronted with managing secure borders, a policy objective that, in this era of increased free trade and globalization, must compete with intense cross-border flows of people and goods” (Brunet-Jailly, 2007).

The foregoing passage illustrates the persistent myth that 9/11 became the “tipping point” for a new border control paradigm. Instead, the reality is different as reflected by the Canadian and Dutch ABC programs that confirm the long-held
convergence of state and firm interests. However, these innovative border control systems are minor in comparison to other global actions underway to deal with transnational and non-state threats arising from political violence and criminality.

In particular, while 9/11 brought Al-Qaida to stark global attention, the UN Security Council had in 1999 already established *The Committee pursuant to resolution 1267 (1999) and 1989 (2011) concerning Al-Qaida*. The purpose of establishing this “global net” was to permit sanctions and other aggressive tools for the apprehension of listed persons, starting with Usama bin Laden (UN Security Council, 1999). The effort to prevent further Al-Qaida led terrorist attacks was well underway when the strikes occurred in the U.S., although the post-9/11 response was considerably more assertive.

Another example of pre-9/11 policy change, which has had major influence on border control initiatives, involved the *UN Convention against Transnational Organized Crime* (TNOC) treaty that opened for ratification in November 2000 (UN Security Council, 2000). Despite the obvious over-shadowing by 9/11, the TNOC treaty intended to bind the community of states to act in the face of the harm created by non-state actors who were taking advantage of global transportation networks. The 2003 TNOC treaty ratification provided for increased state-to-state cooperation, along with acknowledging the role of the private sector in supporting state actions. As discussed with the ICAO Facilitation Office (see Chapter 5), conceptually, little difference exists between the pre-9/11 TNOC treaty and post-9/11 agreements to tackle movement of politically violent perpetrators through collective allied action by intensifying border controls through cooperation with commercial service providers.
These circumstances created the potential for ICT-based border control programs to change the nexus between the state and firms, permitting new forms of “remote-control” (Zolberg, 2002). By comparison, starting in the early 1990s a new enforcement paradigm became evident in the goods movement sector. The U.S. and Canada jointly adopted trade facilitation measures to eliminate paper manifests in favour of electronic submissions. The benefits related to reducing costs of regulatory compliance and speeding up trade. At the time of policy adoption, the required ICT capacities did not exist, but the ICT development trajectory suggested a path for implementation. In time, the U.S. introduced the Automated Commercial Environment program (U.S. CBP, 2009); while Canada adopted a similar system entitled Advanced Commercial Information, and later a sophisticated eManifest program (CBSA, 2004:2006). From a passenger mode perspective, prior to 9/11, both the Netherlands and Canada were moving towards implementing secure ICT systems that would eventually enable post-9/11 ABC program expansion. Table 2 summarizes the evolution of this interplay between the state and civil aviation firms in North America and Europe.

Part II of the thesis contains the empirical evidence to address the questions identified in Chapter 2. The relationship between civil aviation activity and economic growth is explained in Chapter 3, along with an explanation of the global regulatory context, and the leading industry and ABC program examples based on the periods: prior to 1985; rapid international growth from 1985 to 2000; and post-9/11 to 2010. Chapter 4 then highlights the key relationships between the state and firms involved. The subsequent three chapters (i.e. Chapters 5, 6, and 7) provide the case study details, commencing with the global context, then Canada, followed by the Netherlands.
<table>
<thead>
<tr>
<th>Program</th>
<th>Canada</th>
<th>Date</th>
<th>Netherlands</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Pre-Clearance</td>
<td>Pilot program commences in Toronto</td>
<td>1952</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competing program at Montreal Airport</td>
<td>1954</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expansion to Canada and Caribbean airports</td>
<td>1960s</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Canada-U.S. Treaty</td>
<td>1974</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expansion to Canada and Caribbean airports</td>
<td>1980s</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-Transit Preclearance Request</td>
<td>1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expansion to Ottawa airport</td>
<td>1996</td>
<td>Netherlands - U.S. Treaty</td>
<td>1996</td>
</tr>
<tr>
<td></td>
<td>Treaty Revisions</td>
<td>1999</td>
<td>Aruba airport operations commence</td>
<td>1997</td>
</tr>
<tr>
<td></td>
<td>Expansion to Halifax airport</td>
<td>2006</td>
<td>Treaty Revisions</td>
<td>2008</td>
</tr>
<tr>
<td>Advanced Passenger Information System</td>
<td>Japan pilot program at Vancouver airport</td>
<td>1988</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voluntary program operations</td>
<td>1990s</td>
<td>Voluntary program operations</td>
<td>1990s</td>
</tr>
<tr>
<td></td>
<td>Mandatory post-9/11 implementation</td>
<td>2002</td>
<td>Mandatory post-9/11 implementation</td>
<td>2002</td>
</tr>
<tr>
<td>Automated Border Kiosks</td>
<td>Private - public concept development</td>
<td>1980s</td>
<td>Private - public concept development</td>
<td>1980s</td>
</tr>
<tr>
<td></td>
<td>Private sector business case (i.e. EPPS)</td>
<td>1997</td>
<td>Schiphol airport program lead</td>
<td>1990s</td>
</tr>
<tr>
<td></td>
<td>Temporary program interruption</td>
<td>2001</td>
<td>Re-branding / export (i.e. Privium)</td>
<td>2002</td>
</tr>
<tr>
<td></td>
<td>Canada-U.S. joint NEXUS program</td>
<td>2003</td>
<td>Netherlands - U.S. joint program</td>
<td>2009</td>
</tr>
</tbody>
</table>

3.3. **Industry Wide Traffic Activity**

Without question, globalization has been beneficial to the aviation industry with exponential growth that is often at multiple levels of underlying economic activity. However, from an industry maturity perspective, the International Air Transport Association (IATA) indicates that in Europe and North America, traffic growth should remain tied closely to domestic economic prospects (IATA, 2010). By contrast, economic growth rates in developing states are generating explosive levels of civil aviation expansion, with China reporting projections for the next five years in the 13%-15% range annually (China Aviation Administration of China, 2010). Accordingly, expectations for industry growth in the next two decades rest with the regions of Asia, the Middle East, and North Africa (IATA, 2010). As well, the Boeing Aircraft Company (2010) projected that Asia-Pacific travel will grow in the range of 6%-7% between 2011 and 2030. Boeing acknowledged, in preparing these forecasts, the need for attention to policy choices in a variety of related fields, including the challenges of facilitating this level of international activity.

Furthermore, Weber and Williams (2001) identified that real GDP growth has been the principal air passenger driver in the past 50 years or so. For example, in 2000, the civil aviation industry carried 181 times more travelers than the nine million passengers handled in 1945 (ICAO, 2005b). A correlation also existed between the civil aviation and economic structural changes, especially as related to local and regional economies. The scale of activity is such that in 1998, the global carriage of goods and people contributed a direct value-added output of $370 billion to the world
economy and produced an aggregate six million jobs (ibid). The ICAO report further focussed attention on the broader economic catalyst effects, identifying that entire components of the world economy would be handicapped, or unable to function at all in the absence of rapid mobility by air.

According to the IATA (2006), governments and the public did not understand the influence of the civil aviation industry on global affairs, as follows:

“The sheer scale and global industry reach, and its technological innovation, support the oft-cited statistic that the travel and tourism industry drive 12% to 15% of the world output of goods and services…which in turn generates…

Positive links between connectivity and productivity … modelling shows connectivity has a statistically significant relationship with labour productivity levels. It shows that a 10% rise in connectivity, relative to a country’s GDP, will boost labour productivity levels by 0.07%; and,

Greater impacts for Developing Countries … relationship between connectivity and productivity is logarithmic (i.e. based on percentage change in both values), rather than linear. This suggests air transport investment in developing or transition countries, where connectivity is relatively low, will have a larger productivity impact than a similar level of investment in a relatively developed country” (p. 5).

According to Micco and Serebrisky (2006), airline liberalization and growth in competitive forces had also driven down unit costs, which had become a further catalyst for passenger traffic growth, as noted:

“changes in the regulatory set-up helped reduce air transport costs. For example, from 1990-2003 introduction of Open Skies Agreements (OSA) reduced nominal air transport costs by 9% and increased by 7% share of physical imports arriving by air within 3 years of an OSA being signed”.

117
While civil aviation may be important in its own right, and undoubtedly has trade and travel catalytic effects, at a basic level it is only a tool of globalization. For global mobility to work effectively, the study of the uneven negotiation of “border-spaces” becomes an imperative. As such, the limits of the state are no longer located at the physical frontier. Instead, the new “border-spaces’ are situated at airports serving the “creative cities” (Florida, 2005). Thus, as Florida argued, improving international connectivity is critical to encouraging innovation and reducing uneven development, which is especially relevant in a world where global expertise expects to move freely from opportunity to opportunity. Richardson (2006) expanded on this view, as follows:

“the new economy requires more cross-border integration and more predictable and transparent border regulations when it comes to movement of professionals across international boundaries” (p. 241).

3.4. **Case Study (Canada and Netherlands) Traffic Activity**

First, it is important to point out the practical reason why border controls are a crucial element in civil aviation development in both case study domains. For the Netherlands, all air travel is international, even when involving flights to nearby European Community (E.C.) member states covered by the Schengen Agreement Area (SAA). As such, the Amsterdam Schiphol airport, together with the smaller airports in Rotterdam and Eindhoven, handled nearly 50 million passengers annually (Schiphol Group, 2010). For Canada, total air passenger travel involved more than 75 million trips, with approximately 57% represented by travel to either the U.S., or another foreign country (Canada, Ministry of Transport, 2010). By comparison, U.S. air
travel is more than 10 times the Canadian volume, but international air trips represented only 20% of total travel in 2010. In addition, and despite a further decade of globalization, U.S. international air travel barely increased from the 18% level in 2000, the year prior to 9/11 (U.S. Department of Transport, 2011).

Airline growth patterns in both Canada and the Netherlands were similar. For example, Table 3 identifies for the Canadian sites, the route and seat availability changes between 1994 and 2005. This table clearly shows the dramatic increase in Canada-U.S. air traffic for which the ABC programs under study contributed to facilitating trans-border access and delivering improved customer service. However, the assignment of causality to the ABC programs under study warrants caution. In a similar vein as to how the civil aviation industry acts as a globalization enabler, ABC programs remain by case study interviewees as just another facilitation tool. Conversely, as noted in the following chapters, the absence of the ABC programs would have altered the ability for the civil aviation industry to attract new traffic flows.

Table 3 Canada–U.S. Air Route and Capacity Changes (1994 - 2005)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Toronto (1952)</td>
<td>27</td>
<td>48</td>
<td>12,600</td>
<td>18,400</td>
<td>45%</td>
</tr>
<tr>
<td>Montreal (1954)</td>
<td>14</td>
<td>24</td>
<td>5,400</td>
<td>6,300</td>
<td>16%</td>
</tr>
<tr>
<td>Vancouver (1968)</td>
<td>9</td>
<td>24</td>
<td>4,700</td>
<td>7,800</td>
<td>68%</td>
</tr>
<tr>
<td>Ottawa (1996)</td>
<td>7</td>
<td>12</td>
<td>800</td>
<td>1,600</td>
<td>92%</td>
</tr>
</tbody>
</table>

Source: Courtesy of InterVISTAS Consulting Inc., 2005
Both Amsterdam and Aruba airport advised that similar detailed route specific information is not available. However, Aruba explained that the introduction of USPC in 1997 was an important catalyst for stimulating the U.S. market. Amsterdam Airport advised that U.S. origin and destined passenger traffic activity increased from 1.994 million passengers in 1992 to 5.024 million in 2008. In order to accommodate this passenger activity, the number of flights between the U.S. and the Netherlands increased 125% to 33 round-trips per day in 2008 (Schiphol Group Interview, 2010).

3.5. **Global Regulatory Framework**

The civil aviation industry in both case study domains operates within a global regulatory framework. As identified in *The Compendium of International Civil Aviation* (Groenewege, 2003), this regime began at the end of World War II when allied leaders identified that the fledgling industry could support post-war reconstruction. In late 1944, the U.S. invited 52 nations to formulate a commercial aviation treaty. The “Chicago Convention” included the creation of the ICAO (p.19). The treaty reinvigorated the International Air Transportation Association (IATA) that had commenced in 1919 to encourage collaboration between states and the airline industry (p. 219:224).

As well, the ICAO treaty became an example of the potential peacetime benefits that might accompany the completion of the 1944 negotiations to formulate the United Nations itself (ibid, p. 183). Over time, the ICAO secretariat has become “the” preeminent global aviation forum for cooperation among member states. Since its inception, the ICAO’s objectives have been to enhance civil aviation safety and
security; foster harmonized and economically viable international development; and, in recent years have encouraged pursuit of these efforts in an environmentally friendly manner (ICAO, 2010). The Chicago Convention also established the international public air law framework. In keeping with UN principles, this involved assurances that each state had exclusive airspace sovereignty. In order to ensure efficient trans-national flights, states adopted commercial rights otherwise known as “freedoms of the air”. The operations of state and military flights remain separate, although these sectors operate in a harmonized manner (Groenewege, 2003).

Figure 4 identifies the ICAO decision-making process that involves a state-to-state consensus framework and engagement from the civil aviation industry with regard to policy and implementation. The ICAO secretariat, based in Montreal, Canada, facilitates policy approval that then becomes the minimum legal foundation for member states to adopt into domestic law. The dialogue between states and the industry is refined through national and supra-national “Working Groups”, with the objective of ensuring consistency with the overarching treaty principles.

The following ICAO policy documents (see Bibliography for full reference) have considerable influence on civil aviation cooperation with border control matters:

- ICAO Doc 7500 International Air Services Transit Agreement;
- ICAO Doc 7695 Multilateral Agreement on Commercial Air Services in Europe;
- ICAO Cir 284 Privatization in Provision of Airports and Air Navigation Services;
- ICAO Cir 327 Regional Differences in International Airline Operating Economics;
- ICAO Doc 9944 Guidelines on Passenger Name Record (PNR) Data; and
- ICAO Doc 9626 Manual on the Regulation of International Air Transport.
The ICAO also provides technical knowledge to support the formation of global policy consensus. As industry frequently advances innovations for state acceptance, the process in Figure 4 does not necessarily commence with state-to-state proposals. However, this formal step is eventually required as only member states may participate in the ICAO deliberations. In principle, the treaty provides mechanisms that permit
national exceptions to address domestic issues, with a reconciliation process where trans-national implications arise from different policies at the local level (ibid, p. 183).

The ICAO is also involved in encouraging ongoing collaboration with the civil aviation industry to ensure the effective implementation of newly adopted policies and programs. Once the various ICAO supported state-industry working groups assess the practicalities of policy change, the ICAO General Assembly seeks consensus through input from all member states. Once adopted by the ICAO members, each state must adopt the policies and programs into domestic legislation, and then ensure that the civil aviation industry implements the requirements consistent with international obligations. For example, in the post-9/11 environment, the ICAO General Assembly adopted revised passport document control policies (Doc 9303, Version 6) with the purpose of reducing fraud and encouraging international cooperation to prevent the movement of terrorists and trans-national criminal operatives (ICAO, 2006).

The ICAO and parallel national regulatory agencies pursue international harmonization through the establishment of “Standards and Recommended Practices” (SARPs). While the SARPs address numerous other inter-related aviation technical subjects, the SARPs Facilitation Annex #9 was identified as an important topic in the original Chicago Convention, as follows (ICAO, 2007):

“Article 37 of the Chicago Convention obligates States to ...collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures, and organization ... in which such uniformity will facilitate and improve air navigation” (p. 1).
Accordingly, the ICAO Facilitation Annex #9 establishes minimum standards and practices, along with identifying detailed guidance pertaining to facilitating the clearance of commercial traffic through national security related functions such as customs, immigration, public health, and agriculture authorities. It also acts as a reference manual for airport managers, as well as describing the maximum civil aviation industry limits, obligations, and the minimum facility requirements necessary for the efficient functioning of border control processes (Groenewege, 2003). In addition, the Annex provisions specify the methods and procedures for carrying out border clearance operations to meet the twin objectives of compliance to state laws and productivity for the involved operators, airports, and government inspection agencies (ibid, p. 863).

Despite the advantages offered by this integrated approach, the ICAO process is subject to a slow decision-making process that is associated with states having to form a domestic consensus before offering positions to this international forum (AirNeth, 2007). Accordingly, when a state wishes to either advance, or respond to air travel facilitation proposals from other states, this normally would involve complex domestic industry consultations. In this regard, the major complaint from the civil aviation industry after 9/11 was that states (e.g. U.S.) pursued border control policy changes without industry consultation and in the absence of a global consensus (IATA Interview, 2010).

As well, in late 2001, the UN Security Council created the Counterterrorism Committee in order to examine how best to secure borders against terrorists and for detecting illicit arms (UN Security Council, 2001). This led to the long-standing ICAO
Facilitation Panel to pursue SARP’s amendments to account for technology, including the APIS pre-journey data-sharing program. The Panel also considered the role of privatized airports in meeting the requirements of border control agencies (ICAO Cir 284, 2002). The ICAO is also involved in partnerships with member states in developing implementation mechanisms for future international travel identity and travel document protocols. As such, in 2007, the UN General Council gave its full support for the ICAO travel document “Blueprint” that will contribute to improving border control effectiveness well into the future. As part of this initiative, the ICAO also developed the “Machine Readable Travel Document (MRTD) Vision 2020” plan that addressed the global harmonization of security-oriented identity management systems. The ICAO considers the Vision 2020 plan as a work in progress, as noted by Siciliano and Kefauver (ICAO, 2006):

“some simply call it a new era of security and identity. To insiders, it has been a long, concerted effort involving dozens of stakeholders and expert groups and a great deal of time, consultation, research, and flexibility from every quarter. No matter how one chooses to characterize the new global, secure, and integral border control and travel document and identity management environment, however, one thing remains very clear: much still remains to be done” (p. 4).

Before concluding the discussion of the ICAO structure, it warrants noting that Facilitation Annex #9 only deals with those national security threats to state sovereignty interests beyond the civil aviation industry itself. Threats to civil aviation from “unlawful interference” are the subject of Security Annex #17, which involves the protection of assets, personnel, and industry clientele (ICAO, 2007). While inter-linkages exist between these two annexes, the overlaps are minor with regard to the
research topic. For clarity therefore, this thesis only addresses the Facilitation Annex #9 related elements of the ICAO policy.

Finally, it is important to explain the linkage between the role of the ICAO and the ABC programs under study. First, it is worth reiterating that the inter-state ICAO agreements constructed an integrated global technical and economic framework that established the base national law requirements. The consequence for member states to bind themselves in this manner was to establish national policy requirements that directly linked how civil aviation firms would operate across international spaces with how states maintained the integrity of their border control programs. For example, when states pursued efforts to expand civil aviation trading relationships (e.g. “Open Skies” agreements), the resulting increased air traffic placed enormous pressure on border control resources. Second, as states began to adapt national security policies to emergent threats and pressing congestion problems, the new ABC techniques were increasingly viewed as supportive of solving these security and facilitation issues. However, a desire existed, at least amongst international airlines, that expansion of ABC programs occur based on global rather than domestic standards. These priorities encouraged ICAO to adopt a range of policies supportive of ABC programs including biometric enabled passports and encouragement of global APIS standards. The importance of these global approaches were not particularly beneficial during the study period, however, as explained in Chapter 8, the future of ABC programs will be highly dependent on a common global policy and technical platform.
3.6. **Early ABC Program Developments (pre-1985)**

This section identifies pre-1985 aviation industry and border control innovations.

3.6.1. **Civil Aviation**

Mass-market air services started in the 1950s with new aircraft types such as the Boeing 707 (Groenewege, 2003). During the 1960s, fuel-efficient turboprop aircraft were launched, followed in the 1970s with wide-body jets (e.g. Boeing 747) that set a new travel service standard. Despite these aircraft technology developments, passenger traffic growth was mostly oriented towards domestic market expansion.

Up to the 1980s, only the U.S. airline sector remained non-state owned. For example, in both Canada and the Netherlands, Air Canada and KLM, respectively, along with the major airports were all state owned and operated. The industry's economic structure, with large sunk cost requirements meant airlines were highly susceptible to external shocks. Routine financial problems generated political controversy, which led to a “slow and uncertain beginning” to the 1980s for the civil aviation industry (ibid, p. 31). As such, Table 4 identifies some of the major events that have affected civil aviation over the past four decades. As evident, the industry has been highly vulnerable to geo-political and economic circumstances. Despite these negative externalities that routinely influenced the industry, traffic growth generally paralleled that of the world economy, with the fastest areas of growth associated with rapid increases in globalization and with industry liberalization.
Table 4 Major External Events Affecting Civil Aviation (1970 - 2010)

<table>
<thead>
<tr>
<th>Period</th>
<th>Major Events</th>
</tr>
</thead>
</table>
| 1970s  | • OPEC embargo increased fuel costs and limited supply  
         • Frequent hijackings and related security events |
| 1980s  | • Major economic recession severely dampened customer demand  
         • End of the “Cold War” permitted major new civil aviation markets |
| 1990s  | • Oil price shock from first Gulf War  
         • Major shift to internet based global communications and trading |
| 2000s  | • Major recession compounded by 9/11 assaults  
         • SARS epidemic in Asia spreading to North America  
         • Financial system driven recession in U.S. and Europe |

Source: Groenewege, 2003, IATA 2010

From a historical perspective, transportation firms have long been involved in extra-territorial border control intervention commencing in the era of “fast” steamships during the 1800s. For example, the U.S. Congress pursued immigration “remote control” to enforce the 1884 U.S. Exclusion Act (Zolberg, 2002). This legislation restricted entry of Chinese nationals, requiring U.S. diplomats to engage the steamship lines to “physically verify various facts” at the foreign departure port (Torpey, 2000). Further development of pre-journey border control programs emerged under the 1921 U.S. Immigration Act, requiring steamship firms to “inspect alien ticket buyers to avoid fines for bringing ineligible immigrants” (Robertson, 2010). Torpey (2000) further noted that in the modern era, “airlines companies have been subjected to similar obligations …and air carriers have frequently resisted carrying out the sheriff’s deputy function, mainly because they fear that their participation in such quasi-governmental activities will hurt their profitability” (p. 10).
Another important development involved the ability to link identity through automation, known as “biometrics” (Lloyd, 2003). Table 3 identifies how these systems have had a considerable history in both the U.S. and Europe.

Table 5 Major Biometric System Developments (1920 - 1980)

<table>
<thead>
<tr>
<th>Decade</th>
<th>Major Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>League of Nations passport developed containing the photograph of the traveler permanently attached to the document</td>
</tr>
<tr>
<td>1930</td>
<td>Early research focused on systems that could identify human features, which started with development of iris recognition techniques</td>
</tr>
<tr>
<td>1940</td>
<td>Post World War II studies accelerated with nascent computing capacity</td>
</tr>
<tr>
<td>1950</td>
<td>Significant research undertaken involving emergent biometric models using face, fingerprint, and even acoustic recognition systems</td>
</tr>
<tr>
<td>1960</td>
<td>Fingerprint became the de facto U.S. standard, as the Federal Bureau of Investigation pursued automation to vet the national criminal database</td>
</tr>
<tr>
<td>1970</td>
<td>Military applications utilized biometric-based identity systems in support of national security objectives leading to major patents</td>
</tr>
<tr>
<td>1980</td>
<td>“Biometric Consortium” established as a global public-private association to further research and development of biometric systems</td>
</tr>
</tbody>
</table>

Source: Lloyd, 2003; U.S. White House, 2008; Biometric Consortium, 2010

3.6.2. **ABC Programs**

In response to growing levels of air traffic between Canada and the U.S., the earliest type of ABC program was the USPC service. The U.S. Customs Service (CS), at the time a division of the U.S. Treasury, began operations at the Toronto (Malton)
airport in 1952 (U.S. Comptroller General, 1980). This initiative began at the behest of American Airlines, who expressed “the belief that such a system would aid in the efficient use of its [corporate] resources” (ibid, p. 9). As American Airlines, amongst other major airlines began to introduce “hub and spoke” operations, the ability to have international travelers arrive in the U.S. as a domestic passenger facilitated the connecting process. In addition to this customer service advantage, as noted in the Airport Development Reference Manual (IATA, 2004), the relocated border control process also reduced congestion at U.S. airports that were originally designed in a manner that best suited domestic airlines. The USPC program expanded to the Montreal airport in 1954, and in 1968 to the Vancouver airport (McGrath, 1992).

In keeping with the central thesis question that ABC programs represented a matter of importance to civil aviation corporate strategy, the expansion of the USPC program from Toronto (Malton) to Montreal demonstrated the early competitive issues that emerged with border control congestion. According to McGrath (1992), the U.S. airlines serving Montreal airport were concerned with the potential loss of competitive position with Toronto’s successful USPC operations, as follows:

“In May 1952, Colonial and Northeast Airlines expressed an interest in having pre-clearance service (provided by U.S. [Customs] Inspection Services) established at Montreal it was working well at Toronto with the strong support of American Airlines. But since the Dorval terminal building was already overcrowded, the [Canadian] Department of Transport, could not allow the new facility to be set up. The airlines, nevertheless, acted on their own and, on November 23, U.S. Immigration staff arrived and began to work at the airline counters. On December 22, 1954, the Deputy Minister of Transport ruled that pre-clearance at Montreal must be stopped until new building facilities could be provided; and in February 1955, the airlines were told to discontinue pre-clearance. But they resisted, and in April, the Department had to agree to let pre-clearance continue on an interim basis”. (p. 150).
Unfortunately, this limited historical account did not provide an explanation of how airlines could achieve the goal of retaining USPC operations over the objection of the Government of Canada representatives. From an analytical perspective, it would appear that U.S. airlines successfully undertook considerable political engagement to enable the USPC program to expand to this site in the face of this opposition.

The USPC programs at Toronto, Montreal, and Vancouver airports were strongly supported by the airline industry, and remarkably continued operations without either statutory or treaty authority. By the 1970s, the industry became aware of the political gap and treaty talks began to avoid program termination at the existing USPC sites. This concern arose as the U.S. Customs Service (USCS) was not particularly supportive and thus the industry understood that “agreements [needed to be] negotiated with foreign governments … [and thus] the negotiations were lobbied for, intensely, by the airline and tourist industries” (U.S. Comptroller General, 1980).

The 1980 audit reinforced the contrarian view from the very agency charged with program delivery. The audit identified that “USPC provided no real advantages in the USCS primary [enforcement] mission” (ibid, p. 3). Despite these concerns and with the desire to retain the program, the Air Transport Association of America (ATA) viewed that “airlines taking advantage of USPC experience substantial savings in capital outlays and annual operating expenses…and eliminating USPC could disrupt the whole operation of an airline”. In 1979, the ATA prompted by risk of service denial submitted its views to the U.S. Congress regarding program merits, as follows:
“In general, USPC provides a wide variety of benefits. The benefits to U.S. 
agencies and other interested parties are:
• Animal and Plant Health Inspection Service (APHIS) is able to interdict 
illegal products before they enter the US;
• INS is able to interdict inadmissible aliens before departure for the U.S.;
• U.S. airlines gain commercial advantages and efficiently use resources;
• Passengers benefit from greater convenience, especially travelling on 
the same airline bound beyond the initial U.S. gateway; and
• Relieved 20% of passenger clearance at U.S. gateways” (ibid, p. 8).

Eventually, border controls outside of the U.S. territory became authorized by 
the 1930 U.S. Tariff Duties Act, U.S. Title 19, Chapter 4, Subtitle III, Part V, U.S. Code 
1629, which required a treaty or executive agreement to permit “Inspections and 
preclearance in foreign countries” (U.S. Congress, 1930, as amended). The statute 
also permitted the reciprocal stationing of foreign inspectors on U.S. territory, although 
to-date no state has undertaken a U.S. territory based outbound inspection program. 
This lack of reciprocal activity arises as the U.S. has numerous international gateways, 
thus creating major operational and resource challenges for a foreign state wishing to 
deliver border controls in multiple U.S. airports (Private Consultancy Interview, 2010).

The success of the USPC operations at the various Canadian sites (i.e. Toronto, 
Montreal, and Vancouver) provided the impetus for an exchange of diplomatic notes 
that eventually led to the approval of the 1974 Canada-U.S. Air Transport Preclearance 
Service (USPC) Agreement (Karas, 2000). The agreement with Canada also created 
the framework for implementation of the USPC program in Bermuda and the Bahamas 
in the early 1980s.

No examples in this early period of civil aviation pre-journey data sharing or 
biometric use for border control purposes became evident during the research.
However, the research did identify that states had long established methods for making pre-departure determination decisions through other forms of transactions with transportation firms. These border control efforts primarily related to the establishment of entry visa requirements issued at foreign consulates, which transportation firms were required to verify at point-of-departure (Torpey, 2000). This later topic involving visa requirements and consequent airline interrogation is not part of this research project.


Given the heavy state control of civil aviation arising from asset ownership up until the 1980s, frequent conflicts between transportation and trade policy emerged (Pitfield and Button, 1991). As such, the system of agreements under the 1944 ICAO Convention between states for trade in civil aviation services, generally known as “air bilaterals” often resulted in the protection of nationalized firms by restricting the numbers of airlines and airports that could be served. Consequently, at least in the airline sector, this limited the ability for the private sector to offer competitive air services. However, the air bilateral agreements not only applied to the types of air services that could be offered by airlines, but in keeping with ICAO Doc 9626, Manual on the Regulation of International Air Transport, the terms generally specified the particular gateway airports for such international services (ICAO, 2004a). This had the powerful effect of concentrating international air services at select airport gateways, which in turn limited the need for border control agencies to provide services at all domestic airports.
Accordingly, the shift to a system of international air service liberalization, including “Open Skies” regimes after the 1980s, could only occur when multiple states eventually made similar public policy choices to pursue trade agreements that advanced trade and consumer benefits over traditional protection of state industry interests (Pitfield and Button, 1991). By this stage, globalization pressures were insurmountable and protection of the domestic civil aviation sector became increasingly difficult to maintain among Western trading states.

These policy changes emphasized the private sector to have greater freedom to pursue trans-national markets. This process started in domestic U.S. policy in 1978 with the enactment of the U.S. Airline Deregulation Act, followed by domestic policy changes in Europe, Canada, and Australia. These shifts led to considerable market freedoms, with the pattern expanding in the mid-1980s to include international air services through liberalized “Open Skies” Agreements (OSA) trading arrangements (Groenewege, 2003). In keeping with the concepts regarding the formation of new international production networks and clusters, changes to industry structure and the re-location to alternative central nodes (i.e. airports) was a key factor in this policy shift (Derudder and Witlox, 2008). According to Tretheway and Emerson (1994), states such as Canada began to redefine the role of airports in the “post-industrial economy” with the potential to create jobs and value-added opportunities, with an emphasis on:

“All desirable high-tech knowledge industries are highly dependent on human capital. Human capital industries all have the characteristic that connections between people are of critical importance. These industries require world-class and inexpensive tele-communications. They also require frequent air travel” (p. 6).

The Conservative government of Prime Minister Brian Mulroney (1984-1993) pursued major policy changes that affected Canada’s economic structure, including a broad-scale liberalization policy. For example, in 1988, the Government of Canada sold the national airline, Air Canada, to private interests (Air Canada, 2010). Similarly, in 1985, another policy shift involved the shedding of the centralized control of major Canadian airports operated by the national government. By 1992, private sector locally based airport authorities began operations (i.e. Montreal, Vancouver, Edmonton, and Calgary), with other airports transferred under a revised policy in 1995 (i.e. Toronto, Ottawa, Winnipeg, Halifax). According to Brook and Prentice (2000), the objective of the devolution policy was to put airports “in the hands of community leaders, [where] opportunities to achieve the airport’s potential as an ‘economic engine’ could be maximized” (ibid). These authors note that even sub-national governments encouraged these changes in anticipation of local benefits. The liberalization policy also led to the transfer of Canada’s air traffic navigation system to the private sector in 1997 (Groenewege, 2003). Furthermore, the Mulroney government pursued a major trade policy change that led to the CUFTA in 1988, which became the foundation for future changes to the trading relationship in the civil aviation sector described later in this section.

The “liberated” airports began to advocate for their interests, and pursued with the national government the desire for an “Open Skies” agreement with the U.S. as documented in *Airport Devolution: The Canadian Experience* (Brooks and Prentice,
For example, prior to liberalization, the Vancouver airport identified that the pre-1995 Canada-U.S. air service bilateral permitted only six routes to the U.S. from Canada’s third largest city, with only one route permitted east of the Rocky Mountains, to Chicago. Consequently, the revisions to the Canada-U.S. OSA concluded soon after the 1994 NAFTA (Canada, Department of Foreign Affairs, 1995). The liberalized treaty acknowledged that market forces should be the primary driver for determining airline routings with minimum government regulation. Also permitted were formal alliances between airlines, such as those involving Air Canada (Star Alliance) and KLM (Sky Team Alliance), subject to competition law considerations. However, the policy retained limits to foreign ownership. The expected agreement outcomes revolved around an integration of airline networks that would permit greater efficiencies, lower costs, offer better customer service, and build a foundation for competing on an international basis.

Paradoxically, the 1995 Canada-U.S. “Open Skies” agreement included an initial restriction on traffic rights for airlines to carry in-transit passengers beyond either country. This provision undermined the civil aviation industry objective of achieving In-Transit Preclearance (ITPC) for the Canadian civil aviation sector (Private Consultancy Interview, 2010). In particular, Canadian airports identified that the U.S. Preclearance Service (USPC) program had become an impediment to participation in international air services. While the USPC program was effective for facilitating bi-national travel, it was not possible to permit transit travelers from overseas airports through Canadian airports to U.S. destinations. A further complication arose when the U.S. took the position that the 1974 USPC treaty only applied to passengers who had first entered Canada. At the same time, the U.S. desired changes to how its border control officials
could conduct their responsibilities while working in foreign USPC locations. In order to resolve these twin issues, both states pursued adoption of a new treaty.

Thus, in 1996, negotiations to revise the 1974 USPC treaty commenced. In 1997, a pilot program began at the Vancouver airport to assess the operational issues and to test data sharing arrangements between border officials and the airlines. The negotiations concluded early in 1999, with a new agreement providing for the changes desired by both the U.S. and Canada. In 1999, the Canadian Parliament adopted Bill S22, the Preclearance Act (Karas, 2000) to enshrine the expanded inspection authorities for U.S. border control officers stationed in Canada,

Of considerable implications for relations between the U.S. and Canada, the USPC treaty changes permitted U.S. officials to accept a legally valid oral and/or written statement from passengers seeking entry to the U.S. The agreement provided that should an utterance be knowingly false or deceptive, the traveler would have committed an offence under Canadian law. Furthermore, should the U.S. CBP officer at the Canadian USPC site reasonably suspect that such an offence had occurred; the traveler could no longer voluntarily withdraw their U.S. entry application.

The Canadian Bar Association (CBA) objected to this last provision and pleaded with the Canadian Parliament to reverse the requirement (CBA, 1999). The essence of the CBA argument was that a voluntary withdrawal system was necessary to protect traveler rights and Canadian sovereignty. In Canada to the US: Bilateral Cooperation or Intrusion on Sovereignty? (Karas, 2000), a Canadian immigration lawyer expressed a similar opposing. The argument advanced was essentially that the legislation would “result in a serious abrogation of the rights of travelers on Canadian soil and a
considerable intrusion upon Canadian sovereignty” (p. 145). Despite these objections, the Parliament in due course adopted the legislation.

Canadian airports pursued another form of traveler facilitation involving Automated Border Kiosk (ABK) programs that permitted traveler pre-registration to access a streamlined border control system. The ABK system involved a bank-machine style kiosk to verify traveler identity using a biometric tool (e.g. hand-geometry, fingerprint, or iris recognition), and admissibility confirmation through use of a touch-screen question-answer algorithm. Commencing in the early 1990s, together with the Canadian government, the new private-oriented airports in Canada launched development of the ABK program. The original program concept was called “AIRTEC”, which in 1992 became the “Canadian Passenger Accelerated Service System” (CANPASS) for both air and land border crossing modes (Private Consultancy Interview, 2010). By 1995, the Canadian government and the Vancouver International Airport Authority (YVRAA) were able to inaugurate the pilot CANPASS program. Of note, then Canadian Prime Minister Jean Chrétien received the first “CANPASS” membership card (CABTA, 2002). Subsequently, other Canadian airports established separate channels to enable the passage of “Registered Travelers” (RT), which were linked to other airport commercial offerings.

During the 1990s’, Canadian airports led two attempts to launch ABK programs as part of a larger commercial offering to air travelers. The details of the first initiative are not part of the public record. However, the case study interviews in Chapter 6 refer to these efforts in passing. The Passport Office (Annual Report, 1999) reported on the
second collaboration, known as the *Expedited Passenger Processing Services* (EPPS) program, as follows:

“Expedited Service Initiative: the Canada Passport Office continues to participate with Citizenship and Immigration Canada (CIC) and Canada Customs and Revenue Agency (CCRA) in the *Expedited Passenger Processing Services* initiative. The Canadian Airports Council (CAC) wishes to expand the current ABK services (CANPASS-Airport) to selected international airports across the country. The DFAIT Deputy Minister supported this initiative by co-signing a letter of intent, with his CIC and CCRA counterparts that was included with the CAC request for funding proposal. The Passport Office is currently working with CIC and CCRA in developing a Memorandum of Understanding for CAC approval. The latter has already agreed to accept the passport card as a valid instrument for the automated border crossing [ABK] system” (p.17).

The Canadian airports prepared the 1997 EPPS proposal based on a commercial business model that would permit ABC program expansion, and for eventual export (Private Consultancy Interview, 2010). The business plan to establish a partnership between the airports and the government anticipated the use of private capital to develop the “operational system”. The EPPS envisaged the Government of Canada retaining strict control over national security matters (Canadian Passport Office, 2002). Commercial offerings to travelers would be the source of funding. The Canadian airports decided not to proceed with EPPS, mostly because of investment risks. Even with these failures, these early efforts became the foundation for future IATA facilitation programs as described in Chapter 5.

Similarly, in 1992, the U.S. Immigration Service (US INS) pursued its first ABK pilot program named INSPASS (U.S. INS, 1995). This program permitted an alternative process to meet the legislated mandate (8 U.S.C. Section 1356, modified Public Law
101-515) that required the immigration service to inspect the majority of passengers within 45 minutes of arrival. The pilot program involved an "assess[ment of] the feasibility of automating the immigration inspection process and used, as its first test group, low risk frequent business travelers" (p. 3).

The U.S. INSPASS program involved traveler pre-enrolment with an application process that verified traveler credentials and criminal record history. A trial period was necessary in order to test system performance and admissibility adherence. An in-person officer interview with the traveler was necessary to scrutinize the submitted enrolment data. The biometric technology involved the "hand-geometry" tool that measured 32 points across an outspread hand, as "INS was reluctant to use fingerprints because the program team believed that there would be user resistance". The three-year pilot program involved in excess of 27,000 participants, at the New York Kennedy, Newark Liberty, and Toronto airports. The ABK system devised for this program required considerable supervision, which at times created customer service difficulties, especially when on-duty staff was unfamiliar with operational requirements. In any event, the kiosk based border control program had the general positive effect of accelerating the flow of incoming registered citizens, with some benefits to other arriving passengers in terms of reduced airport congestion. Furthermore, the introduction of the ABK pilot program at Toronto airport provided an important opportunity to link with the USPC program, thereby providing frequent travelers an even better service level (GTAA Interview, 2010).

The 1995 U.S. INS audit viewed the INSPASS pilot program positively as an innovative border control technique. For example, the security protocols were
considered to “provide reasonable assurance that travelers who may not be admissible will be identified” (ibid, 1995). The audit report also identified the conditions precedent for the program to become permanent under public aegis, which included various improvements such as the kiosk design, inspection process timing, confirming the preferred biometric identifier, and ensuring adequately trained U.S. INS staff.

The 1995 audit recommended user fees only when the program became permanent (ibid, 1995). The audit further noted the prescribed fees (i.e. currently $50 for five years) arose from the general U.S. budget legislation that required cost-recovery for public programs that served select groups (US Federal Register, 2006). This is contrary to the view in “The Neoliberal Nexus” (Sparke, 2006) which ridiculed this ABK program for its “elitist” fee that acted as a barrier to accessing this accelerated border control program. Yet, the public record identifies that the fee requirement was not specific to this innovative program, which places in question the critique from Sparke. In any event, the U.S. INSPASS program became permanent, which facilitated expansion to numerous U.S. airports, and eventually on a bi-national basis to Canada.

Finally, as the Canadian government became interested in understanding the potential threats from overseas arrival, early cooperative efforts began with the private sector gathering traveler data before departure. The first efforts in the late 1980s involved collection of traveler arrival data in cooperation with airlines serving Japan and the destination airport in Vancouver. These efforts expanded over the coming decade with the introduction of the UN EDIFACT data transmission standard that simplified the process for airlines, and initiated the ability for the Canadian border control agencies to undertake automated searches of databases well before traveler arrival. This capability
became quite instrumental late in the 1990s when the U.S. and Canada began
negotiation of a new USPC agreement to permit ITPC: a crucial element of the
negotiations related to the transmission of traveler data to the U.S. for passengers
connecting in Canadian airports (DFAIT Interview, 2010).

3.7.2. Netherlands - Europe Developments

The 1957 Treaty of Rome created the conceptual framework for air service
liberalization (Groenewege, 2003). Despite the promise that pan-European integration
would permit private sector commercial activity across intra-European frontiers, the
initial situation involved tight national policy controls over economic activity, which was
especially applicable to the civil aviation industry. These circumstances changed with a
decision in 1986 by the European Court of Justice that became the “tipping-point”,
leading towards greater freedom for civil aviation in making economic decisions. The
ruling drove consequential major policy changes, such as the decision in 1992 that
enabled the creation of the E.U. Single Aviation Market, allowing unconstrained airline
services throughout the internal market. Later, the E.C., on behalf of member states,
began to negotiate bilateral agreements, eliminating preferential bi-national
arrangements and establishing an E.U. wide international air service policy.

The European industry response was similar to the North American pattern, but
with more public ownership of airlines and airports (Pitfield, 2009). Changes began in
the 1980s with the sale of aviation assets. For example, in 1998, the Dutch state sold
its remaining shares in the national airline (KLM Royal Dutch Airlines, 2010). Typical of
the European business milieu, close cooperation existed between firms and the state, and thus, “a more cautious approach was taken” (Groenewege, 2003). In keeping with E.U. common market principles, ownership restrictions disappeared, leading in 2004 to the Air France merger with KLM, with a Paris headquarters (KLM, 2010).

Airport privatization followed a similar pattern in Europe. States no longer wished to invest in these facilities, although European airports often continued to remain in part, or full, state ownership (Groenewege, 2003). For instance, although the Amsterdam Airport became an independent corporation in 1994, the assets remain majority state owned. The private sector oriented Schiphol Group was formed to operate the airport on a commercial basis with a separate governance structure, including making dividend payments consistent with typical Dutch stock exchange conditions. In recent years, the Aeroports De Paris, which operates the two major airports surrounding Paris, France, and the Schiphol Group have undertaken a minor capital share swap (i.e. 8%). As well, the Schiphol Group became subject to normal state taxation requirements and was a non-state recourse borrower in international financial markets (Schiphol Group, 2010).

As described later, the Netherlands faced similar traffic growth pressures evident in Canada with regard to border control resources. In order to maintain leading edge offerings, the Schiphol Group pursued cooperation with the state to develop an innovative ABK program for offer at the Amsterdam airport. Figure 5 depicts the ABK installation as of July 2009, operated in formal partnership with the Dutch state.
In order to facilitate trade for the Dutch island of Aruba, negotiations began in 1996 to obtain USPC services. As the majority of visitors to this sun-destination were from the U.S., the establishment of this type of pre-immigration and related border controls on Dutch territory improved access for these travelers on their return journeys to the U.S. These negotiations proved successful with the USPC operation commencing in 1997, contributing to a nearly 40% traffic increase in the first three years (Aruba Airport Authority Interview, 2010). Finally, as the Dutch state viewed access to pre-journey data as an early indicator of threats requiring interdiction at ports-of-entry, cooperative efforts with airlines commenced during this period (IND and KLM Interviews, 2010).

Civil aviation markets in both North America and Europe were already experiencing traffic declines prior to 9/11, driven by the underlying weakness related to the early 2001 economic recession arising from the bursting of the “dot-com.-bubble”. The geo-political uncertainties associated with 9/11 intensified the economic weakness, causing instability within the airline industry for a number of years after this tragic event (IATA, 2007). The later economic recovery reinvigorated international air travel expansion, although tempered by the efforts by various states, particularly the U.S., to harness the industry to support national security interests. As such, this section identifies some of the more crucial civil aviation and ABC program trends in Canada-U.S. and Netherlands-Europe.

3.8.1. **Canada-U.S. Developments**

The 1995 “Open Skies” agreement underwent changes in 2001, and again in 2005 (Canada Ministry of Foreign Affairs, 2005b). First, the 2001 revisions removed the provision that prevented flights between smaller Canadian and U.S. cities. From a Canadian perspective, “a total of ten smaller cities, including Campbell River, Ganges Harbour, Kamloops, Kelowna, Kitchener, Nanaimo, Old Crow, Port McNeil, Saint John’s and Saskatoon, which previously did not have services to the U.S., gained new trans-border services” (ibid, p. 1). This became a catalyst for each airport to expand its facilities based on the potential of U.S. trans-border markets. Table 6 identifies how the
“Open Skies” agreement enabled Canada-U.S. “trans-border routes to nearly double, from 90 in 1994 to 171 in 2005” (InterVISTAS Consulting Inc., 2005). Second, in announcing the 2005 treaty changes, Canada’s then Minister of International Trade, Jim Peterson, stated that (Canada Ministry of Industry, 2005):

"The flow of people, goods, and services between Canada and the U.S. is crucial to how we go about our daily business. This new flexibility, which goes well beyond the 1995 agreement, will improve how the NAFTA works and it will make North America more competitive. The most significant amendment involves liberalizing Canadian air carrier access to U.S. third country markets [thereby permitting full use of ITPC]."

The consequence of this later revision was to finally enable the Canadian civil aviation industry to compete with U.S. gateway airports and airlines for international passengers destined to any U.S. city connected to a Canadian USPC site (ibid).
<table>
<thead>
<tr>
<th>Year</th>
<th>Canada to U.S. Destinations</th>
<th>U.S. to Canada Destinations</th>
</tr>
</thead>
</table>

Source: Courtesy of InterVISTAS Consulting Inc., 2005
However, complicating the opening of aviation trade was the lack of corresponding changes in Canadian border control programs. Continued international traffic expansion often led to bottlenecks for airlines and airports that resulted in increased costs for dealing with border control capacity issues. For example, as noted by an Asia Pacific Foundation report, “the private sector often complain[ed] about the financial burden and inconvenience of security measures” (Evans, 2007). Concerns also arose with regard to the lack of border control staff and resource sufficiency at ports-of-entry; a problem exacerbated by the “Open Skies” agreement that enabled smaller communities, such as Kelowna, to receive direct air services from U.S. airports.

These continued concerns raised by industry led the Canada Border Services Agency (CBSA) in 2005 to undertake a “Core Services Review” (CSR Report, 2005). Industry stakeholders such as the Canadian Airports Council (CAC) identified the “creation of an uneven playing field”, which “created a barrier to regional economic development, particularly for smaller communities” by comparison to the large airports in major Canadian urban centers (CAC, 2006). As well, cost recovery of the more sophisticated border control systems was viewed as inherently “unfair and inconsistently applied”, causing a somewhat “ad hoc approach to service delivery”. As only a limited number of major airports (e.g. Montreal, Vancouver, Ottawa, and Toronto) participated, the benefits to other smaller airports were limited. Furthermore, “those airports that currently have extensive coverage are concerned with deteriorating levels of border control services” and for those airports with “either limited or no service, [they] are most concerned with expanding or acquiring new service” (ibid, p. 5). The response from the CBSA contained in the 2005 CSR report, noted:
“The tragic events of 9/11 had a profound impact beyond the U.S. border by radically reshaping the role of foreign border organizations and placing the focus on security. Escalating costs associated with increased security requirements have resulted in severe budgetary pressures for border organizations. Foreign administrations in the U.S., Australia and New Zealand are becoming increasingly reliant on [airport] user fees as a means of offsetting some of the costs of providing border services”.

Overall, ongoing expansion of air service bilaterals at the same time as border control intensification demonstrated the lack of integrated policy goals within the Canadian government. For example, and despite complaints that the CBSA impeded global marketplace participation, the CSR did not identify the ABC programs as a potential solution, instead pursuing increased funding through user fees. This situation appeared at odds with the achievement of the “Open Skies” agreement by the Canadian trade ministry (i.e. DFAIT) that enabled civil aviation firms to participate in global travel markets, albeit markets that demanded ease of access and were highly dependent on efficient border control programs. The lack of change in Canadian border control programs whether for lack of funds or from other national security priorities left a considerable gap between the potential for expanded trade and the reality of growing levels of border control congestion and customer dissatisfaction. These very circumstances stimulated private stakeholders to pursue additional innovative solutions such as the development of next-generation ABC programs as described later.

As confirmed by the interviewees, it is also significant that 9/11 did not generally alter the extra-territorial USPC program in Canada. This view of events is based on the review of the 2002 U.S. Homeland Security Act that created the U.S. Department of Homeland Security (U.S. DHS), which determined that forward-positioning of the U.S.
territorial frontier represented an important national security priority. The DHS includes a re-oriented border control policy that focusses on an outward deterrence of terrorist attacks (U.S. DHS, 2008). This policy change was contrary to the view held in 1979 by USCS that argued that the USPC program lacked enforcement benefits. Instead, the new U.S. DHS adopted a pro-active stance and accepted this type of initiative as “mission critical” (U.S. DHS, 2008b):

“Achieve Effective Control of Our Borders
We will reduce the likelihood that terrorists can enter the U.S. We will strengthen our border security and gain effective control of our borders at and between the ports, on land, at sea, and in the air. We will defend our homeland with layers of security. Whenever possible, we will expand our zone of security, managing risks, and interdicting threats before they arrive on our shores. We will make our border security smarter, stronger, and more effective, while facilitating legitimate travel, migration, and continued expansion of commerce” (p. 6).

The Canadian 1999 Preclearance Act prescribed a post-adoption review, which involved engagement with the stakeholders (InterVISTAS Consulting Inc., 2009). The public report that followed identified that the government needed to better account for aviation market dynamics that required seamless global connections. In addition, further Canada-U.S. border control collaboration was paramount for the travel trade to flourish. In regard to legal matters, the 2009 review identified the potential for further clarity on what constituted “reasonable grounds” for interdicting travelers, and noted that improvements were necessary in common definitions to ensure consistent interpretation of the 1999 Preclearance Act and accompanying regulations (p. 8).

For example, the InterVISTAS Review report identified the necessity to clarify the powers available to USPC officers to establish the “grounds/threshold within which
they have the right to do [certain acts], and the definition of “goods” that accompany travelers which can affect the “procedures related to manner of seizure and disposal” (p. 13). The stakeholder discussions identified the need for further clarity on the respective roles and responsibilities of the various border control agencies. The 2009 InterVISTAS review also recommended the expansion of the scope of the USPC agreement to other modes (e.g. land ports-of-entry), along with coordination with other national security objectives such as those related to aviation pre-board security screening. The report noted that private stakeholders requested additional flexibility, for example, in terms of the hours of operations albeit, in a manner that did not transfer costs and operational responsibilities to the civil aviation industry. It is also useful to note the remarks provided by the U.S. Department of State on the merits of the current USPC program (InterVISTAS Consulting Inc., 2009):

“Preclearance facilitates the departmental goals and objectives by:
- UPSC is broadly positive to U.S. goals to facilitate the safe and secure travel of admissible foreign nationals for business and pleasure; and,
- Provides a direct economic benefit to smaller airports in the U.S. who are not otherwise served by CBP” (p. 18).

From a forward-looking perspective, in “A Matter of Trust: Expanding the Preclearance of Commerce between the U.S. and Canada” (C.D. Howe Institute, 2010), Hart identified that “the thickening of the Canada-US border in response to post-9/11 security challenges has created new obstacles to cross-border trade and investment”. In this essay, Hart articulated the proven record of accomplishment of the USPC program in providing air travelers with efficient U.S. access. Similarly, “EU members are satisfied that they have succeeded in guarding their security while
promoting an integrated single market by relying on a perimeter approach to preclearance”. Hart further promoted a trust-based approach between states with political commitments in support of collaborative programs that involve "engaging frequent users" and the establishment of a bi-national binding forum for cooperation. The recommendations for USPC program improvement involve specific measures that integrate ABC programs to build a seamless and forward frontier for the U.S. and Canada.

Hart's assertion that the “new programs developed after 9/11 represent a major achievement, but remain a work in progress”, this researcher only partially agrees. Admittedly, the combination of ABC techniques contributed to expanding trade as evident by the strong growth in post-9/11 cross-border air traffic as identified in Table 6. As well, the programs did require major changes in order to become more valuable to the civil aviation industry and to enhance national security.

Yet, what is in question is Hart’s articulation that attempts to reaffirm the fin de siècle sentiments that these solutions were new and necessary to address pre-9/11 related national security failings. As the case study findings repeatedly demonstrated, not only did these initiatives long pre-date 9/11, the programs were already delivering major benefits to the state and the civil aviation industry. From this researcher’s perspective, the 9/11 terrorist attacks became the unfortunate catalyst that encouraged urgent attention by state policy-makers to expand these service offerings in keeping with national security priorities, but the underlying impetus was already well-formed in response to globalization pressures. As reflected in Chapter 6, both the Can/Am Border Trade Alliance and the former U.S. Ambassador to Canada, Paul Cellucci
reiterated that the 1995 “Shared Border Accord” (SBA) identified the necessary border control actions, but 9/11 brought about the political will to “finish the job”.

However, the foregoing may leave the impression that 9/11 represented somewhat less than a paradigm shaping event. The literature from Sands (2006), Andreas (2003), and Koslowski (2004), to identify just a few examples, thoroughly documents the enormous inter-state relation changes. For this thesis, the most significant post-9/11 policy shift was the emphasis on technology and the cooperative approaches imbued in the 2001 “Smart Border Declaration” (SBD). Although this document was nominally the same as the 1995 “Shared Border Accord” (SBA), the media-seeking launch, and the use of virtuous language made the SBA materially different. While Ambassador Cellucci noted that the SBA contained an “urgency of action”, this researcher wishes to point out that the SBD became public shortly after the first World Trade Center truck bombing, which had similar trans-national Al-Qaida centered roots. In any event, Canada faced a trade-related calamity after 9/11, that allowed few choices but to become U.S. centered with regard to protecting its own “economic security” (Andreas, 2003). While the situation in the Netherlands was less dire, nonetheless, the E.U. responded with vigour as the U.S. increased national security protections that might have led extremists to target less-well protected targets. Deplorably, during this past decade Al-Qaida launched multiple fatality attacks on the public transport systems in London and Madrid posing as vivid reminders of the need for vigilance.

Thus, and as identified in Table 2, the post-9/11 Canada–U.S. national security policy alignment caused changes in the role of the state and in assuming overall
leadership for the CANPASS program from the private sector. This did not mean the private sector was not involved, but instead was involved in these efforts by providing a supportive role, with airlines and airports engaged in different ways. As evident from the case study interviews, the CBSA continued to view the private sector as remaining instrumental to program success, both in terms of intellectual support and financial investment. For example, airlines began to link their loyalty programs with expedited access to ABK and USPC programs, and even permitted their frequent customers to store “tombstone” data (i.e. stable and frequently used datasets such as legal name, date-of-birth, gender, etc.) in airline systems for easier APIS submission. As well, the Canadian Airport Council (CAC) members were involved in providing facilities for the CANPASS offices and kiosks, undertaking joint promotions, and in tailoring services to serve local participant needs. In a 2006 submission to CBSA, the CAC took the following public position with regard to the future of the program (CAC, 2006):

“Technology plays an important role in service delivery. CANPASS facilitates passenger processing but is currently only available at major airports. In some cases, this leads to diversion away from smaller airports. CANPASS is a cost recovery program and has been determined to be cost effective with high volumes of frequent travelers. CBSA has no plans to implement CANPASS and NEXUS at smaller airports because of low volumes and associated costs. This is unacceptable and a decision that is likely to have serious consequences for trade and travel. Moreover, the CAC views these programs as contributing to risk management, and thus should be regarded as national security enhancements. Rather than adding costs, programs that identify trusted travelers facilitate security processing and free up resources for higher risk travelers. The provision of free [airport] space should be considered a contribution and used to off-set overall cost to government” (p. 9).
The U.S. also had a major influence on both the Canadian and Dutch ABK programs. Although briefly halted after 9/11, the U.S. INSPASS program re-emerged in 2002 as “NEXUS, becoming available to both U.S. and Canadian citizens (US DHS, 2004). The 2004 Intelligence Reform and Terrorism Prevention Act (IRTP) permitted further program expansion under the name “Global Entry” to include foreign participants (US Federal Register, 2010). Dutch nationals became eligible in 2007, with enrolment permitted for U.S. citizens in the Dutch program (US DHS, 2008). Similar programs developed elsewhere (e.g. Singapore, Japan, Australia), supported by technology vendors in pursuit of national security related business opportunities (Private Consultancy Interview, 2010).

Admittedly, 9/11 did have major implications for state-firm cooperation on pre-sharing traveler data (Movius and Krup, 2009). Changes occurred shortly after 9/11 with the enactment of the U.S. Patriot Act, and later with the 2004 IRTP (ibid, p. 175). In late 2001, the Canadian parliament also adopted the Immigration and Refugee Protection Act (IRPA), and re-vamped national security policy with the Public Safety Act (PSA) (Canada Ministry of Justice, 2002:2005). All of the foregoing legislation involved some form of legal compulsion for transportation firms to provide information about passenger and cargo manifests in advance of departure from foreign origins.

In summary, 9/11-related national security policy changes followed globalization trends. The ABC programs were well entrenched, especially considering the 50 plus years of USPC operations that became viewed by the U.S. DHS as “mission critical”. The events of 9/11 further influenced how the Canadian government viewed border controls, with particular attention to the relations between the ABK program and the
private sector. The most significant change, however, related to the mandatory APIS program, which as Agamben (2004) observed reflects concern for systems originally established for foreigners eventually translating into compulsion of the citizen.

3.8.2. Netherlands - Europe Developments

In the current period, European civil aviation experienced continued traffic growth (Pitfield, 2009). This created enormous competitive pressures amongst airlines, encouraging for example the Air France – KLM merger. In response, the Dutch ABK program continued to expand and other E.U. member states introduced similar programs (FRONTEX, 2007). This created considerable interest at the E.C. given supra-state responsibilities arising from the "European Common Foreign and Security Policy" (E.C. DGHA, 2005). In 2009, the FRONTEX reported that various member states were pursuing ABK programs, as summarized in Table 7.

Table 7 E.U. ABK Programs (2009)

<table>
<thead>
<tr>
<th>EU State</th>
<th>Status</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>Operational (2007)</td>
<td>Airports, with expansion to seaports</td>
</tr>
<tr>
<td>UK</td>
<td>Pilot (2007)</td>
<td>IRIS program at major airports</td>
</tr>
<tr>
<td>Finland</td>
<td>Pilot (2008)</td>
<td>Major airports</td>
</tr>
<tr>
<td>Germany</td>
<td>Pilot (2009)</td>
<td>Frankfurt airport</td>
</tr>
<tr>
<td>Spain</td>
<td>Pilot planned (future)</td>
<td>Madrid airport</td>
</tr>
<tr>
<td>Austria</td>
<td>Pilot planned (future)</td>
<td>Vienna airport</td>
</tr>
<tr>
<td>Czech</td>
<td>Pilot (2009)</td>
<td>Prague airport</td>
</tr>
</tbody>
</table>

Source: FRONTEX, 2009
The ABC programs in Amsterdam, Frankfurt, Paris, and the UK were subject to a FRONTEX audit, for the period 2001-2006 (FRONTEX, 2007). The “BIOPASS Study” (ibid, 2007) reviewed the program at Amsterdam airport, and as revealed, the audit findings indicated that the Schiphol Group continued to lead program development and financial investment in the “Privium” program. This audit specifically noted the substantial cooperation between the private and public sector in co-managing the handling of sensitive national security data, as follows:

“At the programme’s core is the member smartcard. This card includes three files: passport data with so called “search string” used for police queries, the Privium number relating to the Schiphol Group membership database, and two encrypted iris codes. The data are protected by authentication for confidentiality and by message authentication codes for integrity. The biometric data are additionally encrypted” (p. 31).

The 2007 audit confirmed that the “biometric technologies show their maturity and usability” (p. 73). The audit also identified that either central or local data storage was sufficient to meet privacy and national security obligations. The report also identified that “biometrics will likely revolutionize many aspects of border crossings”. However, the report expresses caution that cross-border collaboration and integration was necessary, as the state-by-state approach had limited potential. Finally, technology has not been without its challenges, as indicated by the following:

“However, human border officers are not completely replaceable neither today nor in the near future. No computer systems can currently detect nervousness and suspicion as well as experienced border officers. Therefore, the aim of the ABC system is not to replace humans on the border completely, but to make their work more efficient. If the low risk passengers can be handled by the automated systems, the border officers will have more time to focus on problematic cases” (p. 75).
In keeping with the E.C. Directive regarding the “Collection of Passenger Information” (E.C., 2004a), the Dutch government adopted requirements for private sector transportation firms operating international services to and from the Netherlands (E.C., 2011). The Netherlands also undertook to develop technology-based tools to support remote access by foreign-based airlines and offshore Dutch immigration control staff in order to better access border control databases (IND Interview, 2010).

In summary, the Netherlands continued on a similar path after 9/11 with private sector ABK program leadership. The Netherlands did re-emphasize national security in the 2000s, although the reasons were mostly associated with domestic and E.U. wide immigration circumstances. The implication however is that 9/11 did not fundamentally alter the relationship between the state and civil aviation firms.

3.9. Civil Aviation and ABC Program Summary

Globalization has created enormous growth pressures in the civil aviation industry over the past 30 years that required new partnerships to emerge with the public sector that involved the virtual and extra-territorial border control programs under study. For both Canada and the Netherlands, these new ABC programs became sufficiently credible for policy decision-makers over the decades to support the major legislative changes to make these innovations a permanent part of the border control regimes in each state. An increasing need emerged for border control agencies to share data between states for national security purposes that had the added benefit of enabling the civil aviation industry to pursue innovations that improved customer
service and lowered costs. As the programs matured, their adoption spread to other states, albeit on an individual basis, rather than through a globally connected network that may yet come.

The civil aviation industry faced numerous challenges in their efforts to facilitate cross-border trade, including technical problems (i.e. early Dutch ABK investments), financial concerns (i.e. Canadian airport business case for early ABK programs), institutional difficulties (i.e. treaty negotiations required to update the USPC agreement), and national security conflicts (i.e. post-9/11 ABC program scrutiny). Despite 9/11 related bi-national policy challenges, the ABC programs continued to expand, although with different priorities, and in the case of Canada, with greater public sector leadership. Furthermore, with the civil aviation industry facing increased border control compliance costs, states also desired innovative approaches to reduce costs, and to support heightened national security objectives. Finally, the expansion of ABC programs began to face broader scrutiny, particularly as related to the potential for human rights abuses and the consequential inter-state differences on how such programs should be managed (i.e. E.U. - U.S. APIS dispute). The details of these events follow in the subsequent chapters.
Chapter 4. State-Firm Relationships

4.1. Introduction

This short chapter extends the ABC program chronology discussed above and explains the organizational relationships among key supra national, state, and private sector actors. As such, Figure 6 identifies a typology of state-firm relations as the framework for the in-depth research interviews with key informants (see Appendix B) as detailed in the subsequent chapters. Thus, Figure 6 identifies the general form of state-firm interactions including: (1) formal legislative arrangements, (2) informal cooperative dialogue, and/or (3) structured service-delivery partnerships.

4.2. ABC Program Relationships

In both Canada and the Netherlands, border control modernization commenced through informal channels, rather than from the state. However, as Figure 6 depicts, these private sector efforts operated within legislated mandates, which as noted in Chapter 3 strongly directed how airports and airlines were to interact with border control protocols. Over time, partnerships evolved, with the Canadian situation having a less formal structure, while the Dutch program involved a formal arrangement that has continued to persist over the past two decades. Subsequent to 9/11, the ABK program emphasis shifted to having greater interaction at the state-to-state level, although program implementation continued to have a strong industry presence.
Figure 6 Civil Aviation Firm and Inter-State Relationships (1985 - 2010)
This private-led approach was in contrast to the U.S. where the U.S. INS pursued border control innovation internally. Both Canadian and Dutch airports understood early on that the future success of the automated kiosk program would depend on cross-collaboration with the U.S. INSPASS program. In the past decade, the Canada-U.S. NEXUS program has emerged, mostly through state-to-state dialogue, although the Canadian civil aviation industry remained strong proponents and supported NEXUS implementation at all major airports. Similarly, the U.S. DHS engaged with Dutch authorities and the Schiphol Group to establish the bi-national Global Entry program.

The entire history of the USPC program innovation has involved bi-national cooperation with ongoing dialogue between the state and firms, rather than the traditional model where border control agencies govern all aspects of ports-of-entry operations. As indicated in Chapter 3, the history of the USPC program involved airline and airport advocacy to prevent the program from disappearing, and then expanded to new airports and additional markets. Thus, while the USPC program operates under legislated mandates and treaty arrangements, without informal industry efforts and formal facility partnerships, the program would not be as successful as identified by interviewees in the Chapter 6. Figure 6 reflects this combination of relationships.

The pre-journey data sharing arrangements prior to the formalization of the APIS program after 9/11 involved state-firm cooperation. The advantages for firms, related to expediting low-risk travelers and, for the states, involved the desire to reduce resource use on travelers not likely to pose a border control threat. After 9/11, this relationship changed completely with states implementing policies requiring mandatory participation by the civil aviation industry. Thus, while Figure 6 accurately reflects the early period of
APIS development, the partnership component in the post-9/11 era disappeared, although both formal and informal state-firm relations remained with regard to dialogue on improving APIS implementation. In any event, early efforts demonstrated that the handling of personal data privacy issues was workable in a manner that respected citizen interests and national security objectives. However, the Maher Arar affair created severe challenges for inter-state cooperation on this sensitive topic.

In reinforcing the thesis argument that 9/11 did not alter, but instead accelerated ABC program trajectories, the Canada-U.S. In-transit Preclearance (ITPC) negotiations enabled the formal launch of pre-journey data sharing on a multi-state and trans-national firm basis. In order to underscore this assertion, it is important to note that the treaty annex that permitted ITPC operations was signed on January 18th, 2001, some nine months before the 9/11 attacks. Accordingly, and well before the U.S. and Canada adopted formal APIS-enabling legislation, airlines and airports wishing to participate in ITPC had to comply with the following treaty provision (Canada Ministry of Justice, 2001):

“ITPC data elements shall be transmitted to the Inspecting Party by the air carrier with a minimum sufficiency for the preclearance officer to permit ITPC for its passengers. The non-transmission of elements for a particular flight that would otherwise be normally provided, may give grounds to the Inspecting Party to suspend the ITPC process for that flight”.

The crucial element of the new treaty annex was the APIS requirement that applied to airlines serving Canada as the transit state for travelers ultimately destined to the U.S. as the final destination. The consequence of this complex type of state-firm relationship involved the consideration of other ICAO policy guidance (e.g. Warsaw
Passenger Liability Convention), or possible conflicts with domestic laws in the airline’s host state. For example, in order to avoid conflict with E.U. data privacy laws, major international airlines (i.e. Lufthansa German Airlines) that served Canada did not use the ITPC procedure, despite the obvious customer service benefits (Vancouver Airport Interview, 2010). For passengers using non-ITPC airlines the connection process to the U.S. was quite complicated. The traveler first would need to seek admission to Canada through the regular border control process, and if accepted, would collect his/her baggage, and then proceed through a second inspection in the USPC facility before boarding a U.S. bound flight. This cumbersome process made the non-ITPC process unattractive and not particularly competitive in customer service terms, as direct flights to the U.S. involved only one inspection for the traveler on arrival.

4.3. State-Firm Relationship Summary

Finally, given the global nature of the industry, relations with the state also involved influence from supra-national organizations and international associations. Figure 6 reflects the iterative nature of these non-statutory forces. This thesis argues the relationship did change somewhat with 9/11, but the overall interaction between the state and civil aviation firms became stronger, albeit with some mandatory overtones.
Chapter 5. **Supra-State and Global Private Sector Organizations**

5.1. **Introduction**

This chapter assesses the role of supra-state organizations and private sector associations in the evolution of ABC programs. This material, and as contained in subsequent chapters, draws from the in-depth interviews and document assessment (see Appendix B). The details of the information gathered from each of the organizations interviewed is structured as follows, a) organization’s role, b) relevant ABC programs, c) major challenges, d) perceptions regarding state-firm and inter-state relations, and e) how political, business, and technical trends will influence the civil aviation industry and advanced border control programs in the future. The assessment concludes with the author’s own synthesis of the research interviews and document records, and their relevance to the thesis contribution.

5.2. **International Civil Aviation Organization (ICAO)**

**Organization Role**

The interview involved the ICAO Facilitation Office, which is engaged to encourage dialogue between states to establish global data sharing protocols. The Facilitation Office legal advisor regarding traveler data handling provided the interview.
Relevant Policies

The first interview observation from the manager responsible for inter-state legal affairs indicated that the ABC programs within the research project would be less effective if pre-journey traveler data sharing was not actively coordinated on a multi-national basis. Accordingly, the manager argued that the 2004 Guidelines on Passenger Name Record Data (ICAO DOC 9944) was an important starting point for understanding how the ICAO views this entire subject, which is applicable to all member states and the evolution of data-sharing protocols. However, the ICAO has acknowledged that border control agencies have employed various techniques to obtain passenger information in advance of flight arrivals for at least two decades, as confirmed by the IATA representative. Accordingly, long before the official ICAO endorsement in 2004, the civil aviation industry had been involved with border control agencies on this topic.

However, the ICAO representative expressed concern with developments that involved states adopting legislation that required private firms to perform traditional state functions. The ICAO Doc 9944 (2004b) identified that some states were no longer satisfied with access to airline information collected for internal purposes. Some states had extended their control over the ICT system architecture and collection protocols, reaching deep into private airline databases, and had backed failure to comply with threats of major economic sanctions. For example, the Canadian Immigration and Refugee Protection Act (Canada Ministry of Justice, 2002) requires transportation firms to perform certain actions, which have major implications for corporate strategy, and for which the failure to do so can result in severe monetary penalties, as follows:
“Obligation of operators of vehicles and facilities

148.1) A person who owns or operates a vehicle or a transportation facility, and an agent for such a person, must, in accordance with the regulations,

a) not carry to Canada a person who is prescribed or does not hold a prescribed document, or who an officer directs not be carried;
b) hold the prescribed documentation of a person whom it carries to Canada until an examination begins, present the person for examination and hold the person until the examination is completed;
c) arrange for a medical examination and medical treatment and observation of a person it carries to Canada;
d) provide prescribed information, including documentation and reports;
e) provide facilities for the holding and examination of persons being carried to Canada;
f) carry from Canada a person whom it has carried to or caused to enter Canada and who is prescribed or whom an officer directs to be carried;
g) pay for all prescribed costs and fees; and
h) provide security for compliance with its obligations.

Seizure of security for compliance

148.2) If a person who owns or operates a vehicle or a transportation facility, or an agent of such a person, fails to comply with an obligation under this Act, all or part of any security provided by the person and any vehicle or other prescribed good owned or operated by the person may be detained, seized or forfeited” (p.74).

The ICAO Doc 9944 encouraged states to develop and implement a harmonized approach to data collection and a subsequent transfer of data between airlines and states. While recognizing that the Doc 9944 advice could not “impair the manner in which states enforce their laws and preserve national and public security” (ICAO, 2010), the ICAO holds the view that there continue to be major benefits from global harmonization. For airlines, a common approach would reduce implementation costs, and reduce the risk of individually tailored datasets having systemic and possibly undetectable flaws. For travelers and consumer advocates, the universal rule sets can
enable easier monitoring for violations of data protection laws. This would be particularly useful to prevent abuses by states with vulnerable travelers. For example, disclosure of meal preferences that might infer cultural or religious affiliation can become available to the state for national security purposes, or for the targeting of particular travelers by terrorist or criminal actors.

The ICAO Doc 9944 also addressed economic matters and recommended that states respect the cost and impacts on airline capacities. Furthermore, the ICAO recognizes that holding airlines legally accountable for data integrity is inappropriate as passengers routinely provide false or incorrect information. As noted in one of the IATA interviews, absent from the ICAO Doc 9944 is the role of the state in providing adequate funding or otherwise compensating airlines for providing non-aviation related national security data. At present, airlines are required to amend dataset systems to comply with data transfer requirements, and to self-fund the operational changes needed to inform passengers that data transfer of personal information to the state is occurring.

The ICAO Facilitation Office also identified the International Standards on the Protection of Personal Data Privacy, otherwise known as the “Madrid Resolution” (Spanish Data Protection Agency, 2008). Although non-binding, the ICAO views this protocol between numerous member states as critical to understanding the level of Doc 9944 consensus, which involved years of cross-state dialogue. The ICAO expects understanding this approach can assist in better understanding the ABC programs under study.

The foundation of the “Madrid Resolution” involves the principle of procedural fairness and the rights and freedoms consistent with the UN Universal Declaration of
Human Rights. This led to the principle that data processing should be for legitimate purposes and, where practical, based on the unambiguous consent of the person of interest. As reflected in a number of concerns made to states from various airlines, data collection efforts should not exceed what is necessary for the state to perform legitimate enforcement activities. States should pursue openness practices to ensure the public understand the reasons for data collection. Regardless of the source, states involved in collecting traveler data should also fully be accountable for protecting passenger data, and ensuring that internal mechanisms are implemented that protect against any abuse of state power.

**Major Challenges**

Returning to the ICAO interview, the official noted that the major challenge related to inter-state relations is the willingness to share data across borders. Moreover, the intent of the Doc 9944 advice is to assist states move towards common practices, and simplify relations wherever possible. This does not mean data sharing becomes simpler with harmonization, as technical challenges remain quite formidable. Instead, the ICAO representative asserted that if states adopt the Doc 9944, the major benefit would be the reduction of wasted resources, and allowing a re-focus of energy towards cooperative efforts to improve data integrity. The ICAO further views that a focus on data reliability would support states in expanding ABC programs. However, better quality data would not overcome the hesitancy to share data with other states when uncertainty exists as to whether the use of the data would remain legitimate and secure from unauthorized sources.
The ICAO views these advanced approaches as founded on passenger data sharing, generating privacy protection issues. The ICAO representative noted that when implemented within a jurisdiction, then national data privacy laws prevail to ABC programs. However, with displacement of border controls from sovereign territory, jurisdictional problems arise. Therefore, to achieve the most effective outcomes, origin and transit states must cooperate with the receiving state implementing the pre-journey data sharing requirements. Despite these concerns, the ICAO representative admitted that existing legislation has generally enabled sufficient inter-state cooperation with few technical or political hurdles.

**Inter-State Relations**

However, and despite the general level of inter-state consensus, the E.U. and the U.S faced a major dispute in the area of data sharing. The conflict arose with the adoption of the post-9/11 Patriot Act and later, the Intelligence Reform and Terrorism Protection Act that required mandatory pre-journey data transmissions for trans-national flights serving U.S. airports. This dispute had spill-over effects for Canada, as Air Canada pursued connecting passenger traffic between Europe and the U.S. through Canadian airports, thus making the airline subject to conflicting European and U.S. data-sharing regimes.

The ICAO representative viewed such prominent issues as representing philosophical differences as to how Europeans and Americans view privacy, and the differences were not easily resolvable in the wake of the post-9/11 U.S. national security agenda, even with recent high-level changes in the U.S. Administration. Although the
ICAO is not central to this trans-Atlantic dispute, it is the ICAO’s view that to reduce the inter-state differences the states involved should adopt the Doc 9944 advice regarding the adoption of a globally harmonized platform for data sharing. Although this technical approach would not in itself solve the philosophical challenges, the ICAO is of the view that such an agreement would facilitate further dialogue, which could only be beneficial in rectifying national data treatment approaches.

Finally, the ICAO representative noted that should pre-journey data systems result in the relocation of trans-national threats to less developed jurisdictions, there could be serious repercussions with emerging states less adept in dealing with sophisticated global threats. The ICAO representative noted that data protection and privacy requirements have different standings in different societies. Thus, the ICAO has concerns about how the systems might develop given the power of technology, as reflected by Matthews (1997):

“The most powerful engine of change in the relative decline of states and the rise of non-state actors is the computer and telecommunications revolution, whose deep political and social consequences have been almost completely ignored” (p.51).

Private Sector Role

The ICAO also acknowledges the role of the private sector in data handling and providing technology. In order to maintain security protocols, states have traditionally controlled most, if not all, border control practices. However, the rapid evolution of remote computing was causing states to outsource these activities to private services. The ICAO is of the view that the private sector role in delivering technological services
for facilitating travel is acceptable, on the condition that personal data protection remained clearly accountable to the state. However, dependency on the private sector could result in a range of problems, from insufficient oversight over deliverables, to conflicting resource management priorities, and the ever-present concerns for internal corruption.

Looking Forward

Finally, while ICAO has no authority of its own, and must rely on the implementation of its recommendations through the legislative bodies of member states, the organization did have a broad UN based mandate to pursue cooperative dialogue to achieve a global consensus on trade facilitation and national security. Although ICAO’s primary role is to support member state interests, a growing understanding exists within ICAO that the private sector has a crucial role in implementing new forms of border controls. Although, concerns arose from ICAO that the ABC program partnerships with the private sector require careful structuring to avoid abuse, the potential benefits of this approach also have merit. As such, global airlines welcome an integrated approach through use of a common data-exchange platform that suits their international operations. However, ICAO also recognizes that not all member states could implement the techniques available to the advanced economies in Canada and the Netherlands.

Synthesis

The role of the ICAO is to coordinate a wide range of international organizations and state agencies for the purpose of encouraging reasoned deliberations on matters
related to civil aviation trade, and in recent years with greater attention to national security. In this regard, the most serious issue arising from the ICAO interview and document review relate to data-sharing arrangements between states, which compel airlines and airports to participate in border control delivery and which create unexplored consequences to firm strategy. In addition to the obvious cost and operational complications generated by intrusive data management regulations, the industry faces the insidious threat of criminal and terrorist actors targeting airline and airport data networks in order to disrupt the ability of state agencies to obtain desired traveler information. Such “hacker-attacks” may be simpler against types of databases that must be open to communications with other commercial suppliers (e.g. catering, fuel delivery, other suppliers, etc.), rather than the considerable effort required to access highly secure internal state networks. As such, the difficulty of achieving legitimate access to state databases was evident in discussions with the airport operators in both Canada and the Netherlands, when these organizations were pursuing implementation of Automated Border Kiosk (ABK) programs. Accordingly, states may very well be creating data security risks for the civil aviation industry greater than those possible through dedicated state intelligence gathering methods.

Furthermore, the ICAO finds itself in the difficult position of responding to post-9/11 member state demands for applying national security policies within a “civilian” system of transportation. Critically speaking, this course of affairs leads the industry into becoming a de facto arm of the state police apparatus, and by definition, exposes airlines and airports to similar types of targeting and open retaliation faced by routine military or police supply chain operations from criminal and non-state political actors.
These circumstances already require airports and airlines to establish heightened security protocols. As such, the industry requirement to undertake pre-departure checks of passports and travel visas, and receive state approvals before boarding pass issuance places front-line industry customer service staff in the unenviable role of under-trained and under-protected “pseudo” border control officials.

From a geo-political perspective, it is inappropriate for states to use the neutral UN ICAO agency to foster inter-state national security policies, when other treaty and institutional mechanisms exist to pursue these legitimate ends. The result is the creation of national security impediments for the civil aviation industry to deliver global mobility.

Accordingly, a legitimate criticism of this thesis relates to the general absence of interview and documentary records related to the risk-management interview question intended to illicit responses on these types of sensitive issues that affect state-firm relations.

5.3. International Criminal Police Organization (INTERPOL)

Organizational Role

Established in 1923, the International Criminal Police Organization (INTERPOL) represents the world’s largest international police network (Interpol, 2010). The organization manages a database of missing passports, identity cards, and visas all over the world, known as the Stolen and Lost Travel Documents (SLTD) database. As the INTERPOL has no legislated mandate of its own, and can only act through inter-state cooperation, no relevant policy documents were available for this assessment.
The INTERPOL however does provide guidance to states on dealing with trans-national threats, particularly in the areas of training and governance. For example, in 2007, the organization published the “Best Practices in Combating Terrorism” guide for use by states in ensuring that of national security efforts focus on dealing with new threats to sovereignty and the maintenance of global order (INTERPOL, 2007).

ABC Program Role

INTERPOL was an early technology adopter: a feature core to its overall mission. Accordingly, producing well-rounded threat assessments relied on a balance between an officer’s practical experience, and the use of expert data-management systems. This combination permitted INTERPOL to handle emergent issues with both speed and judgement, a vitally necessary set of attributes in dealing with the nature of political and organized criminal based threats.

Major Challenges

The INTERPOL representative identified the numerous challenges for states to manage traveler identification practices, which in some parts of the world continue to involve hand-written documents. INTERPOL was also concerned with those states that have evolved their identification protocols to biometrics and integrated databases, which could lead some states to demand similar performance from all other states. However, the INTERPOL views the absence of sophisticated systems typical in developing states must not be misunderstood as suggesting that travelers from such localities were automatically threats to others.
At the same time, INTERPOL strongly advocated for much greater use of pre-journey data systems, recognizing that this tool supported the establishment of a basic containment strategy through the prevention of crime and political violence from crossing frontiers in the first place. INTERPOL also observed that where states have a limited ability to control threats crossing borders, state-to-state cooperative mechanisms were necessary and, given that sophisticated non-state perpetrators were unlikely to be concerned about national frontiers in undertaking nefarious activities, the dated notion of state oriented national security policy needed to reflect these broader realities.

Private Sector Role

INTERPOL was also concerned with the role of the private sector in managing border control systems, which has grown in the past two decades. The private sector can be involved in many ways, including the provision of technology-based systems. However, and while states do face their own internal issues on controlling staff and the abuse of technology, states must carefully watch how firms use these tools to understand how they can be compromised.

Looking Forward

Finally, the INTERPOL does not have legislative authority to pursue its objectives, but acts through cooperative dialogue, and with explicit delivery partnerships with member states. The organization viewed that greater international cooperation was necessary to deal with the expanded nature of trans-national organized crime and
political violence. Such initiatives could involve the private sector, although in a manner that retained control over sensitive sovereignty related matters in state hands.

Synthesis

The INTERPOL commentary provided useful insight with regard to the challenge trans-national threats pose to the traditional “Westphalian” state model. As well, the organization also contributes to the ability of states, especially at the developmental stage, to support national security objectives. Interestingly, this global police coordination agency rejects the mantra of “standardization”, although it considers essential that states establish a common platform for communications and data exchange. Conceptually, the agency is articulating the view that advanced states must address “locality” in national security policy, and that mismanagement of the “spaces of flows” could result in the “relocation and concentration of threats” in certain under-developed localities that could foster extreme outbreaks of violence and criminality. Furthermore, and like Agamben (2004), the INTERPOL expressed concern that the movement towards “digital identities” must not become synonymous with the erroneous perspective that travelers become “trusted” because of their participation in biometric border control systems.

The caution from INTERPOL regarding the role of the private sector also warrants attention. In addition to the potential for external attacks, another possible approach to undermine ABC programs is corruption, targeting the agencies themselves or the data specialists within the industry. Unfortunately, the risk of this type of criminal activity is real, as evidenced by the conviction in a U.S. court of Jasbir Grewal, a
Canada Border Services Agency officer who permitted narcotics trafficking through his post at the Canada–U.S. land border (Bolan, 2011). Consequently, the state requirement for data sharing is fraught with risk for civil aviation firms that may employ individuals that become the subject to corruption efforts. While the ABC programs have involved significant co-dependence between firms and state agencies, further safeguards appear warranted to avoid these partnerships leading to national security risks, and subsequently “tipping the balance” away from trade facilitation.

5.4. International Air Transport Association (IATA)

Organizational Role

The IATA represents 230 global airlines, which comprise 93% of scheduled air passenger traffic (IATA, 2010). In recognizing the IATA’s global reach, the interviews involved two representatives, the first of which engaged the Montreal headquarters (also involving the representative from the IATA Europe office). The second interview involved the Washington, D.C. office, which has a North American focus. This latter professional has been a leader in the ABC program field for nearly three decades.

Relevant Corporate Strategies

The IATA’s Simplifying the Business (StB) model pursues improvements in the passenger process with tools for enhancing convenience and for facilitating data transfer between supply chain partners. The parallel Simplifying Passenger Travel (SPT) program uses biometric systems for increasing cost-effectiveness for
governments, airports, and airlines. The IATA is pursuing these facilitation initiatives with the aim of establishing global standards, and building a harmonized approach to passenger service delivery. APIS program harmonization towards evolving global standards represents the key program objective. Within this context, the IATA aims to ensure that access to traveler data respects citizens’ civil rights, facilitates passenger movement, and maintains border control integrity, summarized as follows:

“The end-to-end process includes the entire passenger value chain from airlines, airports to government. All groups must be represented and involved in order to develop a mutually beneficial proposition”.

**ABC Program Role**

For the IATA, pre-journey data sharing was a smarter move. However, the problem with APIS was the lack of global standardization that forced airlines to bridge the divide between airline system capabilities and government expectations. These gaps meant airlines were doing the job of government. This involved the airlines determining what data was required, establishing the data format structure, and providing each party with the necessary data. Even with two decades of development, APIS had not yet reached maturity to be truly useful to border control agencies. Despite the gains, travelers remain subject to routine inspection even if further scrutiny is unwarranted. The proper use of APIS demands that states respond to airline demands for the non-interference in the structuring of databases, and recognizing that downstream non-commercial data users are having a disproportionate impact on computer network programming. Airlines also preferred a “single-envelope” (i.e. government-wide dataset request made by a single agency that then re-transmits the
received data internally to relevant departments): an approach that was not occurring. For example, the requirement to transmit the APIS data prior to departure through a single transmission did not exist, as both U.S. CBP and the U.S. Transportation Security Administration (TSA) are legally required to receive separate files.

The IATA did recognize the difficulty of aligning internal agendas, but this was a common problem where individual departments pursued data for their own ends. For example, European privacy policy was even more complex. As some countries complied with the Schengen Agreement Area (SAA), and others did not, the airline community faced the difficulty of complying with conflicting rules. For the IATA, the problem was the inefficient way this happened. Even worse, states required airlines to collect data that was not verifiable, calling into question the purpose of such data collection efforts. For example, the U.S. DHS required airlines to document the first night’s lodging for “third-country” nationals entering the US, information which passengers routinely invented during the check-in process.

The other “exciting” initiatives included CANPASS and the Dutch PRIVIUM program. The pilot programs, unfortunately, had had little impact on overall capacity. These types of systems could operate at a multi-state level, and the industry needs to promote their use and make the programs widely available. This is an intelligent use of information technology, and the future should see the delivery of these smart services at the point of departure. For the industry and government, the benefits of reducing queues and the better use of resources is important. At a strategic level, the current success of these programs should demonstrate to states the advantages of building a multi-lateral platform that increases trust between the state and travelers. This
favourable outcome alone may have warranted the years of dedicated effort and investments by a myriad of primarily private parties.

**Major Challenges**

From the IATA’s perspective, the state of affairs was not optimal; outcomes were insufficient when compared to the investment. The state-driven approach was often incident driven and lacking in strategy, which can lead to a lowering of national security. By contrast, the IATA was pursuing best practice improvements. For example, a one-stop inspection process had “real advantages” when all the information necessary for a correct determination of risk was brought together in one place and in real time. Lack of progress arose because handling sensitive data generated sovereignty issues between states. Data sharing was also a domestic issue, as evident by the 2004 controversy when JetBlue, a U.S. airline, released historical passenger data to the U.S. Department of Homeland Security (U.S. DHS) for testing the new aviation security program named the “Computer Assisted Passenger Pre-screening System” (CAPPS). Instead, the IATA argued that solutions lay in process innovation, rather than just spending on new and expensive technologies. As such, policy needed to become more responsive to serve business ends.

The view from the IATA Washington, D.C. office identified that the drive for these programs had come from the U.S., Europe, and a few other states. Historically, policy change had been “reactionary”, rather than planned which happened in the “real-world” of politics that the industry could not escape. However, these approaches created unintended consequences, with reactive measures hard to sustain over the long term.
The IATA also believed that states had to refrain from calling for “somebody to do something” when situations arose. Instead, border control agencies required pre-planning and testing in an “intelligent way” with stakeholders. New threats could be handled in this manner, and reduce the pressure for reactionary decisions.

IATA further expressed the view that states have to act in a strategic manner in order to achieve the legitimate objectives of facilitating traveler movement and balanced national security outcomes. For example, the IATA admitted that airlines supported the USPC program, but relocating the same process to forward sites did not necessarily add sufficient value to offset the remarkable costs. At present, the USPC program costs the industry between 2.7 to 2.8 times what the same service would cost at domestic U.S. airports. The primary reason for the major cost difference is related to the “foreign duty pay” premium afforded to border control officials working outside of U.S. territory, which includes relocation costs for the individual and his/her family, subsidized housing, and paid travel privilege for routine visits to the U.S. for training and personal leave. As U.S. law requires the re-capture of additional enforcement costs from users, the civil aviation industry prefers collecting user fees from USPC passengers, rather than recovering costs through direct billing of airlines and airports. Ultimately, the IATA viewed the physical relocation of traditional border control programs as unsustainable in the longer-term.

Looking Forward

The IATA representative concluded that extreme public policy positions were difficult for most states to maintain for various reasons. Consequently, the IATA has
long argued for a balance between national security and international mobility policy. Accordingly, and rather than suggesting the state should “soften hard security edges”, IATA has suggested that a better approach is to focus on accomplishing goals in a mutually satisfactory manner. The change has to start with proper risk management practices to determine where to concentrate efforts to avoid harming stakeholder interests. In sum, the IATA prefers that border control agencies “focus on bad people through better processes”.

Synthesis

As a supra-national industry association, the IATA has long pursued multi-lateral efforts to influence border control priorities and legislation. For the IATA, the importance of border controls to the U.S in the post-9/11 era warranted the notable re-location (i.e. from industry’s perspective) of the organization’s senior facilitation expert from Montreal to Washington, D.C. in 2007. Despite this recent U.S. focus, the IATA had pursued global standardization of data-sharing long before-9/11, with the preference that states adopt data extraction methods that created as little interference in airline data systems as possible. However, these harmonization efforts appear not to have been successful, especially with the evidence from the ICAO that a wide range of APIS requirements were appearing from numerous states.

From a conceptual perspective, globalization theorists articulate the need for standardization in a global economy. However, and despite consistent advocacy from airlines for such policies, the reality is that states routinely adopt policy that deals with localized national security threats. Consequently, it would appear that for an industry at
the vanguard of global connectivity, local threats and local political responses remain cogent factors in firm strategy. Thus, given these circumstances, for airlines and airports to maintain strong relations with border control agencies, including through ABC program, partnerships, appears logical and appropriate.

Finally, the IATA correctly observed that industry faces double-taxation through the legislated obligation to provide dedicated facilities and data system access that are not required from other transportation modes. While the IATA was careful to support the ABC programs under study, the organization did raise serious equity questions with regard to the transfer of costs from the state to the private sector for national security protections. Whether aviation firms should contribute financially to protecting society from the negative externalities arising from trans-national travel is an interesting question, although well beyond the scope of this thesis.

5.5. Airport Council International (ACI)

Organizational Role

Founded in 1991, the Airports Council International (ACI) is a global trade body created to represent airport interests and foster partnerships (ACI, 2010). The interview involved the two facilitation managers in the Washington, D.C. affiliate office.

Relevant Corporate Strategies

The ACI has articulated the importance of the proper use of biometrics. Such systems can enhance the passenger travel process, including facilitating border control
throughput and increasing national security by improving identity verification. ACI members support the ICAO biometric standards. The ACI works with stakeholders on multi-lateral facilitation initiatives, consistent with the shift towards passenger self-service processes. The ACI also conducts an Airport Service Quality (ASQ) survey for its member airports, the results of which routinely highlight border control facilitation as an important measure to overall airport customer satisfaction (ACI, 2009). Furthermore, the ACI-Europe affiliate explicitly supports ABC type systems (ibid, 2009), based on:

“Encouraging design and coordinated deployment of fully interoperable ABC systems that benefits not only public agencies, airports and air carriers, but most importantly the travelling public. A proliferation of non-interoperable ABC systems would diminish the possibilities of creating a common border control interface throughout E.U., and extend it later to non E.U. countries”.

ACI-Europe has a further view in keeping with member airport concerns over the efficiency and costs of implementing ABC programs, as follows:

“EU member states, in full compliance with data protection regulations, should encourage register traveler programs and allow passengers to self-process through ABC systems that can read a variety of electronic travel documents while controlling their registered biometric [identifier]. This approach will enable state agencies and airports to process a greater number of travelers within the existing limited airport space without compromising standards of security, border protection, and facilitation”.

ABC Program Role

As for the Canada-U.S. NEXUS and the U.S. - Dutch Global Entry programs, the advantages to the travelling public require improved promotions. These measures represent good use of public resources and facilitate the efficient use of scarce airport
assets. However, these programs are generating privacy questions, especially concerning mandatory data sharing requirements. Furthermore, the ABK programs, at present, are limited to citizens of the U.S., Canada, and the Netherlands, but leave out the large base of travelers, such as Mexicans who participate in a similar U.S. DHS program named SENTRI (Secure Electronic Network for Travelers Rapid Inspection).

The ACI also supports the USPC program; although, resource and staffing issues are perennial problems, exacerbated by the addition of new sites. Program expansion was not surprising as the advantages for airports are enormous, and the ACI expects further growth pressures as globalization requires more flexibility and improved access for even the smallest communities. However, as the USPC costs are multiples of the traditional border control process, other approaches are necessary such as the expansion of APIS programs at departure airports. This is already underway in Australia with the Electronic Travel Authority (ETA), and recently in the U.S. with the Electronic System for Travel Authorization (ESTA) program. In considering the future, virtual of pre-journey inspections do not require locality-fixed resources and can be supplemented by random and/or targeted border control inspections.

**Major Challenges**

In examining ABC program challenges, it is clear that border control agencies were slow to change, even with 9/11. Although improvements did occur, at best, they represented a marginal shift that “made debatable whether benefits were accruing which left in question agency commitments to pursuing innovations”. This was particularly concerning as globalization was pressing airports to be more responsive in
the face of competition. All this left ABC programs with considerable promise, but represented a work-in-progress that needed more state and airport cooperation.

**Looking Forward**

In the longer term, the ACI views that electronic inspection would provide cost-reductions, as augmenting labour-intensive programs with forward-looking interdiction systems has considerable merit. This change will reduce operational processes, enhance customer service, and reduce space use at airports. In the short-term, these new programs duplicate existing enforcement efforts, which have resulted in higher costs with few industry benefits. The need to invest in the short-term is somewhat of a dilemma as the industry complains of paying today for “possible” benefits in future.

**Synthesis**

The ACI managers observed that ACI has long attempted to influence border control policy in a manner that supports national security objectives, but also provides airports with the freedom to operate in a commercial manner. The ABC programs under study demonstrated the viability of these arrangements, with expanding cooperation having considerable promise to achieve the policy balance identified in Figure 3.

However, the ACI correctly noted that states have acted unilaterally, especially after 9/11, and the risk remains that this will occur in the future. From a firm perspective, such ad-hoc policy approaches dampen the interest of airports in investing in cooperative border control arrangements that could produce better results than legislation could on its own. For capital-intensive businesses like airports and airlines,
the viability of investment decisions must consider market demand and competition over multiple generations, and cannot depend on the vagaries of near-term policy setting from the latest national security threat. This does not mean aviation firms cannot contribute in appropriate ways to resolving national security issues, but in the case of Canada and the Netherlands, the state expressly adopted economic policies to separate airlines and airports from public operation. Thus, a fine line exists between mutually beneficial partnerships between border control agencies and civil aviation, and the re-nationalization of these private assets for expanding border control protection.

5.6. Civil Aviation Industry Association

Organizational Role

This global association provides policy support, training, and related services to its public and private sector membership. The passenger facilitation manager was willing to participate on a non-attribution basis. The association, which has offices in various world regions, generally supported the ABC programs, with the caveat that states should avoid imposing requirements that complicate the ability for industry to manage its business affairs.

ABC Program Role

The association has engaged in lobbying government, and has provided industry support for ABC program expansion. The organization holds the view that these systems deliver better services to customers; produce cost savings; reduce facility
requirements; and increase system capacity. From a national security perspective, the association believes that states engaged in these programs to support border control interdiction to scrutinize travelers prior to arrival. In addition, states are not oblivious of resource constraints for private firms. Consequently, border control agencies recognize the benefits of increasing passenger throughput with the use of technology and new processes.

**Major Challenges**

This association believes that ABC program delivery is uneven, which reflects the reality of global versus local differences. Thus, for the ABC programs to deliver better outcomes, the needs exist for greater harmonization, although achieving this objective would be difficult, as states and firms do not operate at the same level of efficiency.

Another issue over the past two decades related to having a frank engagement between border control agencies and firms that were on the front-line. The challenge of obtaining alignment is often associated with the inability to communicate concerns between the various parties, partly because of the institutional and cultural issues that emerge when private firms engage the public sector. Firms then face uncertainty and consequential risks in determining the best investment case. This lack of a broader partnership retards the ability to achieve a globally harmonized approach to advanced border controls. In this regard, the motivations are not aligned and thus the state is less predictable on the direction of policy, whereas firms have narrower perspectives, albeit, recognizing that firms have to operate within the broader political context.
The interviewee stressed that the information technology delivers high levels of customer service and national security performance. Although new installations face problems, implementation issues are routine in meeting stakeholder and customer interests. More important is the need to change the people, which is foundational to the implementation of improved border controls.

**Inter-Firm Competition**

As the association’s role involves educating the membership on industry matters, ABC program benefits merit consideration. Resistance exists as some express the view that border controls should remain a strict state responsibility. The association challenged this view as ABC programs were changing firm strategy. Leading industry firms had recognized that customers demanded innovations, or would go elsewhere. These heightened passenger expectations were generating competitive pressures on those firms that had yet to invest, reinforcing the cycle of investment in ABC programs.

**State-Firm Relations**

The association took a balanced view on whether national security priorities conflicted with trade promotion objectives. The direction of the industry will involve better data sharing, which is a gap that has taken years to be recognized. The association therefore, believes that there are major advantages, for both the state and firms, to undertake carefully planned data sharing arrangements. In sum, the association views that working together is not a “zero-sum game”, but will generate incremental benefits to the state, civil aviation firms, and travelers.
Looking Forward

Finally, the association believes that legislation is too blunt an instrument for the complex nature of trans-national threats, which often come with a heavy compliance price for industry. Instead, the association prefers that states adopt a consultative approach that fully addresses private sector interests, which involve alternative models for achieving national security objectives through trade facilitation partnerships. For example, the association views the innovative efforts in Canada and the Netherlands as laudable for their commitment to collaboration, and the association strongly supports these approaches. However, the association expresses that cooperation should not necessarily lead to agreement on global standards, as it is important to recognize that ABC program implementation occurs in enormously diverse settings.

Synthesis

This association considers that all border control programs need to account for "locality", although this perspective runs contrary to those of the ICAO and IATA which prefer global harmonization integrated through domestic legislation. This situation confounds globalization trajectories for supposedly “foot-loose” trade-dependent industries such as airlines. Conversely, airports are unable to escape fixed geographic locations, and thus “locality” matters in determining how such firms serve local markets. In any event, the investment in ABC programs by the private sector has direct customer service benefits and creates tangible competitive advantages. At a conceptual level, this conflict reflects the challenge facing globalization theorists regarding the “flattening of space”, and the contra-perspective that “geography still matters”.
5.7. **Supra-National Organization Summary**

In considering Figure 6, these supra-national organizations played crucial roles in various aspects of ABC program development. For example, the ICAO established the legal foundation for cross-national collaboration, especially concerning the increasingly powerful APIS program. Similarly, the airline and airport associations interviewed strongly supported the USPC as a major component of ongoing traveler facilitation. These organizations also viewed the ABK tool, linked with extra-territorial ICT based pre-journey approval systems, as simply inevitable. Furthermore, these supra-national organizations accept that although 9/11 created considerable policy scrutiny, the previous decade of system testing had proved their worth.

However, issues worthy of attention arose in the interviews. First, the ABC programs generate costs viewed as an unfair burden to civil aviation firms. An inaccurate response to this concern might suggest that with privatization benefits, the industry should also shoulder the border control costs. From a broader perspective, Torpey (2000) observed that a core element of sovereignty relates to territorial control, which is why border controls have traditionally been a state responsibility. Thus, the question emerges as to whether the direct funding by transportation firms of a core sovereignty function diminishes prospects for state control of territory in future?

From a practical perspective, the transference of state border control costs to the aviation industry creates a competitive disadvantage vis-à-vis other modes. In particular, the Vancouver airport representative later notes that significant volumes of U.S. bound air travel crosses the land border to Washington State for flights at the
Bellingham and Seattle airports. In part, the cause of this diverted traffic is U.S. border control fees for flights from Canadian airports. Travelers crossing land borders are not subject to these fees despite the fact that land ports-of-entry are state funded and operated. While this thesis does not address the broader question of whether all border control costs should be the direct responsibility of travelers and the transportation firms, the lack of apparent financial fairness by the state requires rectification.

The second major issue relates to personal privacy. While legitimate concerns exist for potential state abuse, in the case of trans-national travel the reality is that states have adopted entry and exit legislation that is data intensive. Completely absent from the privacy debate is the fact that states have made decisions to collect data for processing before departure in order to avoid collecting the same information when the traveler arrives on sovereign territory. The consequence of post-arrival data collection, as documented in the global airport development manual produced by IATA (2004), would be the emergence of tremendous levels of airport congestion while passengers wait for border control agencies to perform this task. The economic cost of such delays was abundantly evident in the days immediately after 9/11, when U.S. ports-of-entry, regardless of mode, were required to perform extensive inspections of all arriving and departing travelers, including extensive data analysis.

Despite these numerous challenges, the benefits of ABC programs were strongly evident to these supra-national organizations. While these organizations express a desire for cooperative dialogue and partnerships over restrictive legislated mandates, the reoccurring debate of “whether geography still matters” is evident in the differing views on how to meet local needs for an industry that is inherently global in scope.
Chapter 6.  Canada Case Study

6.1.  Introduction

This chapter assesses empirical material related to ABC programs that involve Canadian-based stakeholders, including the Canadian government, firms, industry associations, and others. While the interviews involved some U.S. based parties, the interests of these organizations overlapped the research objectives, which warrant their inclusion in the project (See Figure 6).

6.2.  Canada Border Services Agency (CBSA)

Organizational Role

Prior to 9/11, the Government of Canada organized border controls across different departments. In order to integrate these functions, in 2003, the CBSA became the pre-eminent agency on Canada’s frontier. This brought together Citizenship and Immigration, the Customs and Revenue Agency, the Food Inspection Agency, and related controls. The CBSA operates ports-of-entry at land, harbour, and airport crossings, in addition to interdiction operations at foreign locations together with partner state agencies (CBSA, 2010b). The interview involved the CBSA policy manager responsible for traveler admissions located in the Ottawa headquarters. This individual has long been involved in various innovation programs. Furthermore, this individual
directly reports to a senior CBSA executive who was responsible for the ABC innovation program during the 1990s.

Relevant Policies

The CBSA delivers a variety of programs to expedite traveler entry into Canada. For example, in *What We Are Doing To Facilitate Passenger Travel* (CBSA, 2009), the CBSA explains how the organization “looks to maximize technology and advanced vetting in order to stream low risk flows from those of unknown or higher risk”. One of the programs jointly pioneered by Canada Customs with the private sector was the CANPASS ABK service for Registered Travelers (RT). The CBSA considers the program highly secure and a way to provide an innovative service designed to accelerate border processing for citizens and permanent residents of Canada. The CBSA further noted that a more efficient and effective flow was permitted by strategically moving part of the entry determination prior to the physical border. In terms of CANPASS customer service, internal reports indicate that satisfaction ratings among participants were in the 96% range. Finally, the CBSA recognized that ABK programs would not be sufficient to meet rapid traffic growth. In 2006, the CBSA advanced a new air services policy to ensure a “fair, transparent, and … flexible approach to on-airport service delivery”.

The CBSA also has an integrated view of technology and new processes within the border control structure at Canadian ports-of-entry. Over the past two decades, their strategy has evolved to build a coordinated approach, using automation as a support tool to undertake routine tasks. Combining technology with skilled people has the
greatest merit, and allows for a focus on “proper detective work” to deal with the serious risks at the border. The goal for their office was to build a more effective decision-support system that permitted better, faster, and smarter outcomes.

CBSA views that a forward-located Automated Border Kiosk (ABK) concept has strong merit as it supports the confirmation of secure identity of travelers before the passenger boards an aircraft destined for Canada. Recognizing multiple challenges, such as 9/11, the CBSA explained that it was unfortunate that a delay had occurred in expanding CANPASS. As well, the Electronic Primary Inspection Line (E-PIL) pilot rollout at Vancouver Airport has real promise to alter the inspection process and traveler expectations. The E-PIL system involves a self-service kiosk for collecting traveler data and verifying passport information, which is assessed against Canadian intelligence “watch-lists” prior to the traveler’s interview with a CBSA officer. The E-PIL process is reducing inspection times for arriving Canadian citizens from the 45-50 seconds the manual process generally takes down to 10-15 seconds for this semi-automated technique. The traveler is not required to pre-register, and instead, the kiosk is available to any returning Canadian citizen before proceeding to the inspecting officer.

At present, the E-PIL trial only permits the participation of Canadian citizens. In future, CBSA sees the “next generation” systems that build on E-PIL pilot learning, will permit participation by non-registered Canadian citizens at the majority of Canadian ports-of-entry. Of note, front-line officers, with support from intelligence processing systems, supervise the program. CBSA views this combination as a “game-changer” for the way travelers will interact with border controls in the future.
Major Challenges

When considering how ABC programs have evolved over the past two decades, the CBSA observed that innovation had become necessary to overcome both national security challenges, and for administrative concerns related to managing budgets. First, the need to innovate arose because those parties who wished to confound border control practices must not find predictable inspection systems. The CBSA recognized that processes needed to change, and technology was just a tool to make change happen faster. Another advantage of these tools is their ability to change processes rapidly and in unpredictable ways in order to prevent illegitimate travelers from building capabilities to counter CBSA efforts. While the travelling public will not have seen much change in the processes for customer service reasons, technology has become a foundational tool that could provide multiple sources of intelligence for officers to make more accurate admissibility decisions. For example, the design and operation of the E-PIL kiosk purposely resembles the traditional inspection process. This approach received positive customer responses, although, the behind-the-scenes process was quite sophisticated. CBSA has considered the potential for remote monitoring of the Automated Border Kiosks (ABK), but the program planning for the current generation of technology has involved only traditional airport locations that permit direct officer supervision of the system.

The CBSA also noted that for states to ensure a fortified frontier, it is necessary to develop border control tools that extend beyond the territorial limit. For the CBSA, this involves offshore activity such as the Migration Integrity Officers stationed at foreign airports. The approach of extending the inspection chain reduces the complexity of
making a timely decision at a Canadian port-of-entry, as lengthy inspection delays often generate traveler complaints to government. Instead, by undertaking pre-clearance type inspections, in either manual or automated forms, these remote steps reduce the risk of admissibility decision being wrong as time is available during the journey to scrutinize passenger information prior to the travelers’ arrival on Canadian soil. As well, pre-screening permits the CBSA to expedite low-risk travelers through the process permitting a greater focus on those few travelers who need further scrutiny. However, in order for extended inspections to work, traveler data is required at an earlier point in the process, and well before the traveler checks-in at a foreign airport. Thus, the APIS program, and variations involving pre-ticketing traveler verification is becoming crucial in understanding those risks that will arise when travelers arrive for physical inspection.

**Inter-State Relations**

The CBSA has worked with other agencies, including the Canadian Passport Office and the Public Safety headquarters to develop improved traveler identity security. These efforts relate to the national security issues surrounding the lack of information on over-stayers. For example, the U.S. has grappled with establishing a biometric exit program to accompany the U.S. Visitor and Immigrant Status Indicator Technology (US-VISIT) biometric arrivals program. Although the U.S. Congress has required exit border controls since 1996, a completely new process at U.S. ports-of-exit would face enormous operational and budgetary challenges. The CBSA is aware of industry suggestions that rather than a separate exit process between the U.S. and Canada, an alternative exists involving the sharing of secure identity information. This concept
involves the use of a biometric-enabled entry program into the U.S. as confirmation of exit from Canada, and a mirror process for travelers leaving the U.S. for a Canadian ports-of-entry. Of note, other interviewees (i.e. Private Consultancy, Can/Am Border Trade Alliance, U.S. Ambassador Paul Cellucci) supported this bi-national approach as a more progressive facilitation tool.

The CBSA acknowledges that it is still part of the Canadian government, which means changes have to fit within the government’s broader mandate. Thus, structural issues emerged regarding the depth, degree, and extent to which the partnerships between the private and the public sector could remain permanent. These cultural issues are not easily resolved. For example, and despite the progressive efforts by the CBSA information technology division to build robust systems in support of innovation, serious questions have emerged regarding data sharing with the private sector.

The CBSA also advised that understanding the political process was crucial in how priorities became established. The fundamental agency re-working, which is part of a broader public safety agenda, has significant merit. The outcome should be an improved integration of efforts before, at, and after the border. Perhaps not surprisingly, the CBSA stressed that the Automated Border Kiosks (ABK) has yet to make a big difference in the port-of-entry process, as volumes are insufficient to change the operational paradigm. From an enforcement perspective however, the tide is changing, and a new model is emerging that these tools would support. From a broader enforcement perspective, the government has directed that an “investigation and interdiction model” have to have a greater priority. This means the CBSA has had to become forward-looking rather than waiting for travelers to arrive before conducting
inspections. Instead, the CBSA has to focus more on intelligence gathered in the field, together with greater efforts to prevent threats from entering transportation channels in the first place. The CBSA admits that this pro-active stance is different from past practices, and involves the combined deterrent effect of front-line officers. Moreover, as the threats to Canada are often trans-national in nature, a coalition of border control efforts has to be constructed. This means that advanced inspection programs, such as APIS and greater offshore processing, will need to become part of the toolkit.

**Looking Forward**

Due to internal circumstances, the CBSA views that Canada has fallen somewhat behind Europe and the U.S. as both have already issued biometric passports. In the absence of this type of passport for Canadian citizens, the widespread rollout of next generation innovations will delay ABC program expansion. Despite limitations that are shortly to be resolved, and as Figure 6 highlights, the CBSA viewed its cooperative history over the past two-decades as foundational to future innovation. Finally, CBSA considers border control policy as a work-in-progress and despite the commercial pressure from firms and political tension to act, the organization remains committed to consultation before making sweeping decisions on the manner in which firms and travelers interact with Canada’s sovereign territorial controls.

**Synthesis**

The CBSA admitted the organization had not been a driving force behind early ABC program efforts. The CBSA further credited the private sector with two-decades of
advocacy that encouraged alternatives to the historical face-to-face interdiction model. However, some in industry express concern that certain uncoordinated actions by the CBSA in the post-9/11 period negatively affected civil aviation interests, particularly with regard to maintaining service levels that are crucial to competitive access to foreign markets. In this case, the evident conflict relates to the expectation by industry that the pre-9/11 cooperation would continue, but that tremendous political pressure emerged from the U.S. to coordinate border controls in keeping with the renewed 2001 Smart Border Declaration (SBD). In the case of the CANPASS/NEXUS program, this greater state-orientation did not prove to be detrimental because the CBSA accelerated its involvement as this program has benefits to joint Canada–U.S. interests.

From a geo-political perspective, the requirement that the CBSA turn its attention to building relations with U.S. counterparts is not surprising. Yet, the long-standing partnerships with the civil aviation industry were immensely useful in this heightened era, a period that Canada depended on U.S. market access for “economic security”. As such, the theory that globalization enables firms to direct states in the conduct of geo-political affairs again comes into question, and these circumstances reinforce the careful balance between national security and trade as reflected in Figure 3.

6.3. **Canadian Department of Foreign Affairs and International Trade (DFAIT)**

**Organizational Role**

The mandate of Foreign Affairs and International Trade Canada (DFAIT) was to manage diplomatic relations, along with encouraging trade (DFAIT 2010). The DFAIT
discussion involved the U.S. Trans-Boundary Division, which was responsible for negotiating national security and border control agreements on behalf of other Canadian ministries. The particular DFAIT representative has long been involved in various U.S. files with emphasis on advancing Canadian economic and national security interests.

**ABC Program Role**

The DFAIT views that these tools are applicable to all modes and should involve the use of biometrics, which immigration authorities are carefully examining. As well, the U.S. and Canada have to find ways to cooperate on the perimeter security concept. It will also be necessary to frame this narrative differently, as perimeter security objectives are legitimate, but reflect core philosophical issues. The DFAIT also suggests that there is a need to build “security credentials” of travelers entering into Canada or the U.S. from elsewhere. Programs such as CANPASS and NEXUS are consistent with this potential path, which the DFAIT representative stressed was only “potential”.

**Major Challenges**

The challenge of managing the Canada-U.S. border control relations goes back many decades. For example, just obtaining a commitment on resource levels from the U.S. has been a continuous point of contention. For example, the researcher was reminded that the best that during the 1990s USPC negotiations, only vague assurances became possible in the treaty outcomes (DFAIT, 1995), as follows:
“ARTICLE V Inspecting Party’s Obligations and Authorities
On the territory of the Host Party, the Inspecting Party shall:
• provide high level of service to travelling public;
• provide a sufficient number of officers, supported by technologies, to carry out with reasonable speed and efficiency USPC on eligible flights;
• give consideration to using flexible practices and operating procedures, which may improve efficiency or address temporary disruptions;
• make best efforts to secure resources if staff are required;
• consider requests from air carriers and airports to improve operational efficiency through flexible procedures that meet the controls and sterility standards, and are consistent with efficient use of resources; and,
• give notice 90 days in advance of reductions in service to the appropriate airport authorities and to the Host Party”.

The DFAIT admitted that the challenge in moving the facilitation agenda forward arose from the sheer inertia within the bureaucracy. In response, firms came to understand that rather than waiting for policy change to spring forth from the civil service, a better alternative was to the build case for change. DFAIT welcomed well-considered proposals, which involved wider stakeholder engagement before the start of political lobbying. Success with the USPC treaty changes was in part a consequence of this type of engagement to find solutions to trade and national security interests.

As a result, the DFAIT continues to face serious industry pressure to engage with the U.S. to provide more resources in order to take advantage of civil aviation industry trends towards international market expansion. Although the USPC operational costs are higher, the ability to link Canadian aviation networks directly into the domestic U.S. market is highly advantageous. DFAIT further noted the Toronto Port Authority has recently requested DFAIT intervention, following the U.S. rejection of its application for the USPC program to be located at the Toronto Island Airport (Jang, 2010).
This circumstance arose when Porter Airlines, a new Canadian airline based at the small airport located near downtown Toronto began U.S. flights, but found its arrival operations at the international facilities at U.S. airports were less than competitive in comparison to the offerings at the Toronto-Pearson Airport that had outbound USPC facilities available in both of its major terminal buildings. Porter Airlines’ desire to obtain UPSC services is crucial to expanding its service offerings, and involves positioning this change as important to the Toronto financial community to obtain better access to major U.S. cities. Interestingly, amongst the prominent board members for this fledgling airline was the former U.S. Ambassador to Canada, David Wilkins, who joined the airline in 2009 immediately after retiring from this post (Porter Airlines, 2009).

Inter-State Relations

Canada also recognizes that the U.S. has much bigger border control issues. This relates primarily to the Mexican frontier, where the U.S. has a border control presence that dwarfs the engagement at the Canadian frontier. The terrorist risk is not new either, and the U.S. and Canada have long cooperated on this front. However, all of these concurrent pressures create serious difficulties in “getting sufficient boots on the ground” in response to growing Canada-U.S. trade and travel.

DFAIT advised that media reports should be read with caution, as state-to-state relations are generally positive, and have been increasingly so in recent years. However, this does not mean an absence of serious difficulties. The best example is that the “land-preclearance” proposal at the Buffalo / Fort Erie port-of-entry is “going nowhere”. Finding resolutions to serve mutual interests in the complex field of
sovereignty and law enforcement is not easy, and continues to be a core struggle in the Canada-U.S. relationship. Despite the difficulties of advancing this particular goods movement proposal forward, on balance, “the goods movement sector is working much better than traveler processing”. For example, the streamlining of rail and marine modes with technology and joint national security targeting has proven highly productive.

State-Firm Relations

The DFAIT representative also identified the major shift in state-firm relations, with coordination between regional governments and local firms also having influenced national level policy. For example, the bi-national local efforts in British Columbia and Washington support port-of-entry improvements. Similar collaborative efforts between New York and Quebec, and Ontario and Michigan, show that “bottom-up” approaches (i.e. proceeding from small-scale components) can make a difference.

Looking Forward

The DFAIT representative indicated that much remains on the agenda, including provision of soft and hard infrastructure. This would involve facility construction, but as the joint Canada-U.S. NEXUS initiative demonstrates, relationships must support national security objectives. The more difficult task is putting into place a robust set of mechanisms for maintaining high-level relations. For example, even a decade after 9/11, Canada still faces the occasional U.S. policy leader incorrectly suggesting the terrorists came from Canada. While improved bi-national relations will not eliminate these inaccurate expressions, which have appeared from both sides of the
Congressional divide, such mechanisms can serve to build confidence around mutual interests.

In order to resolve this dialectic, the DFAIT advisor expressed that a robust boundary institution would be necessary. The Canada-U.S. International Boundary Commission, established in 1908 to deal with bi-national demarcation matters, has worked well, but more dialogue is necessary to determine what can work. Furthermore, this inter-state institution building perspective was strongly evident in a Government of Canada Research Forum, held at the University of British Columbia, under the banner, Re-thinking the Line: The Canada–U.S. Border (Canada Privy Council, 2000). Most interesting are the similar remarks made a decade earlier by notable forum speakers, including then Canadian Minister of Foreign Affairs, Lloyd Axworthy, as well as the U.S. Ambassador to Canada, Gordon Griffiths. Even more remarkable is the openness expressed in the following passage authored by Marc-Yves Bertin, a staff official of Canada’s Privy Council Office responsible for advising the Prime Minister and Cabinet.

“While Canada and the U.S. have a long history of border cooperation, this relationship, when compared to the European experience, can be rather informal and is not shaped by a series of bilateral institutions. The potential for instability or sudden change is great: for example, Section 110 of the US Immigration Act had the potential of creating cross-border gridlock because it required new draconian entry and exit controls [italics added].

A coalition of Canadians and Americans was successful in securing an amendment that averted border paralysis, but over three years was spent ensuring the border status quo rather than planning for the future. Should we promote the idea of an International Joint Commission for the Canada–U.S. border to help us prevent and resolve border disputes?” (p. 11)
In closing the interview, the DFAIT representative remarked that in the absence of a long-term state-to-state institutional arrangement, there was “nowhere to go without a permanent commitment”. This view recognizes that sharing a common border demands respect for each partner’s interests, but obtains consent in the joint management of common sovereign frontiers.

Finally, and recognizing the vagaries of the government’s legislated priorities, the DFAIT has long held the view that in dealing with the U.S., and other allied states on the enormously sensitive matter of border controls, cooperative dialogue is the most effective approach. In the case of the ABC programs, DFAIT was the lead agency for re-negotiating the USPC agreement, which eventually involved adoption of Canadian legislation. Similarly, the revised USPC agreement anticipated a bi-national ABK program that became reality in the post-9/11 period. Thus, the DFAIT was actively involved from the early days in facilitating trade activity for Canadian firms. These efforts acknowledge that the Department is not only responsible for Foreign Affairs, but has within its mandate International Trade. However, the use and/or abuse of APIS information caused a considerable bi-national conflict between the U.S. and Canada concerning Maher Arar, which placed the DFAIT at the center of the domestic policy struggle over U.S. relations on national security topics. Not surprisingly, the DFAIT is supportive of collaboration with industry, where such efforts make sense and do not create risks to inter-state relations. However, the DFAIT expressed considerable concern that bi-national ABC program partnerships would remain immature without a permanent treaty commitment at the highest levels between the U.S. and Canada that
cement a joint approach to bilateral security relations. The future has much promise, but also many challenges.

Synthesis

“…stopping unauthorized migrants from reaching sovereign territory long before they boarded a boat or airplane. The border moved outward in enactments of remote detention, legally ambiguous zones, and interdiction. Research on mobile borders led me to…sites where management of migration takes place, and struggles over access and exclusion unfold…Those countries with the largest per capita refugee resettlement programs include Australia, Canada, and the United States also exercise the most advanced ‘front-end’ border enforcement strategies to inhibit what policymakers refer to as ‘spontaneous arrivals,’ those who arrive to make a claim for protection without having been selected or assisted by governments.” (p.120)

The foregoing excerpt from The Enforcement Archipelago: Detention, Haunting, and Asylum on Islands (Mountz, 2011) re-affirms the considerable controversy in the literature regarding new techniques of border control. In considering the Canadian policy shift in response to U.S. demands for heightened frontier controls, the dialogue with DFAIT confirms, at least in the immediate years after 9/11, security certainly outweighed trade interests. This palpable policy change from the previous decade where DFAIT was front and center in negotiating NAFTA, the U.S. – Canada “Open Skies” agreement, and even the controversial USPC treaty revisions, reflects a dangerous turn of events. However, DFAIT did acknowledge that the trade agenda had become more prominent in the past few years, albeit enormous financial pressures in both the U.S. and Canada have forced political attention on economic gain where possible. Nonetheless, going forward, how DFAIT proceeds with other states to
negotiate both trade and national security protocols will attract criticisms that such actions reinforce “racialized exclusion” (Inwood, 2010).

As airlines and airports in Canada have actively participated in various types of automated border control tools, new and unexpected risks might come to bear on the industry. As such, in some critical circles the view exists that the ABC programs have become tools of state exclusion. In a similar vein, and while speculative until facts are proven, the social justice movement has implicated civil employees of a UK state intelligence agency that “provides intelligence, protects information, and informs relevant UK policy to keep our society safe and successful in the Internet age” (UK Government Communications Headquarters, 2012). The lawsuit at the UK High Court alleges that the sovereign protection of the collection and dissemination of intelligence data is limited, and available to “only [those] persons entitled to immunity from ordinary criminal law in respect of armed attacks are those regarded under international law as ‘lawful combatants’ participating in an international armed conflict” (Reprieve, 2012).

Consequently, the commercial provision of traveler data that the state might use for illegal purposes, such as the improper conduct of war, or the inappropriate exclusion of persons with the right of due process, could become a legitimate avenue for legal challenge. As the lead agency of the Canadian government that negotiates with other states, it would appear advisable that DFAIT proceed with attention to the legal implications of inter-state agreements that promote ABC programs. This can avoid circumstances where firms and their staff become subject to inter-state legal challenges on the use of otherwise commercial traveler data.
6.4. **Canada Public Sector Summary**

In keeping with the DFAIT synthesis, neither the CBSA nor DFAIT identified a serious risk from U.S. engagement arising from stringent national security policies (e.g. 2001 Patriot Act) that already require foreign visitors, and in future will likely require U.S. citizens to accept a high degree of pre-journey scrutiny. While Canadian citizens who temporarily visit the U.S. for non-business purposes have various border control waivers, including mandatory fingerprinting under the US-VISIT program, it is naïve to believe Canadian citizens will not one day be subject to a comprehensive biometric-based U.S. entry and exit system. As such, Dutch citizens already face these requirements. The question of when all travelers to and from the U.S., citizens or not, will be subject to these requirement is mostly a question of resolving implementation issues, although overcoming the hurdle of public acceptance will not be trivial. The U.S. government is diligently attempting to resolve these issues, and has unsuccessfully attempted to obtain airline and airport cooperation to support the necessary procedures. Accordingly, modern era ABC program cooperation may turn acrimonious should the burden of biometric border controls become the legislated responsibility of industry.

Moreover, DFAIT did indicate the desire to increase “traveler confidence” which may translate into Canada eventually establishing its own stringent pre-journey criteria that require visitors and citizens to pre-demonstrate travel eligibility. It is worth acknowledging that the restriction of trans-national mobility for Canadian citizens is more than an academic question. In the case of Khadr vs. Canada, the Federal Court ruled for a citizen who had his passport re-application denied. This particular individual
was not subject to legal charge or conviction after due process, and no public threat was evident to the interests of the state (Federal Judicial Affairs, 2006). Moreover, the Court found that although the individual’s family were associates of Usama Bin Laden, the legal grounds for passport denial were not applicable.

In considering the future evolution of ABC programs and the role of civil aviation firms, the judgement also indicated that the Mobility Rights (Section 6 (1)) of the Canadian Charter of Rights and Freedoms (Canada Ministry of Justice, 1985) were paramount, providing that “every citizen of Canada has the right to enter, remain in, and leave Canada”. As such, the ruling indicated that:

“In today’s world, the granting of a passport is not a favour bestowed on a citizen by the state. It is not a privilege or a luxury but a necessity.

The right to leave Canada is a hollow right if it cannot be exercised in a meaningful way due to the actions of the Canadian government directed against an individual or group of individual citizens.

The passport is becoming the primary international travel document for much of the world. It symbolizes not only the ability to travel but one’s identity and nationality. It has gone long past the point of a form of diplomatic communication only”. (p. 11)

While traditional border controls will change, with the paper passport replaced by a DNA-based biometric identity system, the risk remains that without attention to how these policy changes occur, “the state could become the source of terror itself” (Bobbitt, 2008). For civil aviation firms, this could mean becoming part of the “terror” apparatus.
6.5. **Air Transport Association of America (ATA)**

**Organizational Role**

The Air Transport Association of America (ATA) is an airline trade body founded in 1936, representing more than 90 percent of U.S. passenger and cargo traffic (ATA, 2010). The ATA’s responsibilities lay with supporting safety, environment, passenger facilitation, and international affairs issues on behalf of members. Although based in Washington, D.C., the ATA represents airlines in Canada (e.g. Air Canada) with regard to bi-national policy issues. In addition, the sizable majority of its U.S. based airline membership operates flights to Canada and utilizes the ABC programs under study as part of routine operational practices. Furthermore, as noted in Chapter 3, the ATA was instrumental in retaining the USPC service when the U.S. government considered eliminating the program in the late 1970s. Finally, other interviewees recommended ATA inclusion in the research project, citing the strong ABC program related policy work conducted by the organization over the past four decades. The ATA interview with the executive responsible for facilitation reinforced the documentary record that identifies the historical involvement of the association in the field.

**Corporate Strategy Priorities**

From a public policy perspective, although supportive of U.S. DHS programs, the ATA is against the proposal that airlines collect passenger biometric data, which has arisen to satisfy the requirements of the proposed US-EXIT program. Since both domestic and foreign-based airlines already submit biographical passport and other
passenger information to U.S. DHS for international entry and exit purposes, the ATA suggests this satisfies the Congressional demands to verify passenger identity. ATA also generally supports the 9/11 Commission report recommendations (National Commission on Terrorist Attacks upon the United States, 2004) that bear on civil aviation facilitation.

**ABC Program Role**

As the U.S. airlines consider European and Canadian markets of importance, thus ensuring that ABC programs are effective is a high priority. These programs need to support customer service and cost efficiency objectives, so the implementation methods require integration with overall airline business plan approaches. Of course, since 9/11, the dialogue around national security has been foremost in the minds of public policy-makers, which airlines ignore at their peril. The ATA was clear that solutions rest with a combination of information technology, public sector partnerships, and a degree of maturity regarding what airline information is useful for national security purposes. The ATA further encourages the exploration of information technologies to replace dated enforcement practices, albeit in consultation with industry.

For example, the ATA has long advocated for the approach inaugurated by Australian authorities in the late 1990s, which removes much of the pre-journey data burden from airlines. The ETA proved highly successful in managing how foreigners sought entry into Australia. Accordingly, the ATA also supports the U.S. DHS, which recently implemented the ESTA. This program is for visa-waiver country nationals, and provides a useful good step in separating airlines from performing border control
services. However, the implementation of real-time data exchanges, which bridge the
time between ESTA approval and actual flight departure, has been less smooth. The
APIS Quick Query (AQQ) process, which uses both batch and on-line queries by CBP
staff, generated considerable costs, and operational disruptions. These requirements
could also have negative consequences for on-time performance, a crucial bellwether
for airline success. The ATA is further concerned that imposition of data exchange
requirements immediately before departure is fraught with risk that is borne by the
industry and with no potential for compensation from the state.

As for the USPC program, the ATA understands the benefits of retaining this
service in facilitating travelers. Difficulties do exist, such as with different border control
standards and insufficient resources. These issues are not severe enough to cause a
decline in support for the program. In a similar vein, the ABK programs provide benefits,
but the volumes are low, so the benefits are negligible. The ATA believes that the ABK
program must become widely accepted without the current enrolment obstacles in order
to allow more low-risk travelers to participate and allow border control agencies in the
U.S. and Canada to focus on higher-risk travelers.

State-Firm Relations

In terms of how ABC programs are affecting corporate objectives, the ATA
believes that national security interests should not cause changes to legitimate firm
activities. This is not to say that firms should avoid cooperating with the state. Rather,
airlines have developed systems for their own commercial purposes available for
sharing in a reasonable manner. Airlines, however, face the challenge of separating
commercial priorities from their public obligations. For example, the ATA is concerned with the U.S. DHS undertaking “border control creep”, with responsibilities that rightly belong to the state being transferred to the aviation sector.

By contrast, transportation firms do not have border control responsibilities at land ports-of-entry, where the state operates their own facilities. This is opposite to the requirement at airports, which have to provide border control facilities at firm expense. Furthermore, the border controls at the USPC sites are disproportionate to land port-of-entry requirements, as land arrivals from Canada do not require pre-journey notification. The ATA was careful not to suggest that land border inspection programs are inadequately serving national security objectives. However, what appears is the unfairness of civil aviation bearing the costs of border controls.

**Inter-State Relations**

From a comparative perspective, the ATA fully recognizes that airlines have to operate within the differing cultural circumstances in various competing jurisdictions. As a result, U.S. airlines have long faced inter-state conflicts when sovereignty issues arise, with the E.U. - U.S. APIS dispute at the forefront. This situation has created the awkward problem for airlines to determine whether to break E.U. or U.S. laws regarding passenger data disclosure. Given the myriad of other regulatory controls, ATA member airlines have few opportunities to create disharmony with the U.S. Congress in matters related to the events of 9/11.
Looking Forward

In any event, the ATA is optimistic that through additional resources and smart technology investments, the often-conflicting objective of national security versus travel facilitation is achievable in a mutually acceptable way. However, and despite the policy change that created the U.S. DHS and Public Safety Canada, more bi-national cooperation is necessary. For example, multiple traveler checks are still required for both border control and aviation security reasons. Admittedly, bridging this type of organizational divide between government agencies is problematic for airlines too.

Finally, the ATA recognizes that much has changed in the U.S. with regard to border control legislation in the post-9/11 era, which in turn has affected Canadian policy-makers. However, even with this re-alignment of state policy, the circumstances do not prevent firms and the state from maintaining a cooperative dialogue. For example, the ABC programs emerged from 9/11 as evidence that partnerships worked, and these early efforts have built a confidence that more can be done. Although the ATA is firmly of the view that collaboration is the preferred choice, the organization does not discount the need for confrontation with government when certain policy proposals (e.g. airline implementation of the proposed US – EXIT program) threaten the independence of the industry.

Synthesis

The airline industry faces the challenge of providing high levels of customer service in the face of pressing national security priorities. The ATA expressed that meeting these obligations can be burdensome, albeit the only realistic alternative might
involve a general tax increase that would also affect the traveling public. This expectation is not surprising, although the question of who should pay for core state services will become more contentious as globalization enables the airline industry to become more footloose.

6.6. **Air Canada (AC)**

**Organizational Role**

Founded in 1936, Air Canada (AC) is the largest full-service airline in Canada. The airline’s security director agreed to the interview.

**Corporate Strategy Priorities**

The firm considers itself as a global leader in building an electronic passenger-handling platform. Air Canada adheres to APIS requirements for travel from Canada to the U.S., and to international destinations that have similar legal obligations. The firm has a published view that this process saves time at check-in and enhances national security. Air Canada also has undertaken numerous other steps to improve the check-in process for customers by providing self-service products such as mobile check-in, web check-in, and self-tagging via airport kiosks. The firm is a major user of the USPC service at Canadian airports, and has been involved since the early days of ABK program development.
ABC Program Role

Air Canada supports ABC program principles, and considers the objectives as “optimal, but not yet operationally optimized”. In part, a perception continues with public agencies and even with airlines that the programs could leave national security gaps through lack of maturity. For AC, retaining its border control performance reputation in all jurisdictions is an important corporate priority. The alternative approach, treating border controls as a low priority, could draw unnecessary attention from state agencies. The result could make the airline subject to further scrutiny, which could increase the difficulty of operating in an already complex international environment.

As for the USPC program, “at-origin inspections” are useful, but not sufficient to meet national security objectives. Instead, the best practice requires a holistic approach to risk management. In order to avoid systemic failures, AC strongly believes that aviation-related organizations should use the “Reason Model” 4. Accordingly, AC views that border control systems need to include a set of non-interlocking protections that, while harmonized, must interact in a way to avoid systemic weaknesses.

---------------------------------------------------------------------------------------------------------------------

4 The Reason Model was explained in Human Error by James Reason (1990). Otherwise known as the “Swiss Cheese” model, Reason hypothesized that most accidents could be traced to recognizable organizational failures that if dealt with in a pro-active manner would reduce system faults. The holes in the cheese represent individual weaknesses of the system, and are continually varying in size and position. The system as a whole produces failures when holes in all of the slices align, permitting "a trajectory of accident opportunity", so that a hazard passes through holes in all of the defences, leading to an accident. The ICAO has adopted this model, and recommend that firms organize their defences against failure through a series of barriers.
For example, AC was concerned about the political and economic risks arising from too much reliance on the USPC program as the final defence to prevent threats from reaching U.S. territory. Multiple approaches aligned across multiple state agencies, operating in a coordinated matter, could be more effective overall from a national security perspective. While this approach demands more inter-state cooperation, in the long history of ICAO, many successes have occurred including globally coordinated safety management systems that have dramatically reduced accident rates.

**Major Challenges**

Air Canada believes that border control technologies require greater attention to human and behavioural factors that could assist in identifying individuals who merit further scrutiny. For example, at many foreign airports, AC hires specialty contractors who review travel documents for authenticity, and when necessary, challenge travelers in a polite and constructive manner. AC views that this pre-journey check should be part of the government’s border control efforts. While these steps are expensive to undertake, the alternative, given the current legislation, is to make boarding mistakes and then face heavy fines. For AC, the benefits over the costs are clear.

The interview occurred soon after the international controversy involving a disguised passenger traveling from Hong Kong to Canada in October 2010 (CBSA, 2010a). The event highlighted how rapidly threats are changing, which could expose the firm to significant public exposure and state fines for the carriage of improperly documented travelers. For AC, this event, along with other modern threats illustrates the challenge of engaging governments to adopt the latest technologies and processes to
keep up with criminals who heavily invest to undermine border control systems. Air Canada has invested heavily in customer service technology, and this has had a major side-benefit of quickly identifying and responding to corporate and national security threats.

**State-Firm Relations**

Air Canada does not believe that ABC programs have developed in a sufficiently integrated way, with too many enforcement activities remaining uncoordinated between government departments. At the inter-state level, and despite two decades of discussion and scores of ICAO conventions, these gaps still exist. For example, the biometric based “RT” programs are quite good, but each state still runs its own system, which invariably limits the number of participants that would be eligible for the program. Thus, AC suggests that the expansion and integration progress is too slow.

**Inter-Firm Competition**

AC believes that customer service and economic factors drive airline competition, so facilitation should not represent a competitive tool. Airlines generally face, with some geographic variations, the same type of national security risks throughout their global networks. Thus, global cooperation already exists on resolving these issues, which is the purpose of the IATA facilitation programs. Air Canada strongly supports a harmonized global approach that does not make the security of clients and staff a competitive question. Overall, AC views that it needs to make balanced decisions on what is best for its customers, staff, suppliers, and shareholders. Accordingly, AC does
not believe that national security is more important than economic security, but that one cannot exist without the other.

Looking Forward

In considering the future, AC expressed concern that states have rushed too quickly to legislation, when cooperative solutions might be viable. AC also holds the view that insufficient policy attention exists towards commercial interests, especially post-9/11, and this is not in keeping with trading commitments made by states. Finally, and as depicted in Figure 3, AC supports the IATA Facilitation Panel as a useful forum for addressing the implications of policy proposals before the ICAO member states pursue adoption.

Synthesis

Unsurprisingly, Air Canada expects more from the ABC programs under study. Some frustration appears to exist that states have committed to trade expansion and facilitation, but have not accelerated ABC program implementation and/or ensured sufficient resources to serve travelers in a timely and effective manner. For this airline, based in a relatively small aviation market by global standards, future prosperity means access to large foreign markets, and streamlined border crossings at Canadian hub airports is crucial to achieving these corporate objectives. Furthermore, while AC recognizes the importance of local circumstances, the preference instead is to achieve global solutions to border control issues given the airline’s intricate web of global airline alliances. Although Air Canada has a pronounced profile in the Canadian economy,
obviously advocacy efforts have been insufficient to encourage the Canadian
government to dedicate additional border control resources, or to persuade the border
control agency to adopt the ICAO APIS guidelines. It would appear that “locality”
continues to have considerable sway in how Canada deals with national security issues
in the post-9/11 era.

6.7. United Airlines (UA)

Organizational Role

United Airlines (UA) is one of the world’s largest airlines. The airline has long
been involved in advanced information technology development for use in operational,
customer service and partnership efforts with the state. The interview with United
Airlines (UA) arose from the numerous choices of U.S. airlines because of the feedback
from other contacts that this particular firm has a strong leadership role in the ABC
program field. As thus expected, the discussion with the UA manager responsible for
security systems immediately turned to how UA viewed these programs in supporting
their customer service efforts. As UA explained, with a target market of customers
requiring a full-suite of journey services, support for the ABC programs makes eminent
sense. Accordingly, UA is disappointed at the length of time that it has taken to develop
the programs, as the benefits for their customers, the state, and for UA itself are self-
evident.
Corporate Strategy Priorities

United Airlines does not support the possibility that airlines should become responsible for delivering any component of border control services. Of concern is the US-EXIT program, which the U.S. DHS proposes should involve airline-led implementation. United Airlines strongly believes that the collection of biometric information should remain with the state, and firms should only engage this data on a voluntary basis with customer agreement.

ABC Program Role

United Airlines has long participated in the USPC program, which offers a seamless service for its customers. While the benefits are tremendous, the USPC program does have complications when passengers have customer service issues in a foreign territory. The program also requires more resources than border control services at U.S. domestic airports. This generates higher costs for customers through user fees. However, for UA, the “pros outweighed the cons”, which means that some form of pre-journey border control program would have merit elsewhere, depending on the circumstances.

In this regard, UA has been involved in data sharing in advance of departure (i.e. APIS). From UA’s perspective, and despite years of development, a uniform approach across states is still missing. The data sets demanded by the state are complex for airlines to address, especially when they relate to non-air transportation topics. United Airlines also suggests that having a harmonized approach would generate security synergies. The absence of coordination could create sizeable national security gaps.
Accordingly, UA is in favour of the ICAO guidelines on how data sharing should occur. One of the most important reasons for pursuing standardization is that airlines are making major expenditures to respond to border control requirements, with little benefits coming back to the industry for the sizable costs employed. Thus, UA desires an increase in economic efficiency through further cross-industry collaboration.

**Major Challenges**

From a risk management perspective, the volume of travelers using the ABC program is not sufficient to cause enterprise-wide operational impacts in the case of a system failure. That is not to say that the programs are incidental in nature, but rather that UA simply treats their use as business-as-usual, with a firm-wide understanding that their core customer base expects cross-border facilitation. Consequently, the challenge is to manage these particular programs within the airlines’ information management systems, while keeping them separate from the state to avoid undesirable overlaps.

**State-Firm Relations**

For UA, respecting national security obligations is a basic corporate requirement, although where practical, the airline attempts to exceed these objectives to demonstrate the firm’s commitment to avoid becoming a conduit for public harm. Unfortunately, the state misunderstands what airlines can operationally accomplish. While the industry engages with various border control agencies, for whatever reason, the desire remains to have the industry shoulder a greater load in the delivery of border control services.
This is not in keeping with UA strategies, which are to focus on delivering quality customer service. Instead, UA and other airlines desire more balance between the legitimate national security objectives, and the philosophy that the role of firms is to deliver customer service in a profitable way for its owners. For UA, this has meant growing the international business where the majority of new opportunities exist. Accordingly, for UA, states should meet their public obligations and find their own ways to facilitate cross-border travel to support export trade.

Looking Forward

UA understands its legislated role in border control delivery, but expressed that these requirements will place the firm at increasing risk. Instead, UA views that through cooperative dialogue, and where appropriate through mutually beneficial partnerships, the airline would voluntarily work with the state to meet national security objectives. As such, the ABC programs generally provide commensurate trade facilitation benefits, although the lack of USPC resources and the insufficient scale of the RT NEXUS program means that further efforts are necessary to achieve useful benefits. As such, the lack of a global consensus on APIS requirements is creating enormous complications and costs that requires consensus at the ICAO sooner than later.

Synthesis

United Airlines (UA) expressed the same concerns offered by other airlines concerning what appears to be border control “scope creep” in the post-9/11 era. While UA has long pursued border control partnerships, the airline faces mounting demands
to absorb additional responsibilities and accept increased user fees. Although the theory of regulation applies to ensuring firm externalities are in balance with other public interest objectives, it is evident that both Canada and the Netherlands compel aviation firms to act as quasi-agencies of the state. As this circumstance also appears in the U.S. where airlines and airports do not pursue the same kinds of partnerships, a possible reason for this behaviour must relate to the technically advanced capabilities of aviation firms that states have yet to master. However, this view is not necessarily accurate as in the late 1990s Australia implemented the Electronic Travel Authorization (ETA) pre-journey system where travelers directly interface with immigration authorities to obtain pre-clearance approval. Thus, what remains as an explanation is that of expediency, where certain states find these delegated approaches to unwilling private parties as faster and cheaper than traditional state management. Invariably, with the expectation that cooperation between border control agencies and aviation firms will continue, these ties could further strain should the state further “download” border controls.

6.8. **Vancouver International Airport Authority (YVRAA)**

**Organizational Role**

The Vancouver International Airport (YVR) is Canada’s second busiest airport, serving over 16 million passengers in 2008. In 1992, the Vancouver International Airport Authority (YVRAA) assumed leadership from the Canadian Ministry of Transport, as part of a devolution strategy that removed the national government from operations of
various transportation modes (Brooks and Prentice, 2001). The executive at the YVRAA responsible for business development granted an interview and follow-up telephone conversation. For transparency purposes, this researcher held an executive post at the YVR between 1988 and 1996, responsible for corporate strategy including ABC program development, a post held for nearly half of the research period.

Corporate Strategy Priorities

The operators of the YVR have long been involved in ABC type innovations, working with both Canadian and U.S. agencies. The airport was an early supporter of pre-journey traveler data exchange, assisting with the development of the Japan - Canada data-sharing program in 1988. Together with Canada Customs, the YVRAA initiated the pioneering ABC studies that led to the CANPASS pilot program in 1995. The YVRAA also led the advocacy to achieve treaty approvals for ITPC, which enable passengers to directly transit to the U.S. through Canadian airports. In recent years, YVR has responded to the significant changes to the Canada-U.S. Preclearance Treaty by implementing “Pre-Board Screening in Advance of Preclearance”, intended to provide further safeguards for U.S. CBP officers working at Canadian airports (YVRAA Annual Report, 2010). As previously described, YVR was chosen by the CBSA to pilot the E-PIL ABK program in 2009.

ABC Program Role

The YVRAA views the ABC programs as a strategic lever influencing the entire approach to serving clients. The interviewee stressed this approach goes beyond the
traditional view of what civil aviation firms should offer. The best example is the partnership with the cruise industry to develop the world’s first inter-modal, in-transit, bi-national border control program, namely U.S. Cruise Direct (ibid, 2010).

As civil aviation, like other service industries, has become information-intensive, success for the YVRAA means the better use of data in serving its clientele. By definition, this also involves sharing with partners to lever their own activities. However, the interviewee placed the foregoing support for technology within the context of the organization’s business plan. The YVRAA reinforced that it takes seriously its financial responsibilities to its clients and stakeholders. Consequently, ABC investments have to have purposeful and measurable deliverables. Given the positive past results for customers and corporate positioning advantages, the YVRAA has ample reasons for continuing to “lead the way” in this field.

The most significant program involves USPC, which serves the largest number of airport travelers. However, the programs receiving the most attention are CANPASS and NEXUS. From a corporate strategy perspective however, the development period has been much too long. The YVRAA understands that 9/11 prompted reflection as to the approach states should follow concerning future border control implementation. However, it has taken nearly a decade to move the E-PIL pilot forward. This new program has already produced definite results in terms of passenger service, national security targeting, and airline processing efficiencies.
Inter-State Relations

The YVR passengers and airlines have noted airport leadership, which has reputational consequences. YVRAA also supported without much advancement the Perimeter Clearance Concept (PCC) viewed as being sound but, in practice, success has “proven to be a bridge too far”. Even so, the bi-national and state-firm discussions surrounding the potential for a “continental bridge” have positively contributed to strategic policy elements in the Canada-U.S. relationship. The YVRAA representative added that this advancement in inter-state relations is just as beneficial in building towards future collaboration as progress on any specific border control program itself.

State-Firm Relations

Moreover, the YVRAA recognizes that Canada has multiple gateways, and thus requires a cooperative approach as border control agencies cannot choose between ports-of-entry. This is different from what the YVRAA learned from discussions with Amsterdam Airport regarding this topic. The YVRAA explained that their impression was that Dutch authorities were able to achieve more targeted ends, given the limited scope of border control operations. Furthermore, the YVRAA does not subscribe to the premise that national security has greater merit than facilitating international trade, as these objectives are not mutually exclusive. For civil aviation operators, whether in North America, Europe, or elsewhere, the YVRAA believes that all private firms will have positive interests in seeing both these objectives succeed. As such, failure is certain should states pursue a strict national security orientation without accommodating legitimate trade objectives through advanced facilitation practices.
Looking Forward

The YVRAA understands that it had little choice but to comply with national legislation regarding the operation of facilities serving international clientele. Yet, the YVRAA has had a remarkable multi-decade track record of cooperative dialogue with the Canadian and U.S. governments in order to advance ABC program implementation. Other Canadian airports and airlines support this leading work, and the supra-national industry association indicated these efforts represent some of the best practice anywhere. The YVRAA explained that the future will involve more innovation and that the organization has every intention or remaining at the forefront of travel facilitation.

Synthesis

In 2011, the Vancouver International Airport (YVR) received the “Best Airport in North America” award (SkyTrax, 2011) for a second year in a row, and the fifth time since its transfer to the private sector in 1992. This success relates, in part, to the organization’s dedication to innovation and leadership in ABC programs that customers themselves routinely rank as crucially important. From a longitudinal perspective, these outcomes reinforce the thesis argument that relations between border control agency and aviation firm relations changed only in small ways by the tragic events of 9/11.

Admittedly, the YVRAA acknowledges post-9/11 challenges have retarded the process of border control innovation, while globalization continues to drive intense market competition. In response, the ‘Asia Pacific Gateway’ economic development initiative has been pursued by private sector transportation interests (e.g. YVRAA, Port of Vancouver, Canadian National Railway, etc.), the provincial governments in Western
Canada, together with the Canadian government (Evans, 2007). This trade-oriented program reinforces an economic strategy evident for the resource-based economies of Western Canada that extends back some 150 years to the completion of the trans-Canada railroads, which permitted the export by steamship of agricultural and mineral products through the ports on Canada’s Pacific coast. The modern gateways to Canada involve the pursuit of international air service markets in Asia for travelers destined to the U.S. with “seamless” connections at the Vancouver Airport. The approval of the In-Transit Preclearance (ITPC) agreement in 1999 was a crucial component of this strategy to permit unobstructed flow of “transit” travelers to U.S. markets.

However, and despite YVRAA pursuing a plan for border control innovation along with having long-standing relationships with the state, this has not translated into a fully successful outcome with regard to Canadian border control enforcement practices.

The consequences of this national security policy change are evident in the submission to the review of Canadian Competition Policy in 2008, where the airports in Vancouver, Toronto, and Montreal, combined to submit their views, as follows:

“International Transfer/Departure Facility (TDF) permits travelers who are connecting from incoming international flights to departing international flights at Canadian airports to by-pass CBSA inspection formalities, as is the case at the most successful global gateways. Canada’s gateways are disadvantaged in accessing this connecting market because these U.S. origin passengers are required to go through border processes at Canadian airports before they can transfer to a connecting flight. U.S. airlines and U.S. airports have a competitive advantage because of U.S. Preclearance, which allows Canadian origin passengers to connect seamlessly at a U.S. gateway, effectively allowing U.S. carriers to combine Canadian traffic and U.S. connecting traffic at their international gateways.
[Moreover,] allowing ITDFs in the Canadian airport environment is imperative for competing with U.S. gateways by building additional gateway traffic, leveraging new routing possibilities, and providing a fast connection time for travelers... These cost and non-cost issues represent significant impediments to the ability of Canadian airports to act as facilitators of international trade, as North American gateways, as tools for attracting talent, capital, and innovation, and as the engines of economic development. (Canadian Airport Competition Policy Submission, 2008)

As noted elsewhere within this thesis, this policy shift reveals the considerable policy conflict that states face in their efforts to promote trade but at the same time adjusting to other pressing priorities, which are certainly evident in the post-9/11 era (Coleman, 2005). From an empirical perspective, the lack of success in obtaining the necessary TDF approvals creates some question as to whether the newly market-oriented Canadian airlines and airports are sufficiently influential in the policy-setting world. Conceptually, this situation questions the neo-liberal critique of globalization that reduces state influence over the domestic economy.

Despite these challenges and risks, this organization, and other civil firms appear to have no choice but to focus on innovation, yet, in doing so must contribute in some ways to national security priorities. Figure 3 reflects this careful balance between trade and national security, and represents an appropriate framework for strategic corporate decisions in this topic field.
Organizational Role

Toronto International Airport (YYZ) serves a catchment area that includes nearly one-third of Canada’s population. The Greater Toronto Airports Authority (GTAA) assumed management from the Canada’s Ministry of Transport in 1996 (GTAA, 2010). For much of its history, the GTAA has focused on rebuilding its main passenger terminal, which included new USPC facilities. YYZ has also hosted the CANPASS and NEXUS programs. The GTAA recently implemented a quality initiative called “Q-Plus”, which is intended to boost efficiency, reduce costs, and improve customer satisfaction including in areas of border control facilitation (GTAA Annual Report, 2010). The GTAA manager responsible for government relations provided the interview.

Corporate Strategy Priorities

As an introduction, the interviewee articulated that ABC programs mean improved customer service, better use of resources, and an overall improvement in customer security. These outcomes fully support corporate goals, and as YYZ is in strong competition with both Canadian and U.S. counterparts, a facilitation strategy is critical. Consequently, the GTAA has made strategic investments in this sector, although it recognizes that this approach requires the organization to accept the prevailing public policy. The risk emerges that with changing circumstances, the airport operator will find future change quite difficult as physical investments in border control
processes are both difficult and hugely expensive to change when new policies demand different approaches. Nevertheless, GTAA considered this risk as acceptable.

**ABC Program Role**

As border control related delays arising from staff shortages had created operational havoc at peak times, the GTAA has seen processing gains from its investment in the technically-enabled NEXUS program. However, the GTAA has learned that it is insufficient to “throw in technology to solve the resource problem”, that it is necessary to step back and look at the overall process from a multi-stakeholder perspective.

For the GTAA, the good news is that globalization and industry liberalization has generated more traffic, however, the general rate of air travel growth has been higher than GDP growth. This has meant that state revenues generally have not grown fast enough to match trade facilitation requirements. The consequence has been congestion problems, or air travelers becoming subject to higher user fees, which do not apply to other modes. The GTAA stressed that this comment was not a complaint, but simply a general statement of how governments work in a more reactive mode.

**Major Challenges**

In recent years, the U.S. and Canadian governments have been finding better ways to deliver border controls to meet the twinned trade and security objectives. This has meant “progressive” solutions, which have resulted in improved customer service, without lessening the national security imperative. The major challenge, however, like
those faced by any private or public sector organization, relates to the capacity to integrate complex information technology into an operational environment. As these programs are “mission critical” with regard to national security, errors could be very costly for both the state and the firms involved. As well, while the labour force is quite capable, a new reality exists that demands a technically adept set of skills that is not yet widely available. For example, the traditional enforcement-oriented hiring paradigm needs to change to permit engagement of staff that has broader relationship skills. This would include individuals who are comfortable interfacing with complex algorithms and related technologies in order to improve border control implementation. In recognizing the competitive forces, cooperation among key stakeholders is necessary to resolve these challenges. The ABC program solutions also represent good risk management practices, which encourage the public sector to operate in a stable manner and with a longer-term outlook. For example, for quite a number of years, the GTAA has organized a regular long-term policy forum with both U.S. and Canadian border control agencies. The agenda for these meetings specifically focuses on strategic issues, purposely avoiding operational matters.

The GTAA also indicated that improvement to border controls has become “bread-and-butter” for the organization, rather than a “corner of the desk, get to it when you can priority”. In addition, these programs represent the “new normal”, and the GTAA would not contemplate their removal. For example, even though removing the USPC program would simplify operations and reduce costs, such a change will not happen. This would undermine the GTAA strategy to connect Asia and Europe with U.S. destinations. The ABC programs thus represent “table-stakes” and the new benchmark
for airline conversations. Furthermore, as the GTAA aims to be a center for global airline alliances, engagement with governments is underway with the goal of expanding the airport catchment area. From a corporate strategy perspective, the organization views that globalization is changing passenger supply chains. For the GTAA, the lack of best-practice services can mean sidelining of its major assets, which for international travelers demands seamless border controls.

**Inter-State Relations**

From the GTAA’s perspective, state-to-state relations have improved, which is vital to progress. Looking back, prior to 9/11, Canada-U.S. collaboration was strong, although the private sector had a lead role in encouraging facilitation. For a number of years after 9/11, the political agenda made little reference to the private sector, but this is slowly changing. The U.S., of late, has taken a broader view of ABC programs as part of new inter-state partnerships. Canada has been more cautious, and needs to recognize the competitive situation. The private sector has been pushing for support to expand gateways on the Pacific, the Atlantic, and in Southern Ontario, principally centered at YYZ. In this regard, the ABC programs in question are essential components of this broader national economic strategy.

The GTAA also indicates that the discord between trade and national security objectives should not be viewed with alarm. These tensions are normal, and require public debate to achieve the right balance. For Canada, while the U.S. is a critically important trading partner and security ally, attention to trade development with Europe
and others requires attention as well. The GTAA thus views ABC programs as just one tool in realizing both physical and economic security objectives over the longer term.

**Looking Forward**

Considering the industry’s global nature, the GTAA believes it has an important role in framing legislative debates. For example, as the Toronto Airport is in the world’s top 40 in passenger volumes, the GTAA holds the view that it has much to offer concerning policies for accessing foreign markets. Moreover, while informal dialogue has led to past strategic partnerships, the GTAA also recognizes the necessity for formality in some cases. For example, states need to debate treaty arrangements to ensure public legitimacy, and transparency is necessary when public agencies pursue agreements with the private sector. While the ABC programs have been successful, the GTAA considers that ABC program expansion might demand further public dialogue. In particular, the problems with the contentious APIS program may have arisen because of insufficient public dialogue to develop support for this rather intrusive state tool.

**Synthesis**

As the GTAA manager responsible for government relations provided the interview, the expectation exists that this individual would be highly attuned to disclosure of sensitive corporate plans. Thus, the interview comments have been compared to published strategies utilized to obtain capital financing (GTAA, 2010). No differences in perspectives emerged from these sources, and the research responses from the GTAA were generally consistent with views from other airports. As such, the
repetitiveness of interviewee comments and documented corporate strategies cannot simply be viewed merely as “corporate-speak”, but from this researcher’s perspectives offers genuine insight that Canadian civil aviation firms are committed to improving customer service through border control partnerships. This does not suggest the relationship is ideal, which the GTAA acknowledged had some strains.

Finally, the most useful insight from this dialogue relates to the suggestion that further public debate is needed to ensure ABC programs develop in a societally acceptable manner. This view is not altruistic, but instead reflects the hard reality that investing in these programs creates a development path trajectory that would be difficult to alter once major infrastructures are constructed. Thus, maintaining an open dialogue that might identify future risks to the organization’s business plan appears prudent, especially as the private sector can expect continued scrutiny from heightened national security policies.

6.10. Montreal International Airport Authority (ADMTL)

Organizational Role

The Montreal International Airport (YUL) serves Greater Montreal. Aéroports de Montréal (ADMTL) has been responsible for operations since 1992 (ADMTL Annual Report, 2010). The Montreal International Airport has long hosted the CANPASS and NEXUS programs, and in 2009, a new USPC facility opened. The ADMTL pioneered new passenger self-service check-in processes, and the organization is a participant in
global ABC initiatives such as the IATA SPT (ibid, 2010). The ADMTL business development manager responsible for corporate strategy granted an interview.

Corporate Strategy Priorities

The manager explained that new information techniques would assist in making better choices about the traveler-associated risks. This is beneficial for state agencies in achieving national security objectives, as well as for the industry in order to streamline “low-risk” travelers. Accordingly, the ADMTL has been involved from the beginning in building these systems. Airport passenger surveys identified that customers valued the services, while contacts with airlines demonstrate the competitive advantages offered by border control streamlining. For ADMTL, the goal is to build a seamless, end-to-end journey, which starts at the departure point for travelers in foreign countries, rather than interrupting travelers with unnecessary entry and exit controls in the middle of a journey. At present, the focus is on frequent travelers, which does have clear benefits for this small group of travelers, but is not sufficiently broad to serve the majority of travelers.

The ADMTL believes that globalization is driving the dramatic transformation of the civil aviation industry. The consequence of liberalization is the expansion of market forces and competition, as opposed to the previous state-driven airport policy. Accordingly, the ADMTL is building the skills to deliver a specialized customer relationship, with ABC programs seen in this light, rather than as a stand-alone system. Also required is better organizational integration, and bilateral cooperation with the state and commercial partners.
As well, the ADMTL defines its corporate objectives in a manner that will build systems that provide “customer fluidity” with an efficient response to changing market conditions. Attention has to focus on influencing public policy across jurisdictions, as a narrow nationally oriented view is insufficient in a globally connected world. For ADMTL, the organization understands the need to translate these objectives into a cohesive message for a wider group of stakeholders. Thus, the ADMTL has encouraged governments to provide choices for travelers in how they interface with border controls. The ADMTL views that facilitating travel for the vast majority of legitimate travelers is essential and consistent with the philosophy that freedom of entrance and exit should exist with a minimum of state interference.

**ABC Program Role**

The ADMTL has seen evidence over its years of involvement that state agencies, in both Canada and the U.S., have gained confidence in these systems. The result has been a succession of regulatory changes that have permitted flexible solutions. From the ADMTL’s perspective, the organization undertook an important initiative by piloting a flexible self-service baggage system. The ADMTL expects that this will be the first step in demonstrating to border control agencies how the handling of travelers can occur in different ways. For example, the U.S. DHS has permitted a new baggage handling process in the YUL USPC facility that permits the inspection of baggage separate from passengers.
Major Challenges

The ADMTL acknowledges the two unsuccessful attempts during the 1990s to build a private-sector ABK platform. As a result, the ADMTL fully understands the complexity and challenges of building a sufficiently robust business plan for such innovations. This is both a technological issue as serious data integrity questions emerge, as well as a matter of finding the right business case for the various partners. The ADMTL stressed that considerable perseverance is required when considering evident state resource constraints. In any event, the ADMTL is working hard to build internal confidence by supporting the learning curve with education and research. The future of customer service will require a different ethic among staff and suppliers, and the ADMTL sees that part of its role is to provide leadership and industry best practice.

Looking Forward

Finally, for ADMTL, “cooperative dialogue” is more than just rhetorical “buzz words”. It is evident through the analysis of corporate documents and the research interview that significant organizational commitment exists to find beneficial solutions with both the state and industry partners. Even the first failure to launch a private-public ABK program did not deter the organization from attempting this initiative again. Although the second attempt also failed, the initial trials had sufficient validity for the CBSA to lead this effort as part of its commitment to the Canada-U.S. SBD. This dedication to innovation also led the ADMTL to become the first large airport to introduce baggage handling changes in the USPC service, and the airport also become an active participant in the In-Transit Preclearance program, a further testament to its
willingness to cooperate with airlines and state agencies to expand access to global travel markets.

**Synthesis**

Finally, the ADMTL admitted the main challenge is not just with its interaction with the state, but of equal importance is building the staff capacity to seize market opportunities and prevent national security threats from using the airport as a conduit. Thus, the ADMTL recognizes that an innovation strategy, which serves to build its competitive position, can involve more than just improving upon its commercial capacities. This useful insight reinforces the notion that civil aviation firms in Canada have adopted a “trade with security” strategy that responds in a pro-active manner to state policy priorities in a balanced manner.

6.11. **Ottawa International Airport Authority (OMCIAA)**

**Organizational Role**

The Ottawa International Airport (YOW) is Canada’s sixth busiest airport. In 1997, the Canadian government transferred operations to the Ottawa MacDonald-Cartier International Airport Authority (OMCIAA, 2010). The OMCIAA executive responsible for business development provided both written and verbal responses.
Corporate Strategy Priorities

The interview confirmed that the USPC program facilitated discussions with airlines; however, in this executive’s extensive experience, this factor was not the sole reason for airlines to make route decisions. However, without the USPC program, the view from the OMCIAA was that “airlines would find it more difficult to make certain routes work, and therefore would not add such routes to their networks”. The OMCIAA views the ABC programs within a strategic context, and given the airport’s lack of scale, the organization admits it has to compete by providing exceptional customer service. Accordingly, the latest Airport Strategic Plan calls for expanded facilitation involvement as the border control systems matured. The strategy recognizes that the benefit from such expansion is to reduce the number of travelers using surface or air modes to connect at the airports in Montreal or Toronto. The OMCIAA expressed that given its fixed business location, the organization has no choice but to focus on ensuring community acceptance, and that airport service levels matter to local businesses, and thus travel facilitation is the “right thing to do”.

ABC Program Role

In 1997, the YOW opened the USPC facility that enabled direct U.S. flights, which was crucial for the Ottawa region hi-tech sector. Politically, USPC was symbolically important in connecting the Canadian capital with the Washington “Reagan-National Airport” which did not have border control services (OMCIAA, 1998). From a competitive perspective, the USPC had dramatic consequences for the community as (OMCIAA, 1999):
“OMCIAA passed an important milestone this year with delivery of the U.S. preclearance facility. The preclearance facility will improve direct flight options to and from points south of the border by allowing travelers to clear U.S. customs while in Ottawa. Canadian and American flights can now touch down at any U.S. airport regardless of custom facilities.

Since the facility opened, Ottawa has seen new flights to [New York]LaGuardia, Newark, and Boston creating easier access to Raleigh-Durham, Atlanta, Orlando, and other centres in the States. The significant factor is our business community is better connected with customers, markets and suppliers, and, tourists will be able to travel with freer access from Ottawa to U.S. destinations. There has been a 50% increase in trans-border traffic since opening of the preclearance facility. Today, there are 37 departures most days from Ottawa to U.S. destinations”.

Consequently, the OMCIAA views the USPC program as “accomplished” and generally expected for U.S. destined customers. However, problems exist including the USPC process requires improvement, and staff resources are lacking. The civil aviation industry has long advocated for these necessary changes, but the relatively mature nature of the Canada-U.S. relationship means change is slow. For example, 9/11 has caused changes in aviation security protocols that can conflict with advanced border control, causing additional costs and negatively influencing the customer experience.

In terms of the ABC programs, the ABK CANPASS / NEXUS initiatives have helped in terms of customer experience, but do not represent major marketing or business development tools. The primary reason is that the small scale of the local enrolment does not generate significant operational benefits. However, the OMCIAA believes that the ABK program is required for competitive reasons, and does make a difference in the setting of corporate strategy. Looking forward, YOW is eagerly awaiting the outcomes of the YVR E-PIL pilot program, which could shorten queues and dramatically improve passenger processing. More importantly, the expected faster
processing benefits can enable the airport to avoid construction of additional costly facilities. The OMCIAA also believes that the ABC programs will eventually support other commercial airport services.

**Looking Forward**

Finally, and like the other Canadian airports, the OMCIAA identifies that cooperation and dialogue is a preferred approach in dealing with border control agencies. As CBSA has been responsive to customer service issues, further progress is expected. However, the lack of border control resources requires more interaction at the political level, and the debate over service levels has caused a challenge in the overall relationship. Challenges do exist, but the route to solving thorny problems such as the lack of USPC resources is not through conflict.

**Synthesis**

The remarks from the Ottawa airport reinforces that trade facilitation has become a competitive issue, especially at the local level. The ABC programs have contributed to market differentiation, which reflects that as a small airport near strong competitors, innovation is vital to success. Finally, some degree of conflict with the state is evident because of the inadequacy of border control resources. Of note, and despite lobbying efforts, this airport operator was unable to obtain additional public funds, which questions the theory that firms in the global era have disproportionate influence in state affairs.
6.12. Can/Am Border Trade Alliance (CABTA)

Organizational Role

The Can/Am Border Trade Alliance (CABTA) is comprised of private firms (e.g. General Motors Corporation, Canadian National Railways) involved in cross-border trade on a cooperative basis with those public agencies involved in managing the Canada-U.S. relationship (CABTA, 2010). The CABTA provides leadership to help resolve border issues, promote better use of resources, and engage with public officials. The CABTA president who has led this association for most of the research study period granted the interview.

Association Priorities

The CABTA priorities are included in the document titled “Border Crossing Efficiency and Security Initiative”. In 2009, the CABTA held a symposium that involved both the private sector and public agencies to review progress and establish future ABC program priorities. The consensus emerged from this strategic planning effort to continue pursuing border security innovations; enforce laws in an orderly and balanced manner; and empower state agencies and the private sector to be better prepared to respond to natural disasters and major national security events. The organization is also a leading actor in promoting the coordination of border controls on the external North American frontier including the Perimeter Clearance Coalition and subsequently the Coordinated Clearance Coalition (CABTA 2002:2008).
The CABTA interviewee also responded that new technology to tackle extra-territorial threats has long been a key component for both U.S. and Canadian border agencies. In part, the CABTA emerged in response to the multi-decade rise of the globalized economy and increase in trade. At the same time, the number of U.S. border control officers stationed along the 49th parallel with Canada remained the same, despite a quadrupling of cross-border trade and travel. It also became clear that the use of manual procedures was impractical to avoid major congestion.

The new technologies proved advantageous because of the extensive police-related testing. The challenge with biometric technologies was primarily public resistance, particularly as fingerprinting had an association with criminality. This resistance to new technologies in the border control environment began to diminish in the 1990s, when information technology firms began to use biometrics in commercial applications. As Agamben clearly announces, the concern of how new technologies might be used by the state have not disappeared. Nevertheless, this has not abated the expansion of ABK programs by various border control agencies, nor prevented large number of enrollments by frequent travelers.

**Historical Challenges**

The CABTA expressed that until 9/11; the ABC programs provided facilitation benefits for legitimate travelers through congested processes and aligned to interdict criminal activity (i.e. mostly narcotics). The preferred response by border control agencies was the implementation of higher thresholds for accepting admissibility claims; however, this was challenging because existing laws required equal treatment for
travelers. This led to the establishment of a voluntary approach for those travelers wishing to submit for initial background screenings that would permit some facilitation advantages on arrival or departure. In the U.S. and Canada, these systems are known as “Trusted Traveler” (TT) and “Registered Traveler” (RT) programs, respectively. The CABTA further noted that even after two decades, this policy approach remains voluntary, as considerable political challenges exist to requiring a mandatory collection of biometrics from U.S. or Canadian citizens.

Current Challenges

Following 9/11, U.S. protocols changed, permitting the fingerprinting of third-country nationals on arrival. For reasons of trade relations, the biometric collection requirement is not applicable to Canadian citizens. The CABTA holds the view that TT / RT policy will gain further acceptance, and eventually allow more travelers to access “Green Lanes”, where pre-journey background checks can virtually eliminate traditional border controls. Given the currency of 9/11, wider acceptance will take time; however, the CABTA will continue to advocate for “point of departure determination” processing.

The CABTA interviewee further noted the impediment to progress often related to program harmonization. Part of the challenge arose due to U.S. efforts to fortify the border with Mexico. These conflicts continued despite extensive cooperation with Canada on expansion of the USPC program and ABK programs, along with data sharing efforts. Unfortunately, progress was routinely undermined when U.S. politicians incorrectly suggested that 9/11 perpetrators entered the U.S. from Canada.
Instead, the CABTA supported the Perimeter Clearance / Point-of-Departure Determination concept that would permit simplified cross-border access for lower risk travelers. This includes information sharing that permits traveler scrutiny at the point of departure, with secondary screening at the Canada-U.S. border based on random or targeted selection. However, given bilateral strains regarding traveler data sharing protocols, the reaction was often knee-jerk on both sides, which undermined the resolution of bigger picture threats. When questioned on this point, the CABTA expressed concern that the circumstances generated by the Maher Arar affair, which involved the rendition of a Canadian-Syrian citizen transiting New York, had spilled into the overall Canada-U.S. border control relationship.

In turn, the CABTA President maintains that the “guilt by association” approach to border control is “just plain wrong”, and instead the focus must be on increasing trust between the state and individual travelers. This must first involve avoiding “profiling” of travelers for reasons that are not associated with reliable measures that point to criminal and politically violent perpetrators. As well, understanding the behavioural profile of high-risk travelers has become increasingly necessary. A successful behavioural profiling approach would use intelligence gathering, understanding of cultural norms (e.g. acceptance of personal firearms), and use of technology to pattern match. Highly trained officers would scrutinize these factors in order to establish a “preventative strategy” on which travelers needed additional attention. This approach would eliminate the vast majority of travelers from additional scrutiny at border crossings, and instead permit the high-intensity focus on those travelers where routine automation of border inspections is less applicable. This does not mean that such travelers are higher risk by
definition, but with ABC programs, state agencies would receive traveler information long before departure, providing additional time to scrutinize select traveler identities.

Another advantage from this approach, which combines human judgement with expert technical systems, relates to the changing behavioural profile of threatening travelers. Manual inspection processes are not sufficiently adaptable by comparison to the ABC programs, which can provide better tools to respond to emergent circumstances. The CABTA further noted that increased scrutiny since 9/11 has vastly improved the ability to detect low-incident threats, such as undocumented migrants and petty criminals. However, interdicting the fully resourced criminal or political extremist demands a sophisticated technological and process response.

However, and with emphasis, the CABTA interviewee stated that, “nobody wished a police state”. These new methods have to support the border control mission in purposeful and publicly acceptable ways. States should not implement ABC programs as a “placebo” with no tangible enforcement benefit. Such activities would lead to civil disorder, as the public would see this as abuse of the authority delegated to the state. This author would observe that the CABTA comment mirrors that from Bobbitt (2008).

The CABTA expects that civil aviation firms would not object to effective ABC processes that safeguard the traveling public and civil society, while preventing criminals from using civil aviation networks. Unfortunately, civil aviation firms are experiencing wasted resources from multiple inspections. Firms have participated in these programs based on the promise of better and streamlined treatment for both passengers and firm operations, which in many cases has not materialized. Furthermore, civil aviation firms are well aware that the traditional manual inspection
processes generate few, if any, serious inspection hits. Instead, a focus on pre-travel information scrutiny can speed the entire travel process, creating higher system reliability, which will result in increased customer service and lower costs.

The CABTA is also concerned that increasing regulatory mandates are offsetting the gains from increased technology use, an issue apparent long before 9/11. Waiting times were not decreasing as expected, primarily because of organizational challenges within border control agencies in deploying resources and systems in a coordinated manner in the face of the rapidly changing political environment. The consequence was that firms were not reaping the benefits from investing in ABC programs, as trust between firms and the state remained in a constant flux. As a result, firms have long challenged border control mandates with concerns about the lack of respect for business outcomes. For example, the CABTA identified the lack of progress on the 1995 Shared Border Accord (SBA), as follows (CABTA, 2000):

"The CABTA has been involved with the implementation of the Accord and has been an enthusiastic supporter of what was and still is an enlightened bi-national initiative. The early period of implementation, which focussed on establishing expedited traveler programs such as CANPASS, Remote ports and the experimentation with the use of technology in commercial processing were most encouraging. The past two years, however, has seen a real slowdown in the implementation of the SBA, which puts at risk the attainment of the stated objectives, [which specifically includes]:

- Traveler programs remain non-integrated;
- Travelers must still apply for each mode (remote, land crossing, airport, etc.) and in each country thus dramatically reducing the take up and the efficiencies;
- Physical and legislative constraints at the border continue to prevent the streamlining of commercial processes and the achievement of cost savings for both traders and governments;"
- Absence of Canadian legislation that would allow U.S. officials to administer U.S. laws on Canadian soil perpetuating the congestion at major land ports of Entry especially those with bridges or tunnels; and
- The same legislation prevents further streamlining or even integration of commercial processes which in turn offsets the cost, service, and enforcement gains which could accrue from joint approaches’.

A larger issue is lack of internal border control coordination. Complex performance requirements are emerging; firms find these demands nearly impossible to meet as “different agencies” desire “different outcomes” for “different purposes” related to sometimes conflicting national security priorities. Thus, the flexibility inherent in the ABC programs is subject to challenging organizational situations, which is particularly problematic for civil aviation firms that must operate across multiple jurisdictions. As the industry has made enormous strides in streamlining system wide value chains, unlinked national security strategies can arbitrarily truncate network operations. This can generate additional firm costs and even lead to national security vulnerabilities when industry is not fully in control of the end-to-end journey process.

An example of this challenge appeared with the Western Hemisphere Travel Initiative (US Federal Register, 2006). WHTI required citizens of the U.S., Canada, Bermuda, and other Caribbean states to have valid travel documents for U.S. entry. The Canadian agencies had the opportunity to match the WHTI program, but chose not to participate. The rationale provided by the Government of Canada for not requiring a matching requirement for travelers entering Canada was the basic lack of necessity. Canadian law already provided the necessary flexibility for border control agencies to verify admissibility and identity claims, without the default requirement of requiring a
formal document. Furthermore, in 2005, Canada had entered into the tri-lateral Security and Prosperity Partnership (SPP) with the U.S. and Mexico, which included a working agreement to “develop standards and options for secure documents to facilitate cross-border travel (Canada Library of Parliament, 2006). For civil aviation firms, harmonization would simplify training and operational procedures. For customers, this would permit a consistent expectation regarding the type of travel document required. From the CABTA’s perspective, having matching requirements for the Canada-U.S. frontier is necessary for better use of pre-journey data sharing arrangements.

State-Firm Relations

From the CABTA’s perspective, a balanced assessment of the events over the past two decades means looking beyond the latest news report. The biggest success is the Canada-U.S. NEXUS program that demonstrates that ABC programs can build trust between the state and travelers. Another gain, and despite the slow progress, involves the SBA that ultimately has delivered useful “behind-the-scenes” cooperation to target bi-national threats. Finally, the support of the private sector in advocating for border control change and actual investment in ABC programs is the forgotten lessen in the ongoing national security debate.

Inter-State Relations

While technologies are important in dealing with modern concerns, building cross-border relationships between state agencies and with firms should be a dominant priority. This cannot happen when elected officials do not provide the necessary tools.
Accordingly, with insufficient resources, border control agencies are failing to manage the growing traffic at the USPC operations. The CABTA believes this to be the most serious issue since the 1995 “Open Skies” agreement. While the program benefits both firms and passengers, and extends the border outward consistent with U.S. policy, the lack of funds raises serious questions. Airlines serving the U.S. from Canada have begun to post-clear flights at congested U.S. airports, which involve flights arriving at traditional international facilities at U.S. airports. The Canada-U.S. Preclearance Agreement did not make use of USPC facilities mandatory, although the requirement existed that when an airline chose to post-clear, no flight on the particular route could pre-clear. Not only do these operational decisions result in moving the congestion problem to the receiving U.S. airport, the CABTA is also concerned that undertaking inspections on U.S. territory generates additional risks to the state.

The CABTA considers that in order to extend bi-national cooperation, even on the most thorny sovereignty issues, public debate is required. Only in this manner can the parties find pre-departure solutions to emergent threats. Solutions will need to have a harmonized platform so future implementation becomes easier when pilot technologies become mature. In this regard, the CABTA applauded the original CANPASS advocates who, starting in the early 1990s, involved U.S. INS to participate in the initial pilot program, obtained airline support, and approached the Canadian government to launch the initiative. This confidence building approach laid the foundation for future U.S. policy change. In summary, the CABTA views that good ideas can come from any quarter and when pursued on a mutually cooperative basis, which can avoid the ownership rhetoric that can sideline necessary improvements.
On the matter of “security trumps trade”, this assertion requires understanding of the context of the heightened political discourse after 9/11. It is worth recalling that prior to this event, public discussion focussed on how to further NAFTA. Some even questioned the purpose of the border controls between the U.S. and Canada, which would mirror developments in Europe. Over time, the U.S. has not relaxed its efforts to counter politically violent external threats; however, the trade agenda is beginning to re-emerge as an important pillar in U.S. economic security. CABTA recognizes that civil aviation firms argue for international cooperation to protect all states, as differential border controls protocols could simply move threats to weaker states.

Interestingly, the CABTA President pointed to the outcome of the CABTA bi-national conference (2007) where the new Ambassador to Canada, David Wilkins, indicated that the U.S. was committed to making the Canada-U.S. border work efficiently. In this regard, the view from the then U.S. Ambassador was that gains were not always in a straight line, but, that from his perspective, their appeared to be a renewed confidence that through cooperation and innovation progress might lie ahead.

Looking Forward

Finally, as the CABTA has been instrumental in encouraging trade facilitative legislation over the past two decades, the view emerged that value does exist in establishing clear and certain rules for industry adoption. The challenge in the post-9/11 era is that the cooperative dialogue, heavily evident in early periods, has become optional in the minds of some policy-makers. Furthermore, the perception that borders are only a threat to U.S. national interests has created unnecessary friction in the large
volumes of bi-national trade between the U.S. and Canada. From CABTA’s perspective, while the ABC programs did provide an immediate opportunity for Canada-U.S. cooperation after 9/11, the continued expansion of legislative mandates has created a heavy strain in efforts by firms to cooperate with the state. The welcome news is that in recent years, a more cooperative tone is beginning to reappear, and not soon enough in CABTA’s highly experienced view.

**Synthesis**

The general view from this organization confirms the self-evident perspective that firms benefit from active engagement with ABC programs. The more relevant insight garnered from CABTA relates to the tension between the local and the global. For example, border control flexibility is desirable to address local circumstances, particularly for territorially “fixed” airports. By contrast, U.S. and Canadian border control agencies prefer consistency, which enables easier monitoring of national standards and bi-national agreements. CABTA pointed out that ABC programs contribute to flexibility at the local level by enabling the tailoring of facilities and services to local market demands. Thus, the implicit criticism by CABTA is that Canadian and U.S. border control agencies have serious internal organizational challenges that are not well suited to dealing with local preferences and the flexibility inherent in ABC programs. In part, the pursuit of standardization thus becomes the de facto solution in response to the lack of organizational capability to deal with new technologically oriented processes. This assessment is consistent with other commentary that a pressing issue for border control
agencies is to develop a new staffing model that integrates best-practice technologies with skilled enforcement judgement.

6.13. A Private Consultancy

Organizational Role

A prominent North American firm involved in ABC program consultancy provided multiple interviews. This firm is a member of the CABTA board, with a number of the firm's executives involved in building proposals for expansion of the ABK, the USPC, and the APIS programs under study. The firm also provided access to its extensive corporate archive, which was incorporated in general ways throughout the research findings. Given the sensitive projects the firm undertakes for both private and public sector clients, the interviewee requested non-attribution on some particular comments. However, the firm has an extensive list of published materials available to the public. Fortuitously, the interviewee also agreed to provide feedback on relevant topics for investigation. This particular individual was also a member of the Government of Canada, Ministry of Public Safety, Cross Cultural Roundtable on Security: a forum “created to engage Canadians and the Government of Canada in a long-term dialogue on matters related to national security” (Public Safety, 2005). For further transparency, this researcher was previously an associate of this firm.
Relevant Corporate Strategies

The firm believes that the ABC programs have become well-entrenched solutions that support national security objectives. However, each initiative is part of a macro-level perspective that involves an overall strategy that over time will build a pre-journey departure approval system. Enormous benefits exist to this approach for travelers, firms, and for both trade and national security objectives of the state. These beliefs have become entrenched in both state policy and corporate strategy, and thus the possibility of reversal is not a realistic prospect for the civil aviation industry.

Major Challenges

Two major challenges are of concern, including the role of Mexico in a North American border control environment, and sensitive privacy issues from cross-border data sharing efforts. First, the threat issues associated with Mexico are quite different from those found on the Canadian border (U.S. DHS, 2008a). This creates difficulties in providing sufficient staff and policy attention to the oft quoted “World’s Longest Undefended Border” (Wilson, 2008). Second, the solution to the privacy conundrum involves smarter solutions, as reflected in the SBA, which include the ABC programs central to this research project. Problems have arisen however when the data is used in improper ways, which has created serious b-national political problems.

In considering the programs in question, the interviewee observed that the U.S. and Canadian agencies have made efforts to tailor the ABK and the USPC programs to local circumstances. As such, a one-size-fits-all approach would be highly problematic.
However, the staff constraints limit the flexibility for the individual site managers to tailor efforts to local airline and airport priorities.

**State-Firm Relations**

The interviewee observed that the most effective approach involved keeping issues close to the ground; working with officials to identify issues and solutions; and avoid broad debates regarding unrelated political interests that might overwhelm working level cooperation. The interviewee stressed this was not to suggest these matters should be handled in a private manner without transparency. Instead, the use of pilot programs and transitional agreements are most useful in making the case for permanent public policy change that is practical and has demonstrated paybacks. This has been a successful strategy going back to the beginning of ABC programs, and the public has generally supported these initiatives when they have matured.

From a broader perspective, progress on facilitation agreements face delays because of bureaucratic lag in translating requirements into action, which arises because government needs to obtain wide stakeholder support. Some firms have difficulty in recognizing that for the state to act in this reactive way is in fact normal. Nevertheless, the gap between policy and action has caused serious frustrations for firms facing competitive pressures. However, without broad public and industry support for new border control programs, that invariably could contain national security risks, government approvals to expand ABC programs will likely stall. Similarly, the DFAIT representative also cited the inherent conflict that requires the Canadian government to
balance travel facilitation objectives with ensuring national security protections, as a key reason for the delays in achieving new policy directions.

For example, proponents of the Buffalo / Fort Erie land-preclearance proposal appear to have generated early media attention before the concept became technically viable. This created unrealistic expectations ahead of inter-state negotiations in the face of real sovereignty and non-commercial obstacles to agreement. A further example is the lengthy gestation period for reaching international agreements for ABK program expansion. These types of negotiations need to deal with cross cultural and legal traditions that have to be resolved in a manner that respects the interests of all involved.

Inter-State Relations

The interviewee also commented that tensions would always exist between efforts to build trade channels and the potential for those channels to facilitate national security threats. It would be overly simplistic to assert that one element of physical security is somehow more or less important than vital economic concerns. Instead, they need to be seen first in light of the real tragedy that occurred in 2001, and then along with the tremendous progress that the CUFTA and NAFTA have generated for Canadian and U.S. society. As both policy objectives are valid and serve legitimate public policy goals, border control improvements can assist in the efficient functioning of the civil aviation transportation sector.
Looking Forward

Finally, as principals of the private consultancy were instrumental in the revised USPC treaty and related Canadian legislative changes, this organization supports the need for formal state-firm agreements. However, in the view of this trusted advisory organization to both public and private sector interests, formal arrangements must happen after cooperative dialogue that seeks solutions to serve mutual objectives. At least from this organization’s perspective, partnership approaches are even more vital in the post-9/11 era, although the foundation existed for this public - private cooperation long before these tragic events.

Synthesis

The most insightful perspective from this experienced consultancy was that the “obvious” was “not so obvious” for some private and public actors in the ABC program field. As evident, stakeholders did not always follow the advice on how best to deal with border control agencies through careful management of expectations and first working through sensitive issues before obtaining political and public approvals. The example cited by both the consultancy and the Canadian Ministry of Foreign Affairs related to the lack of approvals for land-preclearance at Buffalo / Fort Erie. Both interviewees indicated that the public and industry expectations in the local area ran well ahead of the respective state negotiating mandates. The lesson ultimately is that despite the obvious benefits that inter-state border control agreements might provide, in the absence of clear pathways for resolving issues, agreements cannot happen and premature political pressure might even make the situation worse.
The second lesson relates to the timing of responses to private sector priorities. While some clients of this consultancy expressed concern over the reactive way the state appeared to deal with ABC program development, the reality is that the state faces broader criteria for approving border control changes. This caution arises, in part, because while the benefits of change may accrue to the industry and travelers, costs typically reside with the state. These costs are not just financial, but can include creating unintended pathways through border controls for serious societal harm. This leads to government undertaking a careful analysis to achieve the proper balance between travel facilitation objectives and national security protections. Moreover, the lack of comprehensive analysis by the state could lead to gaps as theorized by Reason (1990).

Conceptually, this situation is also counter to the theories that firms cause states to act in particular ways that undermine the public interest. Instead, the ABC programs demonstrated that the states acted in deliberate ways, before and after 9/11, to ensure the balance between trade and national security. This is consistent with the concept depicted in Figure 3.

6.14. Former U.S. Ambassador to Canada

“Canada and the US: friends, partners, allies in the new world order. In the wake of the attacks, Cellucci worked tirelessly with Canadian and U.S. authorities to stabilize borders and maintain the vital back-and-forth flow of goods and services. As Cellucci reveals...his brutally candid and engagingly vivid memoirs of his years as U.S. Ambassador to Canada, it was a relationship that over time challenged the cliché of blissful congeniality as the two countries diverged over increasingly contentious issues” (Unquiet Diplomacy, Jacket Cover, Cellucci, 2005).
The Canada case study also engaged the former U.S. Ambassador to Canada at the time of 9/11. Thus, as the co-author of the December 2001, Canada-U.S. Smart Border Declaration (SBD), it is fitting that the Canada case study concludes with an interview with Paul Cellucci.

Organizational Role

The former Ambassador recently retired from three and half decades of public office, including three years as the Republican Governor of the Commonwealth of Massachusetts, a post held just prior to his appointment to Ottawa in early 2001. Reporting through the U.S. Department of State, the Ambassador acted as the U.S. President’s permanent envoy and played a central role in Canada-U.S. relations. Of note, Ambassador Cellucci recently joined the CAN/AM BTA Advisory Board.

The U.S. Embassy to Canada highlights the major changes to the relationship including the 1988 CUFTA and 1994 NAFTA (U.S. State, 2010). In 1995, the “Open Skies” agreement began to ease the decades-long restrictions on bi-national air travel. In the same year, the Shared Border Accord (SBA) was established which recognized that improving the efficiency of the shared border required cooperation. As well, the revised USPC agreement generated mutual benefits with the passage of Canadian legislation. As the U.S. Ambassador has responsibility for ABC program oversight in Canada, changes to staff and/or procedures require approvals from both the Department of Homeland Security (DHS) and the Department of State. Furthermore, the U.S. IRTPA (2004), which included the Western Hemisphere Travel Initiative (WHTI) provision, had implications for Canada-U.S. relations on bi-national passenger travel.
Relevant Policies

As documented in *Unquiet Diplomacy* (Cellucci, 2005), this ambassadorship was highly notable not just because Cellucci was responsible for the post-9/11 aftermath with Canada. The former Ambassador created considerable controversy with a 2003 address to the Economic Club of Toronto, where he explained that 9/11 created a permanent shift in U.S. geo-political interests. Cellucci stated that the principal consequence of the assaults was that successive U.S. Administrations would have no political choice but to consider U.S. homeland defence as a core priority. Cellucci then summarized this concept as “security trumps trade”. For some Canadians, these remarks were repugnant, including “one journalist [who] went so far as to refer to [him] as a hired thug making veiled threats” (ibid, p. 139).

Cellucci started the interview by noting that when appointed to the incoming G.W. Bush Administration, trade relations were both positive and important on the bi-national agenda. Booming Canada-U.S. trade demanded attention, as did the U.S. jobs that depended on a well-functioning border. At least from the U.S. Administration’s perspective, congestion at the Canadian border was at an acceptable level.

Cellucci further commented that the outlook was promising, and the pace of trade facilitation change was both planned and deliberate. This recognized that for trade to grow, new and better approaches to border controls were of importance. However, this did not mean that the new U.S. Administration would simply adopt the previous government’s program. Well before 9/11, in an editorial discussion with parliamentary journalists, Cellucci indicated that the idea of a “continental security perimeter” around the two countries, and eventually to include Mexico, warranted serious attention.
ABC Program Role

The discussion turned to the Ambassador’s view on the emphasis the SBD had placed on new technologies and evolving border control processes. Cellucci argued that in order to solve the urgent national security agenda and prevent a retraction in bilateral trade, the U.S. believed that accelerating border control innovations was necessary. Fortunately, the ABC programs under study had proven to be sufficiently mature to meet the heightened mission objectives to protect the U.S. from further attacks. The Ambassador also acknowledged that the ABC programs had commenced long before 9/11. Moreover, the focus on physical goods movement was obvious given the linkages between central U.S. and Canadian industrial sites. From the U.S. Administration’s perspective, the border control programs for expediting physical trade worked well, and demonstrated the passenger improvements were also possible.

From the U.S. perspective, of course, there was an obvious focus on preventing another terrorist attack, thus concentrating heightened border controls on the aviation mode was necessary. The U.S. DHS also had a mandate to prevent a more destructive event that might involve a Weapon-of-Mass-Destruction (WMD) coming through commercial channels. Cellucci further explained that as aviation created time challenges for border control agencies requiring a fast response, it was not surprising that aviation felt the early brunt of change. However, the SBD did not solely concentrate on aviation, as potential threats could emerge through other channels. Thus, securing ports, railways, and other intercontinental pathways through use of various technologies were also priority initiatives.
Major Challenges

Immediately following 9/11, bilateral efforts began at the highest levels to build a “new” relationship. Even though the 1995 SBA (revised 2000) contained the same policy objectives (although with less emphasis on terrorism), Cellucci indicated that the SBD was needed as the previous approach was “lacking in urgency”. The SBD was also necessary to renew the state-to-state commitment in a rather public fashion. Cellucci further commented that the attacks were not just on the physical security of the U.S. and its allies, but also a planned economic assault. It was without question that part of Al-Qaida’s objective was to create economic uncertainty. The U.S. Administration understood that tightening the border would harm U.S. interests and jobs dependent on trade with Canada. The SBD was therefore a reflection of the efforts to resolve differences in implementation, rather than something new altogether.

Inter-State Relations

Cellucci pointed out that that even from the early days after 9/11, the subject of a harmonized and integrated perimeter security strategy remained part of the national security dialogue. The Canadian government showed concern that this kind of language posed public acceptability challenges, particularly given the differences between the U.S. and Canadian policies on Iraq. Instead, Cellucci repeated in the interview what he had said publicly before: the goal was to create a “Zone of Confidence” (ZoC).

From a bi-national relationship perspective, these confidence-building efforts would enable the neighbours to achieve a selective, pooled approach to sovereignty. This would mean each state retained the exclusive authority to act in the state’s interest, while sharing operational responsibilities where they were mutually in accordance with
agreed principles. Cellucci further explained that the North American Aerospace Defense Command (NORAD) model was a successful example of where shared interests existed for protecting North American airspace, but with separate accountabilities. As well, Americans and Canadians should not forget that on 9/11, a Canadian General had operational control over NORAD becoming responsible for the tactical response on behalf of both states to the assaults (ibid, p. 118).

In further explaining the ZoC concept, Cellucci remarked that the goal is to have confidence in travelers destined to the continent. In time, this will include Mexico. As capabilities become mature, and more information becomes available from visitors before arrival, the U.S., and potentially Canada, could move towards jointly pre-clearing individual persons. This would move away from the guilt-by-association policy that places individuals in certain categories depending on where they originate. These measures currently strain Canada-U.S. relations, as each state has its own view of which foreign nationals should be welcomed, with or without a visa. Instead, by streamlining routine border crossings, the potential exists to develop more practical and politically acceptable form of shared border management program. For example, the establishment of common threat definitions might permit entry controls from either Canada or the U.S. to act as the exit control for bi-national travelers. This would create further confidence in who is coming and going, reduce redundant and expensive document inspections, which can proceed without affecting sovereignty of either state.

Cellucci stressed that it was important to view the “security trumps trade” statement as simply an overall perspective on the re-aligned thinking that will permeate U.S. policy-making for a long time. He further commented that this aspect of the
message “was lost, and not meant to be a threat, but a statement of political reality of how matters will be dealt with going forward”. Furthermore, these comments intended to make obvious the linkage between bi-national issues needing attention. Cellucci also acknowledged that as a long-time politician he should have recognized speaking in “sound-bites” on such a sensitive subject could cause misunderstandings.

Cellucci indicated that his view overall had not changed in the decade since 9/11. He observed that these same principles were evident in the February 6, 2011, statement from Prime Minister Harper and President Obama. These high-level discussions centered on resolving border crossing “thickening” perceptions through collaborative thinking. An objective from the previous decade also emerged: “the exchange of relevant entry information ... so that documentation for entry into one country serves to verify exit from the other country” (Canada Office of the Prime Minister, 2011).

**Looking Forward**

Cellucci viewed the future held that the U.S. and Canada had to build further bi-national confidence and resolve matters before they became pressing. For example, Cellucci indicated that, in his view, the perimeter clearance strategy does not require some form of political union, and instead can proceed without constraining sovereignty for either party. As well, Cellucci offered that in order for ABC programs to work effectively, it is important to harmonize health and safety practices, which has been a constant struggle given the different legislative traditions between the two countries. However, with the elimination of routine trade frictions, this would permit border control
agencies to focus limited resources on higher risk trading activities. This would also permit an expanded focus on trade outside North America, which is the next major bi-national hurdle.

Finally, the former Ambassador supported the collaborative efforts by the current U.S. President and Canadian Prime Minister, together with senior departmental officials, to bolster trade relations through “smart border” controls. Cellucci also noted that the ABC programs under study in this thesis represent only a small part of the overarching national security and trade facilitation paradigm. Although any treaty arrangements that might arise from such discussions would require domestic policy support, in the world of inter-state relations, only when cooperative dialogue had reached a mature conclusion would pursuit of mutually beneficial treaties be justified.

Synthesis

A central tenet of this thesis is that 9/11 did not materially disrupt the ABC programs under study, despite the enormous national security policy changes that have occurred in the past decade. In part, the confirmatory comments from former Ambassador Cellucci confirm that at least for the United States Preclearance Service (USPC) and the Automated Border Kiosk (ABK) programs, post-9/11 policy changes both accelerated and brought greater attention to the benefits these innovations had to offer by comparison to traditional border control programs.

However, 9/11 did enable the political consensus to adopt the U.S. Patriot Act, and Canada’s Public Safety Act, both of which represented an order of magnitude shift in national security oriented legislation. This legislation began turning the pre-9/11
cooperation with industry surrounding data sharing into something quite different, with the current mandatory provisions creating serious geo-political conflicts between the U.S. and Europe. As well, current efforts by states to require civil aviation firms to shoulder a greater border control burden do not bode well for the balance depicted in Figure 3. Accordingly, states need to broaden policy-making efforts to ensure that national security policies do not inadvertently “tip the scale” to a situation where trade contracts because of impregnable borders. It may be a cliché, but a useful reminder that permitting trade to be constrained through border control frictions really means the “terrorists have won”.

While the former Ambassador attempted to soften the “security trumps trade” language, nevertheless, the analysis by Globerman and Storer (2006) indicates that 9/11-related measures did affect Canada-U.S. trade. Admittedly, general economic conditions have had far greater influence on bi-national flows of goods and services, which is in keeping with international trade theory. Invariably, Cellucci did focus on the need to build a “Zone of Confidence” (ZoC) as did other interviewees. Presumably, however, this must reflect a belief that the bi-national security relationship between the U.S. and Canada is “less then trustworthy” by comparison to the pre-9/11 era, which included both NAFTA and the Shared Border Declaration (SBD) agreements. In looking forward, the domestic policy ramifications for Canada in negotiating a North American ZoC will involve carefully balancing access to U.S. markets, human rights safeguards, and national security protections. This will become a serious political test for whichever Canadian government will need to seek public acceptance of such arrangements.
Finally, a major caution appears regarding the “ZoC” concept, as noted by INTERPOL. The U.S. and Canada must acknowledge and address the real potential that such a “continental border shield” can re-direct and concentrate violence into those developing states that will be less adept in dealing with powerful non-state actors. This challenge of protecting vulnerable societies is already evident in the remarkable level of narcotics trade driven violence on the U.S. - Mexico border.

6.15. Canada Private Sector Interviews Summary

In keeping with globalization theories, the past two decades have witnessed major changes in the structure of the civil aviation industry, including the transfer of state owned airlines and airports to the private sector. Strategically, this re-orientation demanded the development of forward-looking plans that improved customer service, maintained competitiveness, and actively resolved demand and supply challenges. For all the private sector firms in question, this meant growing attention to facilitating trade across sovereign boundaries, which over the past two decades has been the strongest source of industry growth. Yet, as no longer part of the state, the Canadian industry needed to ensure that border controls did not become an impediment to growth. Thus, the resolution of such obstacles became a corporate imperative, although recognizing efforts would be necessary to engage the state in its traditional domain of sovereign control over territory.

These partnership efforts with the state were not without tensions. The most challenging issue was the concern for increased border control funding, which
historically was a state responsibility. In the post-9/11 era, cooperation moved towards compulsion with industry facing legislation to implement APIs that impeded airline and airport operational processes and generated costs. The lack of USPC program funding also created problems such as congestion at Canadian airports. Even though the “Registered Traveler” (RT) joint Canada–U.S. NEXUS program had considerable merit, the small scale did not generate significant benefits. However, this form of biometric admissibility system did create sufficient confidence to expand the concept to a non-registered type program with trials commencing in 2009 at the Vancouver airport.

Finally, and while industry remained supportive, concern existed as to whether the lack of internal policy coordination signalled some reluctance to expand the ABC programs. However, in 2011, the Canadian Prime Minister and the U.S. President reaffirmed that a “security perimeter” represented an important bi-national interest, and the expansion of ABC programs was a crucial component of this strategy. Whether the implementation of a secure perimeter can be accomplished without diminishing the traditional notion of state sovereignty, protect human rights, and avoid simply relocating a stringent border controls to virtual and extra-territorial locations is yet to be proven.
Chapter 7.  Netherlands Case Study

7.1.  Introduction

This chapter deals with those public and private sector organizations in the Netherlands within the context of the European Union (E.U.). This chapter amplifies the chronology identified in Chapter 3 and examines the specific role of supra national, state agencies, and the private sector as identified in Figure 6. Although proximate to North America, the Aruba Airport analysis is included in this chapter for jurisdictional reasons, as foreign relations remain the purview of the Parliament of the Netherlands.

7.2.  European Commission, Directorate-General for Home Affairs (DGHA)

Organizational Role

In 2010, the European College of Commissioners (E.C.) created the Directorate-General (DG) for Home Affairs (DGHA) from the previous DG Justice, Freedom, and Security divisions. This organizational shift arose because of the growing importance of internal national security policies. The DGHA manages all those activities necessary and beneficial to the economic, cultural, and social growth of the E.U. (DGHA, 2010). The DGHA has responsibility for E.U. border control policy, as updated in 2008. This major package of measures involved reinforcing all dimensions of border controls: border checks, border surveillance, and operational coordination. These initiatives follow the E.U. Integrated Border Security Model (IBSM), which involves:
“The IBSM is based on recognition of the fact that what happens at the border is only part of effective border management. Knowledge and control of what happens before the border in neighbouring countries and what happens inland, once the border has been crossed, is also of vital importance. This will only be possible if there is effective cooperation between the large number of stakeholders who have important roles to play at all stages of the border management process” (FRONTEX, 2010).

Relevant Policies

The most relevant document was the E.C. Directive on the Obligation of Airlines to Communicate Passenger Data (2004/82/EC, 2004). The purpose of the directive was to “combat terrorism” and to “avoid a vacuum in combating illegal immigration”. Interestingly enough, the Directive came into effect at a time when the E.U. - U.S. data sharing protocols were at the height of conflict (Madsen, 2004). The Directives comply with personal privacy laws regarding the protection of data collected by the state and shared with third parties, which may involve other states or private firms.

Major Challenges

The policy division responsible for ABC programs provided an interview that involved discussion of the context and legal framework for the Dutch programs. This included interaction with the E.C. attaché from the German Border Police. As such, this DGHA division engages with all E.U. member states, FRONTEX, and other international organizations involved in border control deployment. The first observation involves the E.C. plans to establish a complete pre-journey approval system for third-country nationals. Routine program consultations engage both the E.U. parliament and national-level policy circles. These new approaches to border control raised political issues
including the E.U. response to 9/11, overall E.U. member state enlargement strategies, and concern for how cohesive policy at the state level might be achieved. The DGHA acknowledges that these high-level issues will require attention prior to program implementation. The main problem, however, relates to data protection, which the DGHA views as more than just a legal obligation. As such, personal privacy represents a culturally significant policy factor, and in the case of the E.U. is reflective of a “civilized legal structure” that respects human rights.

The DGHA noted that discussions regarding technologies often left out the human factor, especially concerning the changing role of border control officers. This issue has raised tensions with labour groups given the perception technology will eventually replace people. The DGHA also holds the view that the IBSM anticipates an approach that levers technological advantages with the capabilities of skilled people.

Despite these tensions, the DGHA views the IBSM model as having merit, which combined with the Schengen Agreement Area (SAA) creates enforcement benefits. This situation arises because the SAA demands an integrated frontier with border agencies watching each other to ensure adoption of E.U. standards. Even with the political pressure from domestic immigration problems, E.U. policy-makers wished to push the SAA further. The DGHA described the creation of a common E.U. external border function as superior to each member state implementing individualized local standards. However, a major challenge was that state border control agencies were struggling to keep up with international traffic growth and still meet E.C. directives. The DGHA acknowledged that adjustments were necessary, through preparation of best-practice
guides, training support, and performing audits to ensure progress towards E.C. specified border control outcomes.

The DGHA is aware of the agency collaboration between member states and civil aviation firms. These initiatives deal with commercial issues, such as the lack of processing capacity that leads to congestion and the inability to serve expanding air service markets. The DGHA admits that the inspection standards established at the E.U. level, on average, have contributed to increased traveler processing time, which reduces processing capacity. As ports-of-entry across the E.U. have to deal with mounting congestion, border control agencies face domestic political complaints. The traditional response of requiring more border police, more space at airports, more training, and more costs is not practical as member states are clear that state treasuries will not tolerate these demands on their budgets. These circumstances reinforce for the DGHA the role of technology as central to resolving capacity issues and providing improved facilitation for the vast majority of legitimate travelers; albeit, in balance with professional border control officers working together with the technology.

The German Border Police attaché to the E.C. corroborated the challenges at the member state level. This senior representative has spent nearly three decades in front-line operational units, with his relocation to the central policy division intended to bring practical experience to the internal ABC program debate. He admitted he was sceptical that technology could replace trained border control officers. He even admitted that he was initially determined to turn back the automation movement. He explained that he had completely misunderstood what the IBSM, which Germany had adopted, was intended to accomplish. The biggest problem, from his perspective, was that the E.C.
had not done a sufficient job of reaching out to the hundreds of thousands of border
control officers across Europe regarding the benefits of these new technical and
process tools.

The attaché further noted that in the modern era, five to seven years was
required to build sufficient competence for a senior officer to find the hardened criminals
and terrorists that receive thorough training to avoid detection. Additionally, due to major
budgetary constraints, member states had typically not hired and trained additional
officers early enough to deal with the large number of retirements. This meant that
during a time of increased threats at E.U. frontiers, the average field experience in the
officer workforce was dropping. In this regard, the attaché moved to Brussels to support
the DGHA in building the necessary staff outreach program, using a specific border
control oriented lexicon and training approaches that would be acceptable to the
disparate border control cultures evident across E.U. frontiers.

The DGHA indicated that it also has had to address the sizable policy divide
between the treatment of E.U. citizens and third-country nationals. As returning or
departing citizens face different forms of scrutiny for legislated reasons, applying
different criteria for inspection of foreigners further complicates matters. The DGHA
understands, like other states, the need to apply segregated inspection processes on a
risk-management basis. The DGHA considers pre-journey data as the key for achieving
differential inspection regimes, which traditionally became available through overseas
consulates that issue entry visas. However, for the many third-country nationals who do
not require an entry visa, national security related intelligence must come from
elsewhere. This is where airline data becomes relevant so border control agencies can begin the process of determining which individuals require further scrutiny.

**Private Sector Role**

As expected, airport design varies across the E.U. to suit local market requirements, although this complicates passenger inspections at the common frontier. For example, some member states permit airports to allow the mixing of arriving and departing passengers, while other states prohibit this space and cost saving practice. This practice is evident in the case of extra-E.U. flights arriving at Rome International Airport that mix with passengers arriving from other E.U. destinations; whilst in the United Kingdom (U.K.), airport design must comply with complex immigration regulations that require traveler separation. In part, this arises because the U.K. is not a signatory to the Schengen Agreement Area (SAA). The DGHA considers the segregation of travelers as preferable, mostly due to the possibility of collusion between airport staff and passengers that could lead to national security breaches (e.g. narcotics trafficking). This problem does not exist at land crossings where the state provides dedicated facilities. Airport operators recognize these issues, and work with border agencies to scrutinize the entire border control process. For example, Amsterdam airport, as a major transit point, works hard to avoid a reputation of lax processes that might enable illegal crossings into the SAA. In order to achieve this objective, the airport operator pursues an approach that integrates border controls with aviation security protocols in an interoperable manner that addresses both Dutch national and E.U. security risks in multiple ways.
In commenting further on the role of the private sector, the DGHA argues that responsibility rests with the member state to ensure border control compliance. In addition, as the E.C. and members states are involved in the technical and economic regulation of civil aviation, in theory and where necessary, the harmonization of the ABC program standards is possible across the E.U. through licencing tools. The ICAO recommends this approach, and the DGHA sees merit in this type of coordination. The DGHA is also aware that the private sector is involved in some forms of “actual border control delivery”, such as the ABK program at the Amsterdam Airport. For the DGHA, these relationships are beyond the organization’s mandate, and implementation of relevant E.C. Directives is the responsibility of state agencies. However, the DGHA did express a general concern that when member states and private firms work together, this situation must not lead to compromises that might affect continent-wide security.

Inter-State Relations

From the perspective of member state relations, further expansion of ABC programs is only one component of managing the E.U. frontier. The DGHA expressed that no choice existed but to invest in new technology and processes, as the smugglers could cheaply provide falsified passports to would-be immigrants. The major focus is to expand the use of pre-journey data, and the E.C. is promoting the integration of RT programs across member states to facilitate low-risk travelers that represent the vast majority of cross-border flows.
Looking Forward

The DGHA articulated a vision that would eventually result in a move away from the historical “guilt-by-national-origin” approach to a “person-centered” decision-making framework. This involves the combination of forward-gathered intelligence and biometric technologies to facilitate internal and external E.U. travel. This approach is consistent with E.U. national security interests, but at the same time respects the rights of citizens and visitors for fair treatment. In order to move towards this new border control paradigm, the DGHA understands it will need to adopt more than legislation. As such, transportation firms must become involved in supporting extra-territorial and person-centered inspections in remote locations away from E.U. borders. This will require partnerships with other states and foreign firms. The DGHA further expects these developments will require a further centralization of E.C. border control policy.

Synthesis

The dialogue with the E.C. DGHA provided useful insights with regard to the major internal tensions in how the European Union is attempting to keep in balance national security, personal privacy, and trade facilitation objectives. While these policy issues, in part, are related to 9/11 and the maintenance of U.S. relations, the considerable public debate regarding legal and illegitimate migration to Europe reinforces the security stigma question with these flows of permanent and semi-permanent travelers. For the DGHA, the response includes expanding various forms of the ABC programs under study, which the organization admits are new concepts and remain under-studied. Nevertheless, the DGHA has accelerated its efforts in recent
years. Furthermore, and despite the conflicts around the apparent unwillingness to permit pre-journey data sharing, every indication exists that the E.U is tracking in the same direction as the U.S., Canada, and Australia with regard to using these tools for stringent national security purposes. The complaints from some European Parliamentarians about U.S. national security policy appears more as rhetoric, when compared to the DGHA program announcements that include nearly identical advanced border control programs to be implemented in the years to come.

As an aside, the DGHA interview did not include discussion of the significant volume of travelers pre-cleared at London, Paris, Lille, and Brussels rail stations for journeys across the English Channel. While not part of the research project, it is necessary to reinforce that the DGHA already has policy responsibility for the same type of ABC programs evident in North America. The most remarkable element of these circumstances is the dearth of academic literature on ABC program development, a gap slowly being filled because of attention to 9/11 national security related changes.

Second, the DGHA recognizes that successful policy implementation will require more than just new technology and partnerships with other states and transportation firms. The lesson that emerges relates to “not losing sight” of the fact that border controls are ultimately a task of deciphering threats from immense data sources to identify which travelers represent a clear and present danger to the state and global relations. As correctly observed by the chief information system manager from the Vancouver airport at a technology forum, no algorithm or super-computer can replace the “judgement capacity” of trained and skilled staff in the ABC program field. Instead, the technology contributes as a “decision support system” to better decision making,
which is in keeping with the above noted remarks from the German Border Police attaché. Consequently, attending to “human factors” is integral to adopting new technologies in virtual and extra-territorial border controls. The starting point for addressing this issue is improved communications with affected staff, policy-makers, operating partners, and the public. It is worth noting that as the switch from traditional border controls to new approaches occurs, it is incumbent on the state to prepare travelers for these changes, and not leave the education process to transportation firms, which would represent a further denigration of state responsibilities.

7.3. **FRONTEX**

**Organizational Role**

The FRONTEX, that is also known as “The European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union”, was created in 2005, with its base in Warsaw, to provide coordination and cooperation between member states in the field of border control policy (FRONTEX, 2011). The mission of the FRONTEX is to build a policy platform that coordinates intelligence gathering and strengthens security at external borders. The current program involves all aspects of border policy, including operational measures in and with third countries; operational border security cooperation with neighbouring third countries; border checks and border surveillance at the external borders; and border security related measures within the member states.
The brief discussion with this organization is relevant as the FRONTEX is involved in coordination with the Dutch government regarding the operations at the Amsterdam airport. The FRONTEX policy manager has encouraged states to pursue “bottom-up approaches” suitable to local threats, which is preferable to central direction coming from Brussels. The FRONTEX is concerned with the appearance of an excessive reliance on technology. First, building trust among member states cannot solely rely on sophisticated equipment. Conversely, trust will be difficult to build without state commitment to the successful use of technology, as advanced states will look with suspicion to those partners that lag at protecting common frontiers. Thus, the FRONTEX is committed to combining the advances in technical system development with an approach that increases the professionalism of border control staff. This way of thinking involves a new paradigm that will take some years to develop and, in time, will change the very nature of how travelers cross E.U. borders.

Relevant Policies

The FRONTEX supports the deployment of the SAA VIS (Visa Information System) in 2012, which will be a foundation for future programs. ABC program expansion is being encouraged, although only E.U. citizens are involved at present. In this regard, the manager noted that “for “third-country nationals” the Schengen Border Code requires that complete and thorough inspections be conducted; which needed to be changed to allow automated checks” (FRONTEX, 2009). Looking forward, the FRONTEX is evaluating a full “Registered Traveler “ (RT) program for non-nationals; automated entry and exit verification systems; and eventually the full deployment of a
“pre-departure travel authorization” system that will mirror the Australian Electronic Travel Authorization (ETA) and U.S. Electronic System for Travel Authorization (ESTA) programs. All programs anticipate a core biometric identifier that must be in keeping with both E.U. and ICAO requirements. The systems will be widely tested to confirm their efficacy in delivering national security outcomes before implementation. The FRONTEX considers that ABC programs must also be reliable, convenient, cost efficient, and capable of increasing passenger throughput.

Major Challenges

The FRONTEX believes that the lessons learned so far have been beneficial in formulating coordinated policies, including a focus on system reliability in order to avoid potentially serious security gaps. In addition, the FRONTEX believes that passenger feedback has been essential to fine-tuning program acceptance, adjusting staff training, managing costs, and facilitating cooperation with the private sector. The major challenge going forward for the FRONTEX will be to concentrate on harmonization, which will depend on consistent use and complementary technical requirements. This means that travelers should be able to use different systems on an inter-operable basis. The other significant challenge involves the need to undertake stakeholder consultations that will lead to an agreed set of minimum guidelines, and then best practices that will drive future ABC program implementation.
**Looking Forward**

As a supra-national agency with responsibility for policy and implementation coordination, the FRONTEX finds itself between community wide and national legislators. Thus, the principal tool for achieving organizational objectives is through cooperative dialogue to influence partner agencies, while establishing active implementation partnerships to ensure a common approach across the large number of European Ports-of-Entry (PoE). Like the DGHA, the FRONTEX does not consider the role of the private sector as crucial to future endeavours. Rather, the FRONTEX anticipates that such activities is a choice available for member states should they need private sector assistance to implement E.U. border control mandates.

**Synthesis**

Within European policy circles, the FRONTEX mostly provides support to member states in executing traditional border control programs. However, the organization has an aggressive research and development strategy, bolstered by demands at the E.C. and member state levels for new tools to thwart illegitimate activity, and at the same time to facilitate citizen and visitor travel. The FRONTEX perspectives demonstrate the difficulty the E.U. is facing in reconciling these twin objectives, without compromising other legitimate interests such as personal privacy and respect for labour rights. The most promising element of the FRONTEX approach is the recognition that border control systems must not impede legitimate travel, and an essential element of policy development involves consultation with affected parties and service providers. Finally, the FRONTEX expressed, with considerable interest, virtual and extra-territorial
border control programs, which may reduce the highly public immigration conflicts evident at E.U. ports-of-entry. Whether the achievement of balanced “remote-control” policies is workable without creating similar human rights concerns as identified by Hyndmann and Mountz (2008) remains an under-developed topic area in both academic and policy work.

7.4. **Netherland Ministry of Justice, Immigration Naturalization Department (IND)**

**Organizational Role**

The Netherland’s Ministry of Justice, Immigration Naturalization Department (IND) implement immigration policy contained in “The Aliens Act 2000” (Netherlands Ministry of Justice, 2004). The IND has three main tasks: migration management involving applicant processing; processing of asylum applications; and the naturalisation process for those seeking Dutch citizenship. The IND is also responsible for implementation policy for the entry of temporary visitors through Dutch ports-of-entry, consistent with the SAA (Netherlands Ministry of Justice, 2009).

An important IND role is to collaborate with E.C. organisations involved in immigration policy, in part by linking computer systems. On the domestic front, this involves partners, such as the Royal Netherlands [Marechaussee] Military Police (RNM), who actually conduct the port-of-entry inspections. While each partner has its own immigration policy responsibilities, the role of the IND is to coordinate these actions at the first point of contact with travelers at ports-of-entry (ibid, 2009).
Relevant Policies

The IND identified those documents that contain the minimum E.U. treaty obligations that must become part of Dutch legislation. These requirements are included in various laws that also authorize the collection of passenger information. These provisions require that airlines “shall take the necessary measures and oversight that can reasonably be demanded to prevent aliens who do not comply with the Schengen Border Code from travelling to the Schengen Area” (Netherlands Ministry of Justice, 2004). The legislation also identifies that it “shall also apply to any airline outside the Netherlands, and airlines will be deemed to be guilty of a breach of the obligations” should passenger data not be provided in advance of arrival, which mirrors legislation in North America.

The IND indicated that early ABC program efforts began on a voluntary basis, generally enabled by the existing immigration policy of the day. During the 1990s, legal changes permitted the inspection by non-traditional officer interviews and in partnership with third parties, including the private sector. The legislation also requires assurances for the Minister of Justice that the technology fully complies with the legislation in all other respects. In order to facilitate cooperation with foreign states, a recent change permits consultation with the criminal record register (Netherlands Ministry of Justice, 2008). The decree enables the “Minister to give a positive or negative clearance to foreign authorities to grant visas and for participation in automated border passage of other countries”. As well, the “Minister may exercise authority to give advice about a particular person to another administrative body or to a foreign state, although the Netherlands Data Protection Commission (NDPC) must grant an exemption” (Ibid,
Article 12). The NDPC, in its published 2002 directive named “Transfers of Personal Data to Countries Outside the European Union”, identifies clear and specific criteria for when transfers are permitted, primarily related to overwhelming national security interests. Organizations, such as airlines, are required to obtain a data export permit for the entirety of data sharing activity with other states, and annual reporting is required in order to verify compliance with the E.C. Directives and Dutch national law.

**Major Challenges**

The IND managers confirmed that engagement with the private sector has been in place for two decades. This reflects the importance the Dutch place on open border access to serve economic and societal interests. The division operates under the motto “Smart, Fast, Effective”, reflecting a desire to achieve multiple policy goals. The division has responsibility for pre-journey policy development, which involves traveler data sharing. The major operational focus since 1990 has been to support pre-journey border control programs including APIS. The IND supports the RT program, administered by the Schiphol Group, as innovative, but no longer considers it sufficient to address emerging problems. First, foreign-based security threats have re-emerged, which has forced the IND to increase border control scrutiny. Furthermore, poor service levels have arisen from growing levels of air passenger travel at Schiphol.

The interview identified that border control innovations have been fluid, with periods of rapid advancement, and with system failures causing retrenchment. For example, an early 1990s technology failure caused embarrassment when the equipment physically entrapped a high-profile corporate figure. These disruptions did
not cause legislative authorities to recant, but the resulting negative media slowed program development.

The interview confirmed that since 9/11, all Dutch border control programs have come under greater scrutiny. While policy changes are contributing to E.U. and U.S. national security interests, domestic issues are even more prominent. Anxiety over both legal and illegal immigration has been a politically charged issue during this past decade. For the IND, one response has been the development of PARDEX (PAssenger Related Data EXchange). This on-line system provides airlines and foreign-based RNM officers with the tools for interdicting potentially ineligible travelers prior to flight departure for the Netherlands (Netherlands Ministry of Justice, 2009).

State-Firm Relations

The IND managers articulated that despite these early limitations, private sector partnerships were foundational to data sharing and technology deployment. While the IND acknowledged these systems as necessary, the IND's role did not involve system implementation. While control of traveler data must not become the responsibility of commercial parties, this situation did not prevent the pursuit of "joint ventures". Thus, it was logical to consider that if others were willing to share in system innovation risk, then permitting private sector partners to reap the commercial rewards based on selling such innovations to others would prove a win-win for the Dutch state.

The IND also acknowledged the ongoing commercial interests of Dutch airports and KLM that have encouraged expansion of ABC program partnerships. The IND generally understood that political support existed from the state that wished to expand
business opportunities for the Dutch aviation industry. As well, the IND further understood that the multi-lateral approaches, which permitted the rise of the FLUX Alliance (see Schiphol Airport section), had to expand by an order-of-magnitude to effectively meet both security and trade facilitation objectives.

**Inter-State Relations**

Inter-state cooperation with allies was at the forefront of border control efforts, with the IND recognizing that technologies and border processes were not effective on their own. This framework is consistent with comments from a Ministry of Justice advisor who stated, “bio-metrics cannot be stand-alone instruments” (Grijpink, 2008). While the Dutch face challenges similar to other states, the IND considered that issues could only be resolved through collaboration. In particular, the complex relationship with the E.U., which established the overall border control framework, appears to have matured. The managers identified that the very existence of the IND Border Innovation division heralds a continent-wide willingness to address border control challenges in new ways. While its advice to government must make practical sense, the IND recognizes that their efforts have become a leading test-bed for other European states.

The IND is further concerned with the resourcing challenge, which it sees as a problem across the entire E.U. border management apparatus. The IND innovations have brought the resource issue into stark relief; this issue has been simmering below the surface for the past two decades. Despite the known failings of the traditional border control model, involving the routine engagement with arriving and exiting passengers, moving towards automation has not been an easy process. The IND has struggled with
the process, which it believes should be simpler given the technological progressiveness of Dutch society. Political considerations regarding protecting state jobs and even the admission that the current manual model needs re-working generate organizational challenges. The IND believes that developing a new cooperative model that combines advanced technology and human judgement will remain a two-steps forward, one-step back process.

Intensifying the difficulty of obtaining resources is the lack of parliamentary support for expanding extra-territorial alliances, especially with the U.S., which has created policy uncertainty for the IND. While the IND wishes to pursue end-to-end journey programs for exit and arrival inspections, the public debate regarding closer working relationship with the U.S. has become highly problematic. This debate is especially emotive where principles regarding protection of traveler privacy come into question. Thus, the IND has chosen to approach ABC program development, to the greatest degree possible, with the use of existing legislation, which avoids conflict at the political level.

Looking Forward

A final comment is highly telling of the future conflicts facing the IND. Unlike the U.S. and Canada, which subsequent to 9/11 moved to amalgamate national security functions, the Netherlands continued with an intra-jurisdictional apparatus. As such, the IND was but one agency among many that influenced Dutch border control policy, with the further complication that each agency reported to a different Ministry. For the IND Border Policy Innovation division, a small bureau within the much larger IND
organization, the task of coordinating implementation of much larger front-line agencies was fraught with intra-organizational struggles in addition to the problem of conflicting legislative priorities that directed various agencies at the border in different directions. The managers acknowledged they could not escape from their bureaucratic surroundings. From their experienced perspective, this issue represents the critical challenge to keep delivering border control improvements on a timely basis.

**Synthesis**

In closing, and contrary to the perspectives of the DGHA and FRONTEX, the IND is, as expected, closely aligned with local policy interests and working with private sector partners to deliver leading edge solutions. Although IND is only one of many state organizations responsible for Dutch border controls, it has an instrumental policy role, especially related to the criteria and conditions for the private sector partnership with Amsterdam Schiphol Airport. Furthermore, IND has become an active participant in delivering these innovative schemes, but the organization admits that without private sector leadership, achieving national security objectives would have been much harder. However, the traditional challenge of sharing knowledge and resources with the private sector is also a major challenge given the typical bureaucratic constraints applicable even to this forward-looking policy bureau.
7.5. **Netherland Public Sector Interviews Summary**

While current Dutch external frontier policy arises from E.U. policy, the ABC programs in the Netherlands have arisen through previous collaborative state-firm level arrangements. This shifting policy nexus concerns the IND as the organization sees Brussels as somewhat removed from practice, with E.U. directives sometimes difficult to implement, and often creating disharmony with domestic partners. Despite these evident tensions, the DGHA admits that the Netherlands provided a successful test-bed to support ABC program expansion, especially for APIS that the IND has long considered as crucial to the future of border controls.

Finally, a partnership approach in the Netherlands was not evident in the perspectives from the DGHA, which believes legislative tools are necessary to ensure civil aviation firm compliance with national security mandates. As both the IND and the Amsterdam Schiphol Airport made contrary comments, the best route to achieve the equally valid travel facilitation and national security objectives will remain unclear if these differing philosophies are not resolved.

7.6. **KLM Royal Dutch Airlines (KLM)**

**Organizational Role**

Founded in 1919, the Koninklijke Luchtvaart Maatschappij N.V., otherwise known as the KLM Royal Dutch Airlines (KLM), is the largest airline in the Netherlands, with its home base at Amsterdam Schiphol airport. KLM has had a long history in supporting
the Dutch border control innovations. Of late, KLM has been one of the first airlines to pursue the use of self-service handling capacity, which has enabled the airline to deal with its customers via sophisticated information technology. KLM has also publicly indicated that it will continue to collaborate with the Dutch state and the Schiphol Group on best-practice border control processes (KLM Royal Dutch Airlines, 2009). The two managers responsible for facilitation granted the interview, one of whom has had a lengthy leadership role in the IATA Facilitation Panel and has been involved in the research field for more than three decades, which predates the airline’s privatization.

Relevant Corporate Strategies

The research interview commenced with the statement that ABC programs should be available to everyone. The advancement of this perspective arises because the airline industry desires to operate with the least possible interference from national regimes. Thus, the preferred approach to border control facilitation should involve globally harmonized measures through the ICAO. KLM fully supports the need to move towards advanced techniques such as ABK, USPC, and APIS. KLM also recognizes that the E.C. and Dutch border control requirements are not isolated from the complex obligations arising from foreign states. KLM is also interested in Dutch authorities expanding their offshore presence, and possibly undertaking reverse Preclearance at U.S. airports for passengers destined for Amsterdam. The airline does not see facilitation as a strictly competitive issue as many of the firm’s passengers connect at the Schiphol airport to airlines outside the Air France-KLM group.
Over the last twenty years, KLM has supported state and airport efforts, for example by participating in global initiatives such as the IATA SPT program. However, KLM expressed the concern that passengers still face multiple checks, which is inconsistent with a streamlined approach that focuses on intervention at the start of the journey. Accordingly, KLM believes that the future has to involve agency pre-departure targeting and prior interdiction of risky passengers. KLM encourages state and industry partnerships, and has long advocated for data sharing to enable legitimate travelers to proceed with no or little disruption. KLM is also concerned about the direct transfer of border management costs that relate to protecting national sovereignty and security of the state, to the private sector.

Major Challenges

The KLM interviewee further reflected on the airline’s pragmatic view that the consequences of states pursuing national security policies have created material conflicts with the operation of an international air transport network. As such, the KLM manager expressed concern that inconsistent border control approaches pose significant corporate risks. For KLM, which is highly dependent on attracting connecting passenger traffic through its major Netherlands base, the policy uncertainty has generated serious customer service and financial penalties. While KLM supports the development of ABC programs, the airline is still awaiting for major benefits to arise from these approaches. Nevertheless, KLM expects gains from these programs soon.
Looking Forward

Finally, for KLM, which until 1998 was a state airline, cooperation with legislators is just a fact-of-life. Given the importance of civil aviation related trade to the Dutch economy, KLM is not surprised at the attention by various ministries to improving state services at Schiphol airport. This means that KLM can expect that the future will continue to involve collaboration with the state. However, challenges are appearing that relate to the increasing number of European Commission (E.C.) directives that influence the delivery of border controls in the Netherlands.

The airline’s facilitation manager also expressed a desire for cooperative dialogue as preferable to enforced and unwavering statutes that have become too frequent of late, arising from both 9/11 and domestic immigration concerns. Similar to the other airlines contacted for the research, KLM desires a global approach to the advancement of ABC programs, which would avoid each state establishing differing requirements that are expensive to meet. KLM’s position is somewhat at odds with the perspectives from Amsterdam Schiphol, which has pursued local characteristics to its border control service offerings. The IND indeed has admitted that these conflicts between the airline and airport are real. However, these differences are not sufficient to undermine the working relationships and the desire to expand the ABC programs to achieve greater customer service and national security gains.

Synthesis

The most striking comment from KLM related to the lack of competitive focus for the organization around ABC program deployment. The perspective from KLM is nearly
identical to the comments from the Air Canada manager noted earlier, but is in contrast to the views from Schiphol airport. The IATA expressed similar standardization related comments, and it is worth recalling that one of the KLM managers has had considerable influence amongst world airlines in the topic field. Thus, an important finding is that globalization has meant the need for airlines to establish globally consistent operating practices. In order for airlines to accomplish these objectives, and to reduce operational differences by locality where possible, the desire appears to be to “flatten space” (Friedman, 2005) and eliminate variations in the economic landscape. This view from global airlines is not surprising, but adoption of such policies could create serious difficulties for states to maintain local competitiveness for “fixed location” industries such as airports.

The second conflict that emerges is the degree to which KLM views national security as the responsibility of the state, and that the airline voluntarily cooperates because of the necessity to manage the border control regulatory burden. KLM clearly expressed a preference that the state should shoulder the full burden and leave the industry to serve its customers, which in a globalizing world is less oriented to its Dutch operating base. This perspective is in keeping with globalization theories regarding how firms are becoming “less territorial”, and instead focus on external markets and supply conditions. These outward-oriented strategies however may pose considerable risk to both the Dutch economy and for Schiphol Airport, particularly as Air France now owns KLM, and is part of the Sky Team global airline alliance. The implications of these new strategic relations however are beyond the scope of this thesis.
7.7. Amsterdam International Airport (Schiphol)

Organizational Role

The Amsterdam International Airport, also known as “Schiphol”, is the main international airport serving the Netherlands and nearby northern Germany and the eastern portions of Belgium. The Schiphol Group operates the airport on an independent commercial basis on behalf of the mostly state-based ownership, which recently involved a share swap with the airport operator in Paris. The Schiphol Group also commercially operates other global airports such as in Aruba. The assessment of the Schiphol ABC program included interviews with all three successive managers from the commencement of the program in the late 1980s.

Relevant Corporate Strategies

The Schiphol Group has implements border control initiatives through its subsidiary Dartagnan, which specializes in ABK program development for domestic and export purposes. While Schiphol operated an ABK program during the 1990s, since 2001 this has been formalized under the Privium brand name, which offers its members access to ABK passage and other services including a dedicated lounge, parking facility, and other features. The Privium program permits membership to the European Economic Area, Swiss, and U.S. citizens, based on iris recognition biometric technology to recognize enrolled travelers. The Schiphol Group has exported the program to Indonesia, which operates there under the name “SAPHIRE”. In 2009, Dartagnan implemented the U.S. Global Entry program in partnership with the U.S. DHS.
Historical Challenges

Discussions with the first Schiphol border innovation manager provided the early history from the late 1980s. The conversation commenced with a reflection on the openness of the Dutch society and the ready acceptance of the technological revolution during the 1970s and 1980s. The Schiphol Group began by using automation in cost management and customer service applications. Thus, technology became a natural fit to improve the arrivals and departure process. Yet, the airport itself did not possess the expertise to pursue such interventions with border control agencies. This led to a corporate decision that technology partners should be engaged to make joint proposals to the state. The business opportunity also became apparent that such a platform would be useful for export services in serving other airports as the technology and new border crossing processes matured.

The Schiphol Group was also busy preparing for the air travel growth expected by the Dutch Ministry of Transport arising from globalization and industry liberalization. As such, the IND was receptive of technology-based service delivery in order to increase border control capacity. However, the IND was concerned with the use of this immature technology. A false negative could produce a security vulnerability that would have political risks for the state. This led to a desire for program testing at a small scale, preferably with travelers that might generate few national security risks when engaging the automated border control process.

The first step was to develop a conceptual and technical prototype for how an ABC program would work; identify the necessary relationships; and build the business case identifying whether the benefits would exceed the costs. Despite these efforts,
many technical problems emerged that undermined the ability for the prototype to work effectively. These challenges applied not just to the building of automated kiosks, but also to protecting personal data. These issues demanded harmonized data communications, a concept only just emerging at this stage of technology development.

The Schiphol Group then needed to engage local technology suppliers; build the custom-made kiosks; and prepare a re-vamped border control process. At the same time, the state began working with KLM on passenger data sharing protocols, which were instrumental to making the RT program work effectively. The prototype came into operations, but unpredictable technology problems developed. Even with these issues, the program grew in popularity with loyal air travelers who found value in the faster border crossing performance. Even in its early days, Schiphol delivered the program within a commercial shell, offering basic services such as discounts on retail and parking. This type of promotional activity recognized that travelers who participated in the Schiphol Automated Border Kiosk (ABK) program were high-value customers. Thus, providing loyalty benefits was considered as a strategic retention tool for travelers from nearby Germany, Belgium, or France who might otherwise use the ever-expanding high-speed rail network to access competing international hub airports.

The most interesting lesson from the first Schiphol Group manager related to the conflict between how globalization was driving liberalization, compared to the tenacious hold the state had over border control practices. The conclusion reached by this individual was that industry was acting at its peril if it pursued a globally homogenous border control solution, that is, policy must be cognizant of local demands surrounding national security, while remaining consistent with an end-to-end journey vision.
The second border control manager took over the program just as 9/11-related policy changes were appearing. The Privium platform had become a commercially oriented venture, with the near-term objective of making the system financially viable. Given 9/11 related stresses, the manager reported rather slow progress towards this goal. In addition, the IND continued to support the innovation agenda, but in a lower key way given the highly sensitive nature of the entire border control topic in the post-9/11 period. For the Netherlands, and as explained in the IND section, domestic immigration issues, legitimate or otherwise, had become a pressing political priority, and the Schiphol Group wished to avoid linking its facilitation efforts with this broader public policy debate.

As the Automated Border Kiosk (ABK) program had become mature, the re-branding in the marketplace of the former trial approach became necessary to provide a wider appeal, and demonstrate the permanence of this well-proven innovation. The ABK program now was sufficiently mature to pursue export potential, an idea that had originated from the Canadian airports in the previous decade. However, as the system was stand-alone technologically, this did not make for easy integration with parallel commercial vendor offerings. Schiphol had built a stand-alone platform that sent secure messages to the IND and awaited an approval or denial response. This system approach required updating, which demanded a new business investment case along with the IND support to host the database. As confirmed by the IND Border Innovation division, obtaining approval for the database architecture and necessary firewalls was remarkably complicated.
Part of Schiphol’s early challenges related to conflicts with labour. First, the kind of public-private partnership necessary to integrate with an entirely new ABC platform demanded a skill set that was difficult to find. Second, the role of IND staff would need to change, especially in the technology division that was highly resistant to opening a portal to the private sector. Third, the post-9/11 policy environment generated intense demands for further research and development by suppliers, with an extensive testing regime to avoid the types of technical failures that embarrassed the government during the 1990s. Finally, as other lucrative national security work was higher on the agenda for capable consultancies in this field, costs were driven up which made the business plan untenable, as noted also by the current Schiphol program manager.

The second Schiphol border control manager indicated that the organization had no real choice but to continue with innovation. Schiphol, with its high cost base, needed to maintain a leadership role to remain competitive. Privium had become an important customer service tool for frequent travelers, providing a suite of commercial services that were attractive to smaller airlines. This enabled these operators to broaden their customer service offering that would otherwise have been unaffordable. As well, without attention to facilitation, 9/11-related national security protocols would have swamped Schiphol’s ability to continue delivering award-winning levels of service.

The Schiphol Group also engaged with the U.S. DHS., which had begun to outreach to both Canada and the Netherlands. The Schiphol manager identified that ABC programs had sizeable support from the U.S. DHS, as considerable confidence exists that these tools would contribute to trade facilitation and national security objectives. Although U.S. – Dutch negotiations turned into a multi-year effort, an
agreement was finally realized. As such, Schiphol was pleased to continue with its “early-mover” track record, and become the first airport in Europe to launch an ABK program with the U.S. DHS.

In reflection, this second Schiphol manager (originally from Bulgaria), having lived for years in both Canada and the U.S., described the enormous parallels between Canadian and Dutch trading histories. As both countries have utilized their trading skills to build gateway economies, this has required both states to adapt politically to the dominant influence of respective American and E.U. neighbours. Despite the occasional setbacks at the frontiers with their major trading partners, both Canada and the Netherlands have pursued trade innovations that have influenced the agenda of their larger neighbours. Ultimately, in this manager’s experience, both Canadians and the Dutch recognize that trade and security are not separate ideas, but must be approached in an integrated way in order to be effective.

Current Challenges

The border innovation manager indicated the commercialization of relations with border control agencies is improving with successive program achievements. This level of confidence is consistent with corporate wide strategies as public and private parties involved in national security have recently joined forces through the Schiphol Security and Public Safety Platform dialogue. This collaborative approach has considerable merit in achieving an optimal security policy with maximum effectiveness for delivering border controls in a streamlined way (Schiphol Group, 2009).
State-Firm Relations

The Schiphol manager recognized that the border control programs developed at the Dutch level were required to be compatible with E.C. Directives. However, the centralization of this policy appears to have created a rather unrealistic view of what may be acceptable at the operational level. The Schiphol manager observed that E.C. Directives often require action on matters that are not practical or quite expensive, such as maintaining high security protocols for access to E.U. enforcement databases during periods when the Automated Border Kiosk (ABK) is not in use, providing access by travelers in all official E.U. languages, and other broad policy objectives. This is not the case with the U.S. authorities, as the strong commercial alliance between KLM and major U.S. airlines demands that border control innovations require commercial merit. This is not to suggest that national security objectives are of less importance in relations with the U.S., but a better balance appears to have been easier to achieve between these trans-Atlantic partners. The data sharing arrangements remain a challenge, but as the ABK program is voluntary at present, travelers have the opportunity to provide informed consent on information shared with the U.S. before participating in the joint U.S. – Dutch program.

For Schiphol, the border innovation commercial model is still a work-in-progress. The question recently emerged as to whether the ABK program had matured sufficiently to become a normal commercial venture. Schiphol until now has treated the Privium program as exploratory, building cross-organizational collaborative capacities, and strengthening relations with the state and private partners. However, the Schiphol Group understood the need for new ideas as the Dutch state has begun to expand the
pre-journey programs to larger groups, and without the current user fee. Furthermore, these types of fundamental changes could not proceed without retaining strong U.S. relations. The reasons for attention to U.S. perspectives relates first to commercial interests as users appreciate how the Privium program supports global air service access. Second, the Schiphol Group recognizes that as the agreement for Global Entry occurs at the state-to-state level, efforts must focus on retaining bi-national confidence. Thus, the Schiphol Group considers any unilateral action on its part could precipitate an unhealthy reaction from their U.S. partner, which could create domestic tensions with its long-standing partnership with the Dutch state.

**Inter-Firm Competition**

As the ABK program becomes routine rather than the exception, the Schiphol manager commented observed that corporate risk management issues need further attention. This is important as the Schiphol Group intends to export this program to other jurisdictions. The airport understands it must deliver effective border controls to retain the confidence of the state. At the same time, in order to remain relevant in the marketplace, management is clear that its principal objective is to increase the flow rate for its airline business partners. Unfortunately, the delays and uncertainties arising from the time it has taken to build state consensus and typical risk-avoiding bureaucratic behaviours are the realities the airport has had to work through at every step in the innovation process. In this regard, the Schiphol Group has no expectation that these challenges to program development and execution will change anytime soon.
Despite these challenges, the Schiphol Group is accelerating its innovation efforts to retain its long-held early adopter position where such initiatives support customer service goals (Schiphol Group, 2009). The latest innovation involves a combination of pre-journey data sharing, biometric authentication, and the expanded cooperation with IND and private sector partners, as follows:

“No-Q
Early in 2009, Dartagnan launched the No-Q project at Schiphol with the Dutch government. No-Q aims to allow as many travelers as possible to cross the border with only automated checks (i.e. without government official intervention). The project will reduce the long queues at border crossings and improve the service provided to the traveler. E.U. subjects can benefit from this facility, provided that they have been issued with the new ePassport that includes such features as a fingerprint of the left and right index fingers. In order to safeguard competitiveness of Privium vis-à-vis the No-Q programme, Privium will be further developed and improved”.

The consequence for the Schiphol Group was the No-Q improvements required further innovations for the premier PRIVIUM offering. Despite the routine challenges, globalization required firm innovation to maintain a globally competitive position.

**Looking Forward**

Given the catalyst for border control innovation was the policy change that transferred the Amsterdam airport to a commercial business-oriented, much more can be done to lever the opportunities that the organization’s leadership position has to offer. These collaborative border control efforts also established the platform for post-9/11 policy changes. This proved immensely useful in maintaining relations with the U.S. airline industry and border control agencies that eventually permitted the joint
FLUX-Alliance ABK program at the airport for both Dutch and U.S. citizens. The Schiphol Group remains committed to the continued evolution of these programs, as the organization sees that no practical alternative exists.

**Synthesis**

In considering the breadth of comments from Schiphol, without a doubt the organization remains attuned to national security, with a parallel focus on delivering innovative customer service. The consistent responses from the historical and current Schiphol Group managers reinforce the responses from other interviewees who indicated the Amsterdam-based ABC programs represent best practice. Accordingly, the categorization of these consistent perspectives as simply platitudes in response to questions from an inquisitive researcher is inappropriate. Instead, the lesson from this airport is one of continuous change in response to competition from around Europe, and increasingly from airlines and airports elsewhere (e.g. Emirates Airline/Dubai, etc.). The challenges to overcome were many, including internal problems with technologies and shifting business priorities, while external attention to heightened immigration controls across Europe, and especially within Dutch society, were all factors in driving ABC program change. For a theoretical perspective, globalization created an external environment for Schiphol that drove customer innovation, which logically required the organization to understand and develop solutions to pressing border control constraints.

Another lesson from the Schiphol Group relates to understanding the causes for differential economic activity across territorial spaces. While Friedman and others argue that global forces are eliminating spatial differences, instead the Schiphol Group
successfully pursued ABC programs as part of a niche strategy to align facility and customer experience solutions. In order to accomplish these objectives, Schiphol was dependent on the state for various policy supports, especially from the immigration agency. Despite the challenging post-9/11 era policy environment, Schiphol persevered and its border control program leadership has become the template for other European states. Interestingly, these efforts parallel the events in Canada, another trade dependent state that liberalized its aviation industry in response to globalization forces. Consequently, while globalization created pressure for states to adopt similar economic policies, the response at the firm level, at least in Canada and the Netherlands, involved innovation and partnerships, while respecting localized national security priorities.

7.8. **Aruba International Airport (AUA)**

**Organizational Role**

The Aruba Airport Authority (AUA) operates the Aeropuerto Internacional Reina Beatrix in Aruba (see Figure 1) in partnership with the Schiphol Group (Aruba Airport Authority N.V., 2010). In 2000, the USPC facilities were completely re-built. The Schiphol Group general manager from Amsterdam and the locally based general counsel granted multiple interviews. The AUA also graciously provided English translation of relevant documents adopted by the Parliament of the Netherlands.
Relevant Strategies

The most relevant document was the original 1994 U.S. - Netherlands treaty (Netherlands Ministry of Foreign Affairs, 1994), which led to the USPC opening in 1996 in a temporary facility. Further changes occurred to the treaty in 2008 (Netherlands Ministry of Foreign Affairs, 2008). The reason for this later change was to permit pre-inspection of private [corporate] aircraft by U.S. border control agents in Aruba, which the airport operator found to be highly beneficial for business development reasons. The revised treaty included a new provision that expressly acknowledged the authority available to the U.S. to inspect for Weapons-of-Mass Destruction (WMD). As the WMD protocol is consistent with existing United Nations Security Council Resolution 1540 (2004) and the E.U. Common Foreign and Security Policy (2003), this precaution was not viewed as creating additional implications for the Dutch state or local authorities.

Major Challenges

The AUA managers indicated the importance of USPC as a competitive tool in positioning the island in the lucrative U.S. market. This facilitation tool complements other recent public policy changes. Furthermore, customer surveys indicate that repeat U.S. visitors find the USPC program to be highly convenient. The main problem with the USPC program deals with lack of U.S. CBP staff resources. The availability of the NEXUS program installed in the departure terminal was only somewhat useful. This situation arose because of the leisure nature of the Aruba market that results in RT participants being unable to use the kiosk when travelling with non-registered family members. Moreover, as the island is in close proximity to the South American coast, the
growing problem of narcotics smuggling compounded the lack of resources. For AUA, this has meant the implementation of complex baggage handling and staff screening procedures to prevent narcotics from being loaded onto U.S. bound aircraft. The AUA managers believe these difficulties do not outweigh the benefits of preferential U.S. access in a highly competitive tourism market.

As an aside, the introduction of the USPC service at AUA created another interesting challenge for management. The 2001 passenger terminal redevelopment involved splitting departure facilities for U.S. and other international flights. This was necessary to provide the required operational sterility for U.S. departing flights that would arrive at U.S. airports as domestic flights. With nearly two-thirds of passengers destined for the U.S., the other international traffic volumes were sufficient (approximately 350,000 annually) to require clear signage to direct these passengers in the most expeditious manner possible. As noted in Figure 7, the Aruba Airport has defined such other international departures in a rather unique manner. The reference to “Non-USA Departures” posits for travelers a comparison that requires consideration of a third state (i.e. U.S.) that is not involved in the travelers’ journey. In these circumstances, the language of “border controls” would provide another interesting course of study, although well beyond the scope of this project.

Looking Forward

Finally, for Aruba Airport, this organization’s effort to build ABC programs was crucial to the tourism interests of this Caribbean island. These initiatives benefited relations between the Netherlands and the U.S., and encouraged high levels of U.S. air
service. As Aruba does not have its own domestic airline industry, the island is highly dependent on U.S. airline services, and thus it is vital to facilitate airline commercial interests in these non-conventional ways. Overall, this small community located quite a physical distance from both the Netherlands and the U.S. is continually contributing to the Aruba’s trade facilitation capabilities, which in turn bolsters the island’s economy.
Figure 7 Aruba Airport Departure Terminal Signage

Source: Photographs taken by author with permission of Aruba Airport Authority, 2008.
Synthesis

The primary lesson from this assessment relates to the ability for even small civil aviation operators in remote localities to participate in ABC programs. Although Aruba has historically depended on the Dutch state for foreign relations, including the treaty that enabled the USPC program, success was dependent on local operating practices.

From a conceptual perspective, globalization-oriented border controls do not necessarily eliminate the advantages of local expertise. In the case of Aruba Airport, it is vitally necessary to the island’s economy to provide efficient services to the large volume of visiting U.S. citizens. Accordingly, these circumstances bode well for the potential of ABC programs to enable communities of varying sizes to participate in global flows.

7.9. Netherlands Private Sector Interviews Summary

Given the similar levels of economic dependence that the Netherlands has with Europe and that Canada has with the U.S., civil aviation firms in the Netherlands thoroughly understood the importance of trade facilitation. Thus, the inventive Dutch pursued a parallel set of ABC programs during the rapid era of globalization. From inception, the ABK program launched at Amsterdam Schiphol was private sector led, with state support. In the case of Aruba, the drive to obtain the USPC service arose from the need to facilitate U.S. access. While these achievements occurred prior to 9/11, in the subsequent era of heightened national security, like Canada, these efforts proved remarkably forward-looking. The Dutch industry was also concerned about the
transfer of costs, and the frequent problem of uncoordinated border control policy. Yet, the challenges faced by the private sector in building a world leading ABC program were not viewed as insurmountable, and amongst aviation professionals, the Netherlands is viewed as having developed best-practice advanced border control systems.

Finally, the Dutch civil aviation industry has long operated under restrictive legislation in keeping with a rigid European philosophy towards the role of suppliers in the marketplace. As well, the history of state ownership mattered as the transfer of staff to the private sector provided both an institutional memory and continuation of professional relations. These circumstances facilitated the airports and airlines pursuing cooperative dialogue, and achieving ABC program implementation partnerships.

7.10. Case Study Summary

In concluding the Canadian and Dutch case studies, what seems as a tedious repetition evident in the interview and document assessments, instead reflects a broader paradigm shift driven by globalization. The shifting global emphasis towards trade dependency, supported by “fast-transport” and “Information and Communication Technologies” (ICT), has created for these two trading states intense levels of firm competition at the inter-state level (Porter, 1990). Part III that follows assesses the implications of these structural economic changes in light of evolving national security relations between the state and civil aviation firms.
Part III Research Assessment and Conclusions

Chapter 8. Research Assessment

8.1. Case Study Assessments

Overall, the case studies demonstrate considerable consistency of how border control agencies and civil aviation firms developed a level of co-dependence regarding the ABC programs in question. The inherent limitation in this assertion is that the case studies involved the review of documents and interviews from organizations and individuals closely connected to these programs over the past two decades. As the academic literature does not address this topic, comparisons are not available in regard to similar innovations in other transportation modes or border control agencies. Thus until other researchers assess this subject, the conclusions that follow remain a work-in-progress, albeit strongly reflective of the circumstances over the past 25 years.

8.1.1. ABC Program Evolution in the Rapid Globalization Era

As the interviews with the ADMTL representatives, the private sector consultancy and the first Schiphol manager explain, understanding the context of the ABC programs starts with globalization and the liberalization of international air traffic services that commenced well before 9/11. This viewpoint existed in the documents and interviews
with the supra-national ICAO that indicated that border controls and improved facilitation had become important in the past few decades as traffic pressures mounted on states.

As the evolving travel marketplace demands competitive air services, states have adopted policies that loosened the restrictive Air Service Agreement (ASA) regime between states. For example, shortly after the 1994 NAFTA, the new Canada-U.S. “Open Skies” agreement enabled tremendous bi-national air traffic growth. According to the 2005 InterVISTAS Trans-border Air Traffic Study, summarized in Table 3, the decade-long increase in Canada-U.S. air travel that followed meant enormous economic gains for Canadian communities. Similarly, policy liberalization in Europe resulted in expanded air services, and paralleled the lessening of border controls with the 1990 Schengen Agreement Area (SAA). Nevertheless, the powerful effects of ongoing globalization of air travel in both Canada and the Netherlands required border control agencies to respond, at least in the earlier period, to growing trans-national threats associated with contraband (i.e. narcotics) and human smuggling.

In addition, deregulation related policy changes re-oriented firm structure towards private-sector strategies, regardless of whether the underlying assets (e.g. airport lands) remained in public hands. As noted previously, industry liberalization encouraged and enabled rapid international traffic growth. The document reviews and interview findings repeatedly identified that these globalization related changes drove the early strategic efforts to engage states in evolving the port-of-entry arrival and departure process. The interviews in particular identified these actions as being crucial to avoiding future system paralysis due to airport congestion. Despite these structural
industry changes, there is little evidence in the literature that acknowledges that border controls are a causal factor in the network strategy of civil aviation firms.

For example, Budd et al. (2011) identified a number of studies concerning the relocation of frontiers by virtual and extra-territorial means. However, this particular article, which addresses the “potential” for trans-national spread of disease through United Kingdom (UK) regional airports arising from liberalization, includes no reference to the shift starting in 1985 that resulted in the privatized U.K. airport ownership structure. More importantly, the authors assert that “frontier examinations of passengers and aircrew are insufficient [italics added] when dealing with the volume and complexity of the contemporary patterns of aero-mobility” (ibid, p. 277). This accusation would be more credible if the literature identified gaps in the rigorous U.K. airport licensing regulations that require, at firm expense, the extensive provision of facilities and systems in order for various border control agencies to perform U.K. port-of-entry services. Furthermore, the authors provide no evidence that the airport operators prevented or otherwise interfered with the ability for health authorities to establish the necessary airport facilities before the commencement of international air services. To the contrary, the IATA Simplifying Passenger Travel (SPT) forum has discussed the potential to adapt Automated Border Kiosk (ABK) equipment to detect various illnesses, especially those that may involve elevated body temperatures associated with pandemic flu viruses. Such ABK program installations would be ideally suited for regional airports to supplement limited enforcement resources. For transparency, the researcher has provided professional advisory services for the development of various U.K. airports, as well as for IATA planning and facilitation initiatives.
Granted, Budd et al. have made a relevant observation that international air services have grown rapidly in the past two decades, and states have not necessarily allocated sufficient resources to meet pressing border control demands. In part, this circumstance formed the rationale for border control partnerships in Canada and the Netherlands. However, this is in contrast to the literature that explains that firms only undertake delivery of public goods where measurable profit outcomes are expected. In this case, a better explanation is that civil aviation firms recognized that traditional border control approaches would invariably result in the state “falling behind the growth curve”, and would lead to undesirable outcomes such as the inability to accommodate international traffic, which in turn would reinforce the advantages for competitors.

Unfortunately, this understanding of border control influences on civil aviation is absent in the literature from Papatheodorou and Arvanitis (2009) that addressed traffic changes in Greece in the post liberalization era. Missing from the extensive discussion is reference to the role of border controls in enabling European market access, especially when discussing airlines based in the U.K. and Ireland, states that are not participants in the Schengen Agreement Area (SAA). Accordingly, flights from these countries would require full border controls on arrival, and even for flights originating from within the SAA, Greece would need to determine whether other border controls (e.g. customs inspection for contraband) would be applicable as the SAA only applies to immigration inspections. Furthermore, the authors noted that the Greek state is considering airport privatization, although this will be difficult to accomplish if private operators face the risk of insufficient border control services. Given the financial
circumstances facing the Greek government, prudent investors should consider this issue carefully before any investment proposal.

Similarly, Graham (1998) identified the key drivers of change in Europe’s air transport networks without reference to the SAA, or the need for states to address border controls arising from the tremendous rate of growth that liberalization brought to the European continent. This is particularly surprising as Graham acknowledges Nijkamp and van Geenhuizen (1997) who correctly argued, “transport cannot properly be analysed when isolated from its social context; on the contrary, the key forces of mobility and communications are a direct offspring of broader social, economic and political developments” (p. 5). Yet, for Graham, the elimination of internal borders between various European states is an insufficient factor to warrant mention as contributory to air travel growth. Furthermore, and without confirming that flight patterns had access to sufficient and timely border control services, the model analysis conducted would tend to reinforce historical spatial patterns as prevalent in the structure of modern day aviation networks. As states would have established ports-of-entry based on previous traffic levels, this would also tend to impede new flights to emerging tourist and business destinations without a sizable border-crossing history. The Canadian Airports Council also identified this problem with regard to the unfair allocation of border control resources to smaller Canadian cities. Finally, and despite the elaborate explanation of mobility factors in “European transport: challenges and opportunities for future research and policies”, Nijkamp and van Geenhuizen (1997) made only passing reference to air security. These are but a few examples of the transport geography
literature replete with gaps in explaining important factors in civil aviation network development.

Nevertheless, the empirical interviews and document assessment identified that the civil aviation industry continued with parallel advocacy efforts in order to expand resource availability. However, both Canadian and Dutch airports considered such outcomes as only a partial solution to serving the air traffic growth potential. Clearly, new border control methods were necessary to cope, but at the same time, states needed to respond to the growing levels of inter-state threats. As evident from the discussions with the UN ICAO, INTERPOL, and FRONTEX representatives, the narcotics trade, human smuggling, and politically oriented violence from non-state actors were all issues that needed state attention, and preferably to be dealt with prior to the physical arrival of the traveler at the ports-of-entry.

In this regard, political and commercial relations with the U.S. were sufficiently positive to permit the expansion of the USPC program during the 1990s, which involved the airports in Ottawa, Canada, and Aruba, Dutch Antilles. In addition, the interviews with Canadian airports consistently indicated that the USPC program prevented their full participation in air service globalization, as the treaty did not permit connecting passengers to use the facility en route from international origins to U.S. destinations. Industry undertook significant efforts to build the case for change, which proved to be acceptable as the U.S. government wished changes to the treaty as well to enable expanded inspection powers for their border control officers working in Canada. The private sector involvement in these traditional state-to-state negotiations was significant, including the operation of a pilot program at YVR commencing in 1997, to test the “In-
Transit USPC procedures. Despite the uncertainty of state approvals, the investment in both facility and operational program changes became paramount to demonstrating the workability of innovations. As the YVRAA representative confirmed, the airport operator believed that these early trials were necessary to prove to government that new ways were possible to serve existing and future customer needs. Thus, for the YVRAA, this speculative project was just one example of the careful business planning undertaken to consider whether border control innovations warranted further risk-based investments.

Likewise, as the civil aviation industry generally viewed itself as a leader in using ICT to serve its international clientele, these sophisticated tools had benefits for passenger processing at frontiers. By the late 1980s, biometric technologies were finding viable uses in sensitive national security fields. Thus, airports in Canada and the Netherlands developed ABK program concepts for consideration and acceptance by border control agencies, which led to an initial prototype in the early 1990s. The focus of these partnership efforts was to serve a limited number of frequent international travelers in order to provide the “proof-of-concept” for eventual program expansion to a much wider segment of the international air travel market.

During this early period, states also began to view that the civil aviation industry could contribute to national security objectives through provision of passenger data prior to arrival at ports-of-entry. The initial efforts involved cooperation between the state and firms, as potential benefits were evident from the ability to streamline pre-screened travelers. However, the data transmission technologies were not particularly mature at this stage, and the passenger processing benefits proved elusive for industry. From a strategic perspective, the research findings identified that the firms involved understood
the longer-term potential for pre-journey data sharing. Well before the events of 9/11, industry began advocating for a broader definition of border control frontiers that would commence at overseas departure airports that would permit states to make admissibility determinations in advance of the territorial frontier. The North America “Perimeter Clearance” concept paralleled developments in Europe with the Schengen Agreement Area (SAA) that established a common border control code for participating states.

The research findings for this early period confirm that the ABC programs gained significant traction. Notably, Ambassador Cellucci observed that part of his mission on arrival in Ottawa in the months prior to 9/11, was to expand these programs, with emphasis on a “continental” border control approach to match the economic integration progress brought about by the CUFTA and NAFTA.

Relevant for this assessment is the manner in which core sovereignty aspects of the state began to evolve away from traditional state-centered approaches. Specifically, the ABC program innovations under study involved investment by the private sector, on a partnership basis, to enable border control agencies to use new technologies and processes to facilitate air travel. At a conceptual level, and as noted by Torpey (2000), the role of the state involves the legitimate use of force at territorial frontiers to protect society, which in the global era represents one of the few opportunities for the state to project outward state sovereignty. In considering state theory, globalists might argue that permitting firms to become this involved in border controls is a further example of eroded state power.

Conversely, Canada and the Netherlands received important strategic national security benefits from these innovations beyond the trade facilitation advantages for
domestic firms. This assertion is in keeping with Boulding (1962), who theorized that states would need to extend national security protections outwards as threats from afar became more proximate (e.g. inter-continental ballistic missiles). In this regard, the emergence of trans-national criminal and terrorist groups dramatically changed how and where states established defences. Thus, this thesis argues that states should view the virtual and extra-territorial nature of ABC programs as “enhancing sovereignty” as these tools permit the projection of power over travelers well beyond the territorial limit. In the pre-9/11 environment, these capabilities were not enormously instrumental, but the world changed a decade ago with 9/11, and as described in the following section, relocating frontiers has become central to national security policy in some states.

8.1.2. Post-9/11 Major Changes

The research identified that although 9/11 focussed attention on border controls to prevent a reoccurrence, this did not represent a material disruption to ABC programs. Admittedly, border control agencies faced additional scrutiny in all front-line national security programs, and major changes did occur that have had considerable consequences for trade facilitation. First, while the USPC program had a long history, and was viewed as successful by industry and U.S. border control agencies, addressing apparent gaps was vital. For example, the proliferation of small-scale highly destructive weapons, which were easily transportable by air, came under intense scrutiny at both Canadian and U.S. ports-of-entry. Accordingly, new equipment was required, staff training updated, and emergency procedures adopted to deal with such threats as a
“Nuke-in-a-box”. Adapting the USPC services to these new threats, although expensive for airlines and airports, was identified as advantageous as the inspections were conducted before departure, and thus reduced the risk of such weapons reaching U.S. territory. In 2006, Halifax was the first Canadian airport to introduce new baggage handling provisions that permitted automated radiation detection, followed shortly thereafter by the Montreal airport.

However, political and policy tensions after 9/11 complicated Automated Border Kiosk (ABK) program expansion. In the Canadian case, the private sector became less involved as a result of internal difficulties in finding a reasonable business case for further firm leadership. In part, the events of 9/11 drove down passenger activity, affecting airport financial performance. At the same time, for reasons of both geopolitical and bi-national relations the Canadian government adopted policies aligned with U.S. national security interests. This led the CBSA to expand efforts to promote its CANPASS ABK program. The private sector remained involved providing both facilities and marketing support for these programs, and encouraged joint efforts with the U.S.

In the Netherlands, the ABK program remained with the Schiphol airport, later becoming a partner with the U.S. Global Entry program. The industry was positive regarding these developments, but the scale of the program and participant enrolment was insufficient given the lengthy gestation period. Furthermore, the research identified that both the private and public sectors were actively monitoring the implementation of the non-enrolment based kiosk systems at the Vancouver and Amsterdam Schiphol airports. Unfortunately, the introduction of these systems at the end of the study period does not provide a sufficient history to understand the program’s future trajectory.
Aéroports de Montréal (ADMTL) President, and Airports Council International (ACI) Chair, James Cherry, provided additional research commentary. Specifically, the head of the world’s airport association remarked that “these new programs are exciting, and warrant much attention by industry as these technology and process innovations represent important potential to: enhance customer service, improve national security, and support trade competitiveness objectives”. Thus, should these innovations prove reliable, the general consensus at least from industry, was that traditional border control systems at airports could be completely re-worked, and replaced by an automated customer service oriented model. The Canada Border Services Agency (CBSA) representative however expressed some caution, carefully explaining the technology was just a decision-making tool to assist highly trained officials in making better decisions. Thus, both the public and private sectors must consider how best to communicate these innovations, and educate the traveling public on how to interact with a technology adapted form of interrogation, which may occur away from the airport or other ports-of-entry, including via “cyber-space” methods.

The most significant change though during this past decade has related to the expansion of pre-journey data systems. While generally the APIS program was voluntary prior to 9/11, the U.S., Canada, and the E.U. / Netherlands eventually all implemented mandatory data sharing requirements. The manner in which the APIS program became the norm for international travel became highly contested. In the case of Canada-U.S. relations, data sharing in support of terrorism interdiction led to a considerable conflict on various matters, the most publicized of which related to the Maher Arar rendition from the U.S. to Syria. In the case of the E.U., the consideration of
data privacy was of paramount importance in protecting citizen rights, which led to a considerable political conflict with the U.S. with the approval of the 2001 Patriot Act, and later in 2004 with the IRTP Act. Although the pre-journey data sharing programs remain in the early development stage, even two decades after initial introduction, the private sector continues to support reasonable use of this technique. The firm support for new ways of undertaking border controls at the beginning of an international journey was central to the February 2011 announcement by U.S. President Obama and Canadian Prime Minister Harper who initialled a memorandum of cooperation that envisages a future “Continental Clearance” approach to bi-national frontier inspections (Canada Office of the Prime Minister, 2011).

Admittedly, the post-9/11 environment brought about significant border control tensions between the U.S. and allied states, although the multi-decade effort to prove the strength of ABC programs eventually overcame any policy concerns over the new technologies and processes. Table 8 summarizes the generally positive outcomes for the various ABC programs in question.
Table 8 ABC Program Case Study Summary

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>• USPC expansion to Ottawa Airport</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• USPC treaty update</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Voluntary APIS program introduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Biometric-enabled Registered Traveler program introduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• USPC expansion to Halifax Airport</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• USPC treaty update</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mandatory APIS program introduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Joint Canada-U.S. Registered Traveler program introduction</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>• USPC treaty agreement for service to Aruba Airport</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Voluntary APIS program introduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Biometric-enabled Registered Traveler program introduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• USPC treaty update</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mandatory APIS program introduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Joint U.S. - Dutch Registered Traveler program introduction</td>
<td></td>
</tr>
</tbody>
</table>

Source: McGrath, 1992; U.S. CBP, 2002; CBSA, 2010; Schiphol Airport, 2010

Before concluding, it is worth observing that ABC programs are not limited to Western states. As might be expected, the pressures of globalization on border control systems first emerged in Europe and North America. Rapid international air travel growth in Asia, Africa, and South America is a relatively new phenomenon that only until recently demanded states in these regions to pursue border control innovations. While not part of this research project, post-9/11 intensification of national and international security relations has had considerable influence on the border control practices in these other regions. For example, the 2004 consensus at ICAO regarding the implementation of biometric enabled passports will eventually involve a worldwide
expansion of ICT-based border control systems. These new tools will likely parallel new
programs, such as the US-VISIT program, that involves the collection of biometric
information for all alien arrivals, and possibly citizens in future. Accordingly, for both
trade facilitation and national security reasons, the ABC programs in question have
begun to appear in various forms in all regions of the world.

8.2. Trade and National Security Policy Implications

A considerable challenge faced by both the civil aviation industry and border
control agencies was how best to deal with individuals traversing international spaces.
For firms, these individuals represented customers. At the same time, these travelers
“might” represent a potential threat to the state. Thus, for civil aviation firms the
availability of sufficient border control services became an essential component of
offering international mobility services to its customers.

In keeping with this dependence on state services, the civil aviation industry
developed an inherent self-interest in encouraging states to pursue trade facilitation
measures that involved improvements to border control measures. In the case of
Canada and the Netherlands, this encouragement involved direct partnerships with the
state. With recognition that private sector partnerships had much to offer, states
responded by enabling these arrangements through domestic legislation and/or by
changes to treaties that provided for commercial advantages through border control
facilitation. The “In-Transit Preclearance” program was a leading example of state
efforts to enable the private sector to offer new aviation services to its customers.
In return, the state understood that the private sector could contribute to national security goals given their front-line position in handling travelers at foreign departure points. For example, airlines voluntarily shared with governments the passenger data collected for internal corporate purposes. Similarly, in response to airline demands for streamlined border controls, the airport operators in Canada and the Netherlands re-designed facilities to enable border control agencies to perform their functions in an efficient and secure manner, and of course at firm expense. These conditions did not appear in the other trans-national passenger modes, and in the case of the Netherlands, the Schengen Agreement Area (SAA) caused the near disappearance of traditional border controls amongst a number of E.U. member states.

From a trade facilitation standpoint, Figure 3 expounds how this symbiotic arrangement has considerable merit. For example, the streamlined passenger handling through high-scrutiny national security related processes improves the attractiveness of civil aviation services. As also noted, passenger surveys indicate that such improvements have significant customer appeal. Furthermore, and despite the limited benefits to date and high program costs, the civil aviation industry continues to cooperate with the state. As noted by the GTAA representative, these technology-based innovations have become the “new normal”, and the demands for seamless global mobility require achievement of state support for these tools. The research findings also confirm that the firms involved continue to advocate for border control agencies to develop an internal imperative to find more efficient and effective processes, which if not accomplished would hinder trade performance in a globalizing world.
The situation for Aruba is highly instructive when recognizing the island’s location in the southern-most part of the Caribbean and the most distant from the primary sun-destinations available to the U.S. leisure market. Accordingly, the USPC program makes a significant contribution in reducing this physical distance disadvantage as most of the flights from Aruba are destined to major U.S. hub airports where most passengers connect to other domestic destinations. By comparison, the travelers departing from competing Caribbean airports, except for the Bahamas, Bermuda, and various U.S. island protectorates, arrive in the U.S. as an international passenger, and thus face mid-journey border controls and lengthy connecting times. Because of the USPC program, passengers departing Aruba arrive at U.S. airports as “domestic” origin, and thus these travelers can avail themselves of routinely short flight connections. It is worth noting that in civil aviation industry parlance, the availability of short “Minimum-Connect-Times” (MCT) represent a core strategic advantage and permits Aruba to position itself in an attractive manner in the lucrative U.S. market.

The Ottawa airport (YOW) also benefited from the introduction of the USPC program, which eliminated the policy-related dis-advantage of traditional U.S. border control on arrival. For YOW, this post-NAFTA change meant direct access to major U.S. airports without border control functions that could only otherwise be served by domestic flights. For example, the Washington “Reagan-National Airport” is located only six kilometers by road to the center of the U.S. political administration, so not only did the new USPC program have pragmatic transportation benefits for YOW customers destined to the U.S., but also had considerable symbolic advantage of improving “proximity” between the U.S. and Canadian capitals. Prior to the availability of the USPC
programs, airlines departing YOW could only fly to the “Washington-Dulles” airport that is located approximately 45 kilometers from the U.S. national capital.

The conceptual implications are also noteworthy as the USPC program displaces the frontier to a forward location that enables new nodes in a network to avoid the “friction” associated with intermediately located border control operations. This creates advantages for airlines by permitting “seamless” connections at hub airports (Canadian Airport Competition Policy Submission, 2008), and making available entirely new nodes in a network that are otherwise excluded from lack of port-of-entry services. The identification and assessment of these types of network-altering features of the ABC programs under study are generally absent from the transportation geography literature.

However, the research interviews also identified that the civil aviation industry observed that the costs of these various programs were generally borne directly by the customer, or shared in part with government. This circumstance arose because traditionally Ports-of-Entry (PoE) were a state function funded through taxation. For example, in Canada, the state constructs new PoE facilities and the management of traffic operations occur without direct recovery from the user. The consequence is that customer user fees are quite high, and viewed by the civil aviation industry as creating an uneven commercial playing field relative to other passenger transportation modes. Nevertheless, the civil aviation industry views that continued cooperation with the state is preferable as the alternative can be prejudicial to corporate interests.

The civil aviation industry was also concerned by the reactionary approach by governments to 9/11 pressures at territorial frontiers which became immensely harmful to trade facilitation interests. The civil aviation industry prefers, for both operational and
cost reasons that governments adopt and pursue in a reasonably consistent manner national security strategic plans. These approaches would permit firms to establish their own long-term corporate strategies in a way that could serve customer needs, and achieve effective collaboration with the state on protecting sovereign interests. Although both Canadian and Dutch border control agencies admitted that policy coordination is a routinely slow process, the political choices are limited. Again, however, civil aviation firms have come to accept that given the broad inter-jurisdictional issues involved, that achieving rapid policy change in the sensitive field of sovereign control over state territory is always going to be fraught with challenges.

The research found no circumstance where Canadian, Dutch, E.U., FRONTEX, or others involved in national security policy suggest that the ABC programs pose any threat to national security. Instead, a growing acceptance appears across the states involved, including the U.S., that the achievement of national security objectives is possible with a high degree of certainty, and without undermining vital trade linkages. Consequently, while the “security trumps trade” sound bite may have been a useful political tactic to encourage bi-national debate at the time of national security crisis, the reality is that neither Canadian nor Dutch policy pursues this extreme position. Rather, in keeping with the original objectives of the 1995 Canada-U.S. Shared Border Declaration (SBD), the ABC programs under study represent a meaningful and long-term strategy to secure borders in a manner that facilitates legitimate trade activity.

Interestingly, and although numerous and meaningful frictions have emerged over the past decade, it would appear that the trade facilitation agenda is again in vogue. This attention exists not just from the recent high-level pronouncements by the
Canadian Prime Minister and the U.S. President, but as importantly at the program level by senior government officials responsible for border control implementation. For example, in May 2011, the U.S. CBP Commissioner, Alan Bersin, identified that “federal officials are trying not to slow legitimate traffic along the Canada-U.S. border, which facilitates trade valued at more than $1 billion a day”. As well, Bersin identified the importance of “building up a competitive U.S. economy in concert with Canada, so that North America can compete with East Asia, with the Indian sub-continent and with Brazil and South America is critical dimension of our work…and we recognize security and economic competitiveness go hand in hand” (US CBP, 2011).

Invariably, the concern by states and firms about border control related “frictions” remains, yet, often lost in this debate is the recognition that the vast majority of trans-national travel between the U.S. and its allies occurs with few, if any, major border control delays. This generally positive circumstance must acknowledge that the perception that remains of highly fortified frontiers has deterred some travelers. These border control concerns were sufficient, as noted by Globerman and Storer (2006), to have reduced legitimate travel, which represents a dead-weight loss to the economy as avoided travel had utility for the individuals involved, and would have benefited industry from increased patronage. Nevertheless, the consensus from the research respondents is that the expansion of the ABC programs over the two-decade study period has enhanced the twin objectives of national security and trade facilitation.

Despite the major organizational and operational changes to border control programs arising from post-9/11, national security policy regime, such as the 2001 U.S. Patriot Act and the 2002 Canada Public Safety Act, along with further restrictions in E.U.
immigration policies, these challenging circumstances had limited implications for air service expansion. An important theoretical conclusion arises from this finding as even an “era-creating” geo-political event the likes of 9/11 was insufficient to alter the trajectory and expansionary path of globalization, at least for the states and civil aviation industry under study. With increased global competition, partnerships efforts directed towards building border control capabilities ultimately created firm advantages. The 9/11 tragedy inevitably became just another challenge for these firms to resolve to maintain a globally competitive position.

Although the reality is that the ABC programs remain a work-in-progress, civil aviation firms remain persistent in order to improve the interaction for travelers at territorial frontiers. It is not surprising in the post-9/11 era that none of the private firms or industry associations indicated that states should diminish national security policies to reduce industry obligations. However, pre-9/11 advocacy efforts indicate that when civil aviation industry interests are severely challenged by advanced border control proposals, such as the 1996 U.S. immigration legislation enabling an entry - exit system, serious industry efforts are made to thwart the proposed techniques.

Consequently, the research findings re-affirm that civil aviation firms do act across both domestic and international spaces when necessary to achieve corporate objectives. In this regard, and in keeping with the thesis argument, these mutual trust-based arrangements “strengthened sovereignty” by assisting states to protect frontiers through use of virtual and extra-territorial tools. In relating these firm strategy choices to broader economic drivers of change, the thesis also argues that another consequence of globalization has been to “negate border controls, but not sovereign borders”. This
does not mean the disappearance of border control techniques, as the post-9/11 national security orientation of Western states will remain a relatively permanent policy fixture. Instead, the ability to interdict territorial threats through less-intrusive and customer-service oriented measures through cooperation with the private sector generates “win-win” outcomes for both the state and industry.

Admittedly, other states already perform similar border control tasks without private sector intervention. However, the Canadian and Dutch case studies demonstrate that involvement of the private sector has not been deleterious to national security interests, nor did these engagements “diminish sovereignty” in favour of private sector gains. This perspective is another useful contribution to the literature and counters the anti-private – public partnership perspectives that argue, “when firms gain, states lose”.

Finally, the private sector involvement has also encouraged a reversal of the frequent perception by travelers that border control agencies treat “everyone as criminals”. Both the Canadian and Dutch border control agencies admitted that working with the private sector brought new ideas for dealing with the overwhelming majority of trans-national travelers who have legitimate intentions and, as citizens and valued visitors, deserve respect and dignity. Although the risk of abuse remains with new technologies such as data-sharing, introducing a “guest” or “client” philosophy into border control processes, when implemented in a manner that respects national security priorities, has much to offer to global mobility.
8.3. Contemporary ABC Program Status

This section identifies the current challenges that assist in identifying future directions for policy development, corporate strategy, and academic research.

The first research question relates to whether ABC programs have material implications for the civil aviation industry. Accordingly, the evidence in this thesis demonstrates that the USPC program have significant benefits for industry, enabling streamlined passenger border crossing processes and facilitating market access during the period of rapid globalization. While the Automated Border Kiosk (ABK) and Advanced Passenger Information System (APIS) programs were not fully mature during this period, lacking critical mass and harmonized trans-national approaches, the consistent response from industry was that these innovations would become the way of the future. Furthermore, research interviewees from both the public and private sectors believed that despite these challenges, these programs were foundational to the re-structuring of territorial controls. As such, and even with the limited program benefits, the trade facilitation and national security benefits were sufficient to warrant continued industry support. Looking forward, those interviewed repeatedly commented that no reasonable alternative existed, and with time, the programs would become fully part of the traveling public’s experience. Moreover, should North America adopt a perimeter clearance strategy, similar to that adopted in Europe through the Schengen Agreement Area (SAA), the ABC programs under study will need to be fully re-configured to permit bi-national integration, and when conditions warrant the inclusion of Mexico as well.
The second research question involves the implications of these programs on the expansion of international trade and travel. The research findings generally demonstrate an affirmative response, with the USPC program most notably supporting expansion of bi-national travel (i.e. Canada to the U.S., and Aruba to the U.S.), along with multi-national travel (i.e. international travelers transiting Canada through USPC to U.S. destinations). While admittedly some degree of this travel would have occurred without these programs, the relocation of border control programs to forward locations supports customer service and market positioning efforts.

However, the methodology section identifies the difficulty of linking trade expansion with ABC program development, and thus these findings require verification through robust methods. Despite this limitation, this thesis argues that trade facilitation programs lessen the “frictions” associated with border controls, and will thus logically produce a positive effect on the terms of trade. This is in keeping with Globerman and Storer (2006) who explained that stringent 9/11 border control related policies increased border crossing “costs”. While further empirical analysis is required to confirm “positive econometric effects”, nonetheless, the absence of this confirmatory evidence has not prevented airlines and airports in Canada and the Netherlands from investing heavily in ABC program development.

Given the considerable risks associated with inter-state operations, the civil aviation industry strongly prefers certainty when dealing with border control agencies. Thus, the USPC and APIS programs enable the state to make pre-journey decisions that reduce the risk for airlines in transporting inadmissible travelers, and for airports to provide facilities and services for travelers “ejected” from the state on arrival.
For the transport geography literature, these “point-of-departure” determination practices mean understanding that “supply chain” uncertainty is displaced from the end of the journey to an earlier location, which can influence the traveler’s decision to travel in the first place. In considering the conceptual network design questions from Black (2003), the consequences can also involve the alteration of network structure as travelers choose those nodes that provide streamlined border control, which the Greater Toronto Airport Authority (GTAA) identified as a desired strategic outcome from ABC program investment. For travelers, the certainty that journeys will not be interrupted by en route border controls can improve both route and destination attractiveness. Pre-journey approvals also reduce the costs to airlines and airports of elaborate redundancy programs to deal with border control related delays. The civil aviation industry also benefits from the certainty associated with pre-journey approvals that permit more routinized traveler behaviour and simplifies the overall journey process. This in turn creates network development advantages by increasing airline and airport reliability, which customers will notice through consistency and fewer travel disruptions. However, should these systems involve discriminatory techniques (e.g. racialized profiling); this could result in the diminishment of global mobility, as described in the “Critical Assessment” section of Chapter 9.

As for the ABK programs, although this technique currently only serves a limited frequent traveler clientele, this is changing rapidly to a more mass-market offering. As the ABK programs are available at the USPC sites, this circumstance already highlights the potential for remote virtual inspections prior to departure. The combination of these practices, including an evolved ABK program that no longer requires pre-enrolment, has
considerable potential for border controls to become primarily technical in nature. The interviewees also stressed that “technology can only go so far”; therefore, future border control programs will likely retain a strong element of human judgement made by trained officers to augment algorithm-based admissibility determinations.

However, the frequent complaint from interviewees was that these programs have not resulted in a major diminishment of traditional border control inspections. Paradoxically, this means border control agencies are undertaking multiple inspections of those travelers who have provided the most information about their journey, which is typically associated with the aviation mode. For example, NEXUS participants travelling by air from the U.S. to Canada are subject to various inspection processes, including: (1) interview at the time of application approval; (2) routine database checks to determine continued eligibility; (3) transmission of personal data in advance of flight; (4) biometric identity verification upon arrival; and (5) random checks before entering Canada. In contrast, the same Canadian citizen returning to Canada from the U.S. via a land port-of-entry, which does not have a NEXUS lane, can do so unannounced with a verbal declaration of citizenship. This multiplication of inspections appears unwarranted when compared to other modes, and while border control efficiencies warrant serious attention, unfortunately this thesis can only raise this uncomfortable question.

Despite these challenges, the civil aviation industry views that the combination of automation and sophisticated human decision support systems will reduce future border control related disruptions. As noted by some civil aviation firm interviewees, these changes have begun to generate important business case benefits. In particular, border control agencies further recognize the need for collaboration as the compulsory
legislative route to achieve policy objectives is insufficient given that these state agencies depend on the private sector for facilities and operational cooperation. For civil aviation firms, it is becoming apparent that border control agencies, despite occasional setbacks, are becoming more forward-oriented with consultation on future operational programs. This active degree of consultation has increased certainty for operators in dealing with the day-to-day vagaries of states having to deal with trans-national threats. Civil aviation firms further anticipated that continued joint system investment might generate additional advantages, including the reduction of the downside risks associated with national security related “Black Swan” events (i.e. events viewed as “rare”, but within the realm of possibility with sufficiently broad analysis).

The third research question deals with ABC program implications on state policy and consequent interfaces with the private sector. As indicated, the reason for selecting the Netherlands and Canada for the case studies related to the role of the private sector in developing the ABC programs. In these cases, the state participated, in essence, as a member of a joint venture, albeit, as a crucial partner requiring sovereign control as its principal priority to program investment and operational outcomes. These states participated sufficiently with their respective civil aviation industries to become global leaders in the ABC program field. These changing dynamics generated, in both the Canadian and Dutch state contexts, internal structural questions about the future of their respective organizations. In this regard, given the length of time required to develop a highly skilled border officer who could effectively interact with the technology, the most pressing issue was developing an entirely new labour relations paradigm.
These labour skill adjustment insights logically appeared in the discussions with the CBSA and IND offices responsible for border control policy, the departments responsible for identifying and translating future requirements into viable operational paradigms. Interestingly, the civil aviation firms dealing with these agencies made similar comments, recognizing that not only did border control agencies need to change people management approaches, but would also need to make commensurate adjustments in how civil aviation firms interacted with the state. Conceptually, these insights lead to questions regarding how both the state and firms “innovate” together, which in the case of border controls involves sensitive adjustments to permit new ideas and technologies into mainstream programs that are acceptable to the political class and the public, without creating unacceptable national security risks.

The next major finding is that the lack of a global APIS consensus has both national security and trade facilitation implications. Evident from both the research interviews and document records is that harmonization potential among states remains a distant prospect. The inability for states to formulate a global inter-operability agreement not only reduces gains for industry but also inhibits expansion of other virtual border control tools that depend on multi-state cooperation. In the case of trade facilitation, such an agreement, when linked with forward-located Automated Border Kiosk (ABK) systems at departure airports, would eliminate the need for airlines to gather this information as the traveler would self-submit and receive pre-departure approvals in one-step. These concepts may also be useful multi-modal networks.

In examining the national security vulnerabilities from the lack of APIS consensus, it is evident that the growing prevalence of global inter-airport hub
competition increases the number of international journeys where travelers use separate tickets for access to multiple non-aligned airlines. The result is that pre-journey data is only available for each separate ticket, rather than for the entire journey. Thus, the current limited APIS approach may not identify the traveler’s true origin, which invariably introduces risks for transit and receiving states as such ticketing practices could misdirect attention away from travelers seeking to hide their travel patterns. Similarly, the cyclical nature of immigration in the post-modern world involves multiple citizenships and consequently the legitimate possession of multiple passports. As the current APIS requirement only specifies inclusion of passport information from one document, and despite the necessity that airlines verify this information prior to departure, travelers are not obligated to use the same passport on arrival at a foreign destination. Consequently, border control agencies will not have accurate data to undertake pre-journey screening, which again can create serious national security risks. The researcher identified these gaps in APIS practice to the ICAO representative during the interview, who agreed that these were useful examples of the need to achieve globally inter-operable systems.

However, the ICAO representative observed that a significant issue has emerged for developing states from the legitimate and necessary efforts to achieve a global APIS standard. This parallels the observation from the INTERPOL that lack of sophisticated systems and technologies does not automatically make travelers from such states “suspect”. Interestingly, though, these challenges may be less problematic than initially perceived as modern technologies are often “downwardly scalable” (i.e. transfer between scales with little efficiency loss) for adaptation to less sophisticated
environments. The Amsterdam Schiphol airport has already acted to address this issue through implementation of an Automated Border Kiosk (ABK) system in the international airports in the development challenged state of Indonesia. The evolving but currently manual nature of documentation systems in developing countries will remain a considerable challenge without major contributions from developed states to achieve some degree of equivalence. This approach is likely far more practical than requiring all states to achieve the high performance standards evident in Canada, the Netherlands, the U.S., and Australia. In any event, and from this researcher’s perspective, the effort by the ICAO to press for agreements that include recognition that developing states face very different challenges, and any global arrangements must provide assurances to deal with locally contingent circumstances deserves applause.

Overall, the introduction of ABC programs that are located in offshore and virtual locations will demand new ways of collaborating between states, as these practices go to the core of sovereign control, and thus require attention by states to future risks and opportunities. Of note, Bobbitt (2008) noted that an inadvertent gap in the ABC programs that leads to a massive calamity in a transit or receiving state could create a hostile relationship between even the closest of allies. However, the imperatives from advanced states, encouraged by international airlines to global standardization for APIS and other advanced border control tools, can generate regressive outcomes for locally contingent circumstances. In fact, the recurrent theme throughout the thesis findings relates to the opposing forces of globalization that demand standardization to enable efficient global processes, with state efforts to deal with particular national security threats along with airport operators recognizing that the failure to serve local markets
will drive travelers elsewhere. Thus, it is worth repeating the remarks from Grygiel (2006) that “states must account for locality when considering relations with others”.

The remaining question involve the challenge of 9/11-era national security policies that counter-pose the geo-political debate raging during the 1990s and was dominated by the end of the “Cold War” and the rise of globalization (Coleman, 2005). Undoubtedly, 9/11 did accelerate national security policy and reversed human rights protections. In sum however, 9/11 did not cause a radical break or represent the “tipping point” towards an all-encompassing national security paradigm in either Canada or the Netherlands, at least in regard to the use of the ABC programs under study. Instead, the repeated view from interviewees, including Ambassador Cellucci himself, was that the “security trumps trade” concept does not have a literal translation. Rather, this sound bite is part of the broader context of the events of the day, which reflects the need at that time for attention to trade facilitation and parallel national security objectives.

This researcher would assert, therefore, that what 9/11 caused, among many other policy changes, was the re-recognition that trade development and promotion cannot occur without understanding that when borders are opened, more than just legitimate travelers may come through the ports-of-entry. This lesson is not new, and reflects an understanding that where the merchant ships go, so do the smugglers. Thus, in the modern era, the race to achieve favourable trade agreements must bring further attention to the negative externalities that accompany trade flows. After 9/11, the ABC programs became a platform for the intensification of state efforts, which had the beneficial outcome of retaining trading performance while enabling both Canada and the Netherlands to adapt to the shift in U.S. and E.U. national security policy.
Admittedly, the processing gains have been small, except for the case of the USPC program; nevertheless, for the firms in these two states have well understood the lessons from history. As such, the collaborative efforts with the state to integrate trade, transportation, and border controls have created confidence, not just with domestic policy-makers, but favourably with the U.S. and the E.C., who have accepted these programs and their partnership requirements in recent treaty-making efforts. The agenda going forward, therefore, must carefully align “trade with security”; this is a premise equally applicable to firms and the state in their respective decision-making processes.

8.4. **Future ABC Program Issues for Stakeholders**

This thesis has documented and explained the majority of related events over the study period. As such, this section addresses those elements of public policy and corporate strategy that may need to change to continue trade facilitation, pursue legitimate national security protections, and ensure human rights and mobility freedoms.

First, both the Canadian and Dutch governments confirmed the incorporation of ABC programs as a routine element within the overall frontier control mandate. The most significant issue that arises from this integration is the need to re-adapt the staffing model in order for information technologies to better support sophisticated interdiction techniques based on human judgement. In addition, while considerable support exists for expansion of these programs within the state, the coordination of policies across departments remains wanting. For example, evident in both case studies are the major
gaps in the pursuit of aviation security programs that has insufficient linkages with the ABC program techniques. As well, as budget resources remain constrained, this slows the integration process, and creates conflicts in delivering border control services.

Second, border control agencies also remain subject to challenging intra-governmental bureaucratic processes that often severely limit the ability of state agencies to cooperate with private firms where mutual benefits are evident. For example, the structure of the ABC programs under study, incorporated protection of sensitive personal information held in government databases for national security purposes, while facilitating trade through selective engagement with the private sector. In the case of the APIS program, it is worth reiterating that airlines collect traveler data for their own purposes, which may also pass through airport database systems that support airline ground operations. Airlines and airports in Canada and the Netherlands are already subject to stringent privacy requirements, as evidenced by the data collection permit required by KLM. Furthermore, the private sector did not have access to the national security data used in the USPC and Automated Border Kiosk (ABK) programs as border control officials had access to separate government systems.

However, even with these legislated and physical system safeguards, Canadian and Dutch agencies identified that considerable internal resistance existed to data-sharing practices. The rationale for these concerns ultimately related to the potential for an external system failure that could cause both physical and reputational damage to state interests. Invariably, the involvement of the private sector in traditional state affairs will remain a contentious topic for a considerable time to come, especially in the border control field where decisions over the sovereign control of territory come into question.
From an industry perspective, the engagement with border control agencies has been one of necessity. The research findings repeatedly identified that private firms would prefer not to become involved in delivering border control programs, yet corporate strategies identified that growth prospects could not be met without progress at state frontiers. Consequently, private firms in Canada and the Netherlands were not satisfied that just expanding traditional border control programs would be sufficient to serve customer needs. Thus, in keeping with innovation strategies that lead firms to marketplace success, these organizations expected state agencies to also pursue process change solutions based on modern information-based technologies.

Without doubt, these actions did not involve a grand altruistic motive to support national security interests. Granted, the argument might exist that as civil aviation firms are highly dependent on positive inter-state relations, conceptually the requirement to contribute to reducing trans-national threats might be a logical extension of the “licence-to-operate” philosophy. The research did somewhat identify this perspective, like the commentary from the Ottawa airport that its involvement in ABC programs was the “right thing to do”. Even with this broader rationale, the motivation for these private firms clearly involved the contribution of ABC programs to business outcomes that demand careful planning. Only Amsterdam Schiphol airport identified that direct financial returns from the ancillary services associated with the ABC programs was a contributory decision-making factor. In all other cases, the customer service benefits were paramount to industry participation.

While the industry understood that the APIS and ABK programs lacked maturity as compared to the USPC program, the expectation existed that this situation would
reverse in future. In part, this view arose as the USPC program was quite expensive to operate, and was less flexible in dealing with rapidly evolving inter-state threats than what might be offered by remote technology-based programs. As such, the trial of leading-edge pilot programs introduced in both Canada and the Netherlands at the end of the study period are not new concepts. It is worth noting that these ideas emerged some two decades previously, with most stakeholders, including state agencies, being rather disappointed at the extended period that has elapsed from initial concept to the current trials. The research found that all stakeholders anticipated that some form of biometric-enabled non-enrolment based system would fundamentally re-work the practices of state frontier controls over the next decade or so, at least in the narrow confines of airport border crossings. However, a consensus emerged from both the private and public sector interviewees that progress was much too slow.

Given the public nature of this research project, private sector interviewees were careful not to express an outright opposition to ad-hoc border control changes in response to recent threat events. However, in considering the breadth of research commentary from the industry on the need for long-term planning from government around national security priorities, civil aviation firms did indirectly identify doubts that states have a strongly held commitment to the future direction of ABC programs. This was not the view expressed by the border control agencies themselves, so a gap appears to exist between what industry expects from border control agencies in the Netherlands and Canada, and how government is responding to industry demands for improved long-term planning. In the case of the Netherlands, further complications
emerged as the E.U. policy-making agenda was creating some issues at the local level regarding what was practical to deliver.

Despite the gains, the civil aviation industry has concerns about the future state of affairs. Aviation firms have seen a considerable increase since 9/11 in regulatory mandates, but the state resources necessary to deal with these new requirements and an effective response to growth pressures has yet to materialize. In the case of Canada, smaller communities wishing to participate in global trade are pressing for expansion of ABC programs as these innovations can avoid the costly and intrusive process of routing supplies and customers across traditional international gateways. More worrisome is the potential for engaging private firms to undertake a more active role in border control programs. Airlines in particular are concerned with the inter-state disputes around pre-journey data sharing which place these firms at the center of international conflict on matters that do not relate to core industry interests. Accordingly, airlines have a strong interest in globally harmonized solutions, and prefer instead for states to pursue their own data gathering programs such as the U.S. Electronic System for Travel Authorization (ESTA) and Australian Electronic Travel Authorization (ETA) programs. However, civil aviation firms continue to complain that even with these additional checks, traditional border control programs have not changed, causing pre-screened travelers to proceed through duplicate checks.

Another concern is program termination or denial of service arising from a future event. For example, after 9/11, traffic at U.S. ports-of-entry came to a near halt when travelers faced severe inspections (Alden Interview, 2011). In an impromptu research interview discussion with Alden, in his interviews with U.S. border control agencies no
consideration was given to expediting frequent travelers in the days immediately after 9/11. Furthermore, the CABTA argued that firm participation in ABC programs has not resulted in a shift away from traditional border controls (CABTA, 2005). This leaves the civil aviation industry with the requirement to still meet traditional regulatory mandates, but at the same time undertake costly innovations to improve customer service.

Despite these concerns, the lessons from the lengthy ABC program history was that trade facilitation remained crucially important, even in the face of 9/11-related policy changes. Although self-evident, the interviews did reinforce that trade dependent states such as Canada and the Netherlands considered national security as important, especially with regard to U.S. trade relations. Consequently, both policy-makers and industry need to have urgent attention paid to rapidly evolving technologies, as well as border control sophistication in a manner that can further contribute to achieving a reasonable balance between trade and national security.

From a conceptual perspective, the thesis findings also demonstrate that Canada and the Netherlands pursued a broader definition of “national security” that accounted for economic threats to the state. Hence, the multi-decade integration of national security-oriented border control efforts with promotion of trade demonstrates how these states, working with civil aviation firms, have maintained the balance depicted in Figure 3. Similarly, for firms, the pursuit of corporate strategies that encouraged states to adopt trade facilitation measures was logical and became crucial in the post-9/11 era that verged on “tipping” towards an imbalanced national security paradigm.
8.5. Alternative Assessment

While evidence did not become obvious from the document review or from the research interviews that supports another interpretation that would invalidate the hypothesis, without question, examining the research inputs from an alternative perspective is useful. Thus, this section identifies the state-firm relation implications if airlines and airports in Canada and the Netherlands did not pursue ABC program leadership in partnership with the state.

First, as the U.S. and Australia also pioneered related ABC programs during the research period, with other states becoming involved in recent years, it is clear that these innovations did not rely on firm leadership, nor does this thesis argue this was the situation. Instead, a potential explanation for the symbiotic relationships evident in the two case studies might relate to the state decision to transfer responsibility for border control innovation to the private sector either through inaction or even through a purposeful strategy, albeit concealed from public disclosure. The context in which this explanation might be viable relates to the neo-liberal critique that the state has capitulated to globalization forces, which eventually led to the transfer of publicly held airlines and airport to the private sector. As such, commentary from some research interviewees indicated that with air service liberalization and the consequential growth expectations, concerns existed as to whether the state would provide sufficient “hard” and “soft” trade-supporting infrastructure (Reisman, 1985). Given the challenging fiscal pressures for governments over the past two decades, thus a prudent strategic response by market-oriented airlines and airports to “supplant” the state in the
innovation process is possible. Moreover, the evidence from both the Canada Border Service Agency (CBSA) and the Netherland’s Immigration and Naturalization Department (IND) confirm that private sector encouragement with the bureaucracy and the political-class was useful to achieve the innovations in question.

In closing, it is not realistic that states might adopt a strategy that ignores innovation or permits the private sector to lead such programs; however, the likelihood of discovering documentary evidence and multiple corroborating views from senior-policy advisors and decision-makers that confirm such a perspective is low. Further research will be required to assess whether such evidence might become available.
Chapter 9. **Thesis Conclusions**

9.1. **Introduction**

This thesis contributes to the academic literature by demonstrating the validity of the research hypothesis. In order to reach this conclusion, the research findings confirmed the collaboration between the state (i.e. Canada and the Netherlands) and civil aviation firms through joint pursuit of ABC programs to achieve the mutual objective of safeguarding national security interests and advancing trade before and after 9/11. This multi-decade symbiotic set of integrated actions had material implications for spatial-relations by contributing to the “relocation of frontiers to extra-territorial and virtual spaces”.

Furthermore, these collaborative approaches have enabled improved state-to-state relations. These gains were especially evident in the sensitive post-9/11 period when timely border control innovations were necessary to avoid the implementation of heightened national security policies to overwhelm globalization trajectories and open trade priorities. For example, with the early aviation industry investment in passenger data sharing systems, states were able to readily gain access to intelligence at a time when international cooperation demanded immediate action on this front. Although a claim that extensive benefits to inter-state relations arose from the evolutionary process of ABC program development warrants caution, nonetheless, these pre-9/11 efforts did ease the policy strain that emerged after this calamity.
Contemporary border studies suggest that changing geo-political and domestic circumstances are prompting a redefinition of the territory controlled by the state, and even the definition of the state itself (Torpey, 2000). Therefore, and in keeping with these broader perspectives, the thesis identified a history of sophisticated interventions, led initially by the private sector in relocating frontiers to virtual and extra-territorial spaces. A consistent pattern emerged over two decades that reflected the location and function of border controls has become “less territorially” bounded. Moreover, the thesis also confirmed a growing ability for “the projection of state power far beyond the territorial borders of the country (ibid, p. 109). The following section identifies theoretical implications for both the state and the firm.

9.2. Relationship Structure Implications

Figure 3 provides an interesting graphical depiction of the relations between globalization-enabling approaches by both the state and the firm, along with a parallel set of national security arrangements. These relationships are not static and thus a more “nuanced approach to state-firm and inter-state relations” must identify how the complex interplay between these forces has changed over the past two decades.

First, the relationships identified in Figure 3 remain in the same general structure despite the momentum altering scale of geo-political events over the past two decades (e.g. fall of the Berlin Wall, 9/11). The constant throughout has been the unshakeable globalization trajectory and its influence on shaping trade policy that rejects a monolithic “security trumps trade” perspective. This does not mean, “globalization trumps national
“security” as this has not been the case, either before and certainly not after the tragic events of 9/11. Instead, the ABC programs have demonstrated that states and firms working together can contribute to “Economic Security”, a label with considerable academic attention. For example, one of the first challengers of the traditional national security paradigm was Buzan (1983) who identified that military security was insufficient, and attention was required to other forms of security including political, economic, social, and even environmental. Thus, this thesis contributes to this literature by identifying that cooperative trade facilitation practices contribute to state and inter-state economic and national security affairs. By comparison, the absence of effective trade facilitation would lead to weakened trans-national economic activity resulting in fewer resources becoming available for the state to employ interventionist approaches to resolve threats from trans-national non-state actors.

Second, Figure 6 provides labels for the various relations between states and between states and firms. Although the “legislative” and “cooperative” arrangements are of a “normal” characteristic with the literature replete with explanations of their workings, what is new are the “partnership” relationships that are in keeping with the concept identified by Aoyama and Ratick (2007) regarding “trust-based” relations in the logistics industry; which also involves considerable involvement with advanced border control systems. In the post-9/11 era, these partnership arrangements between the firm and the state changed somewhat in the Netherlands, mostly in regard to greater scrutiny from public agencies. In the case of Canada, 9/11 required the state to establish greater leadership, which changed the relationship to a greater degree. In the Netherlands case, an apt label might include “private sector led partnership”, which was applicable in
the case of Canada in the pre-9/11 period. However, in the post-9/11 era, these arrangements have continued in Canada, but a better label might suggest, “public sector led partnerships”. As these labels can easily be misconstrued and subject to immense interpretation errors, rather, the more relevant lesson is that new forms of state-firm partnerships emerged that remain understudied in the literature.

9.3. State–Firm Implications

“As states have pursued ABC programs which virtually and extra-territorially relocated frontier controls, did this affect the relationship between civil aviation firms and the state?”

The foregoing reiterates the primary research question that concerns why firms would make strategic decisions to promote and/or pursue ABC program leadership that might conflict with the Westphalian role of the state in asserting sovereign control over territory. In part, the civil aviation industry responded to mitigate the negative externalities from the role of “fast-transport” in globalization. This view is consistent with Napoleoni (2008) who observed that civil aviation has inadvertently become a major conduit for trans-national movement of criminals and political extremists. Furthermore, firms viewed that cooperating with border control agencies was beneficial, as leaving the state to act on its own volition or in alliance with other states might have reinforced the “border-effect” (Helliwell, 1998) problem and thereby affect trade flows. Accordingly, in order to avoid conflicts with the globalization of markets and production, civil aviation firms came to understand their inherent self-interest in supporting national security objectives.
As previously noted by Smith (2000); Dicken (1998); Graham (2010), and Helliwell (2005), another causal factor worthy of attention is tracing the history of the industry. In the case of Canada and the Netherlands, airports and airlines were fully public until the current era of globalization. Conceptually, the findings identify that the transition process to the private sector appeared incomplete in some ways, with the state remaining dependent on private sector facilities and technology access to perform both traditional and advanced border control functions. In the post-9/11 period, the movement towards mandatory provision of civil aviation firm assets for use by state agencies creates serious questions in regard to whether state policy is truly coordinated. As such, the prominent globalization ethos requires states to adopt economic legislation with the aim of pursuing full market liberalization, while contemporary national security policies appear to view the civil aviation industry as an external vehicle for achieving border control objectives. As noted previously, civil aviation firms accepted this situation as the risk of the state acting unilaterally might generate even higher costs for firms to support mandatory ABC program compliance.

Furthermore, border controls are ever-present in day-to-day industry workings, and the major ABC investments over two decades reinforce that in the absence of border facilitation, international air travel would be significantly more costly and far less convenient. As such, this thesis argues that states have long understood the necessity of involving both the private sector and international state cooperation to maintain effective control over territory. While the U.S. has adopted a public dominated approach to border controls, this still involves acting through the private sector (e.g. airlines collect Passenger Name Record data for transmission to U.S. DHS). This has not meant that
cooperation has been easy, and the complications involving political, business, and technical elements have created additional risks for the civil aviation industry in operating in the duality of the local and the global milieu.

Nevertheless, the ABC programs under study have really mattered to the competitiveness of particular airports and airlines, starting in the early 1950s when airlines serving the Montreal airport became concerned with the competitive advantage evident with the USPC service that had started at the Toronto (Malton) airport. Conversely, civil aviation firms have come to view the lack of investment and/or cooperation with border control agencies as a competitive threat, making it more difficult to attract international airlines. The fact that some nearly sixty years after inception, the interview response from the representative of the privately oriented Greater Toronto Airport Authority (GTAA) was that ABC programs have become “table-stakes” for international hub airports to remain competitive is profound.

Accordingly, for Canada and the Netherlands the approach to implementation of ABC programs was highly collaborative, especially prior to 9/11. The economic dependency of these two states on trade meant that working together with the private sector simply represented a better approach. Such a comment is not a criticism of the U.S. and its Administration’s top-down border control paradigm; rather, it simply recognizes that history, location, and culture all matter in considering domestic and state policy decisions (Helliwell, 2005). Potentially, the way in which Canada and the Netherlands proceeded might relate to the neo-liberal critique that “question[s] the inevitability of this apparent nexus between global economic restructuring and neo-liberal policies at the local level” (Broomhill, 2002). Such a criticism that the dominant
forces of globalization have caused these states to adopt private sector supportive policies that place commercial interests at the heart of public policy making is not completely without merit. For example, the research found a considerable divergence of view between international airlines and the ICAO seeking a global approach to ABC program conundrums, versus at the state and airport level that sought local solutions to local national security and market conditions. While the concern of firm interference in policy-making may be legitimate, what remains is the implicit threat by the state towards transportation firms to cooperate as quasi border agents in support of the traditional protection of sovereign territory. Yet, in an age where state finances are intricately dependent on the vagaries of global trade and travel flows, untangling whether or not states are compelled to act in partnership with the private sector may no longer be a valid question. Instead, the research indicates that collaboration became effective for both the state and the private sector to achieve their interests, even if this has meant, “dislocating” the traditional definition of territorial space.

From a transportation geography perspective, the findings reinforce that the location of the mandatory frontier engagement with the state no longer remains tied to a situated “Westphalian” defined spatiality, or even to the notion of physical space itself. Conceptually, and as identified by Zolberg (2002), although traditional border controls have long represented fixed points of friction, the “remote-control” ability of modern technologies “dematerializes space”. For civil aviation firms, such developments are altering the “border-effect” (McCallum, 1995) as the USPC program already permits pre-entry approval from Canada through automation technology, albeit under the watchful presence and supervision of highly skilled border control officials. As such, similar
provisions are already in place between the U.S. and Canada for the electronic manifest of commercial goods movement. As well, the U.S. and Australia have implemented virtual pre-journey programs (i.e. ETA and ESTA, respectively). Although enormous political and technological challenges remain, these processes appear irreversible.

Wider ABC program implementation will alter flows over civil aviation networks. For example, as indicated by interviewees (e.g. GTAA, CABTA, IND, and CBSA), those states with ABC programs will have a considerable advantage in interdicting travelers away from the state should they so wish. As states become proficient in these practices, this will invariably influence firms and their customers towards streamlined routes and nodes. Inopportunistly, this can lead to a concentration of illegitimate flows along those routes and in nodes that are less likely to have a national security apparatus capable of dealing with sophisticated trans-national threats. This “privileging of network flows”, which can turn higher risk travelers towards developing states, could intensify the negative transportation-related elements of globalization. A critical assessment of these circumstances suggests that in the absence of developed states assisting others with technological and process improvements, these circumstances might thwart the local gains from sophisticated virtual and extra-territorial border controls. Thus, permitting a “critical mass” of trans-national criminal and politically violent actors to congregate over certain “dangerous” routes and nodes can undermine the considerable efforts by states and non-governmental agencies to support human development where most required.

The research also identified that civil aviation firms have accepted that the “new normal” must involve participation in technology-based border control systems, which have the added benefit of increasing supply chain security (Aoyama, 2006). Conversely,
the absence of such systems in certain locales will mean civil aviation firms and their customers are likely to avoid those networks viewed as “less secure”. Thus, the airlines and airports with "more secure" operations are likely to attract additional traffic, especially as travelers receive vivid reminders on each anniversary of 9/11 that the civil aviation industry had become a weapon for use against civilians. Moreover, ABC programs have enabled non-dominant nodes in the air transportation network, such as Ottawa and Aruba, to gain a favourable market position. As such, the case studies demonstrated that ABC programs became valued competitive assets for the industry and supported national security objectives for their state partners. For airports in both Canada and the Netherlands, these initiatives have also increased service levels that have proven attractive to international air travelers.

The implications of ABC programs are not addressed in the claims of theorists such as Keeling (1995), regarding the drivers of the World City Network (WCN). The WCN concepts ignore the importance of the timeliness and sufficiency of border control services as essential elements of international air services. In fact, a major constraint in airline and airport scheduling relates to border control (IATA, 2010). Thus, the very definition of the WCN cluster of global activity, in part, is dependent on the historical determination by the state of which cities previously had sufficient gateway functions to warrant the establishment of territorial entry and departure controls at local airports. Smaller and remote communities in Canada have long complained, as evident in the findings, that the inflexible application of state resources inhibits non-traditional gateway development. Therefore, the role of ABC programs, which involve relocating frontiers to virtual and extra-territorial forward perimeters can reduce service level discrepancies.
As a result, less outwardly oriented communities could more easily participate in the international commercial arena with fewer restrictions from intervening nodes. This also has the potential to reduce the “border-effect”, which is compounded by traditional border control programs. This, however, does not suggest that smaller communities will obtain higher degrees of economic success from greater global access since many other factors are relevant to the achievement of global competitiveness.

A related research finding is that in a world where international connectivity is becoming paramount (Florida, 2005), overcoming state resource limitations through new modalities of border control can change the way local spaces are able to participate in global flows. Thus, ABC programs can contribute to the reduction of traditional geographic notions of centrality and peripheralization. As these programs enable the virtual and extra-territorial re-location of state frontiers, non-central communities that require access to global markets and supply chains become less dependent on historical gateway oriented border control models. In the era of globalization, these new capacities represent a progressive development for peripheral communities, and provide an important public policy lesson in regard to how the state can promote consistent access to foreign markets.

It is also worth noting that for those states that master these advanced technological capacities this capability will lead to the control of the physical movement of international travelers beyond state frontiers. For these states, “remote-control” abilities will assist in dealing with the migration - securitization dilemma, and advance certain national security objectives such as the pre-emption principle noted by Schattschneider (1957). However, Mountz (2004), Hyndman (2004), and Butler (2004)
also identified that extra-territorial border controls have the potential to violate human rights that are rooted in the old “Westphalian” sovereign nation-state framework.

Finally, the research findings identify that the private sector sponsored ABC programs have created further striations in space. This involves the overlap between sovereign spaces, the extension of the state into cyber-space, and even the shrinkage of the state when border controls from another state are located in foreign airports. None of these new ways of looking at territory neatly fit into traditional Cartesian boundaries. Thus, this thesis argues that civil aviation industry efforts to overcome the logistical hurdles caused by traditional border controls have enabled the redefinition of what the state “represents”, and where this “representation” occurs. Furthermore, this new combination of spatial and non-spatial relations between states and with firms, reinforced by a post-9/11 ethos that demands the “projection of territorial controls”, makes for an enormously complex spatial pattern. Ideally, these inter-linkages are best graphically illustrated; albeit, much more needs to be done to understand these relationships further before “new maps of border control spatiality” can be developed.

9.4.  **Inter-State Relations Implications**

The success of the ABC programs contradict the “The Borderless World” thesis (Ohmae, 1991), which theorizes a future where trans-national firms and private actors operate without consideration of frontiers. As abundantly evident from the research, the public sector remains firmly equipped to thwart trans-national threats and at the same time facilitate trade opportunities. This has occurred through state actions to engage the
private sector to expand territorial controls outwardly. Admittedly, the civil aviation industry did not volunteer to pursue the ABC program innovations, but rather viewed their leadership in the ABC program innovations as a necessary pre-condition to ensuring effective participation in globalization. As such, the events of 9/11 have cemented the permanence of territorial border control for the foreseeable future. However, the virtual and extra-territorial methods described herein may permit the disappearance of border controls in their physical form, but certainly not the territorial control by the state of who may enter or exit.

However, while ABC programs involve inter-state relationships that improve trust through increasing mutual knowledge of state intentions (Kydd, 2005) this does not necessarily lessen the potential for conflict. It is worth recalling that the political space that emerges from frontier relocation involves the "embedding of sovereign rule" within the territory of others. For example, the inability for Canada and the U.S. to agree to the Buffalo / Fort Erie land-preclearance, or the E.U. - U.S. data privacy conflict demonstrate a "lack of trust" regarding more than just the sovereign control of territory at a foreign airport or land border crossing. Instead, even for these close allies a “trust” gap appears to have emerged. The reality is the abuse of ABC programs, especially with regard to personal data sharing for purposes not related to legitimate travel authorization, has already led to major public debate over the use of these techniques. Furthermore, consistent with Boulding’s (1962) theorization that as states come into closer proximity, the risk for conflict increases, thus ABC programs require explicit attention by states to ensure political space overlaps do not turn hostile. Thus, preparing for the eventuality that some form of trans-national originating violence will occur
through abuse of the ABC program is a precaution that can safeguard lives, and avoid debilitating trade impeding policies.

The research findings also reinforce that the state retains the capacity to act in an independent way, albeit integrated with other interests, as articulated by the international relations theory related to liberalism. As the case studies identify, not only did the states in question act to serve broader policy objectives that are difficult to ascribe to neo-liberal labels, but state efforts were also in keeping with the principles of “international institutionalism”. In fact, the ICAO Facilitation Office views the efforts in Canada and the Netherlands as leading implementation of international objectives that have yet to mature among other member states. This does not suggest that the states in question have avoided major policy reforms related to market preferences for economic activity, trade liberalization agreements, state enterprise devolution into the private sector, and other practices that change the fundamental role of the state vis-à-vis society and the firm. Instead, and as identified in Figure 3, what has emerged is a more nuanced and complex approach. These particular states chose to act in a joint manner with the private sector and with bi-lateral state partners when mutual interests coincided. As such, when national security again became a prime-order priority, states acted to protect these interests, and with some degree of imbalance given the public opposition to various legal frameworks (e.g. U.S. Patriot Act, Canada Public Safety Act).

Furthermore, the repeated claims by various researchers who have contributed to the body of research literature that the state has already lost control of firms acting across international spaces are simply not applicable in the civil aviation sector. Although strongly evident beforehand, this perspective was reinforced in the post-9/11
period when airlines and airports charged that states routinely re-acted at territorial
frontiers in a unilateral and costly fashion. This has created the interesting dynamic that
while states understand the value of trade and establish elaborate treaties and well-
functioning institutions for its promotion (e.g. ICAO), even in the face of the enormous
benefits from a globalizing world, the entire trade system appears fabricated in a weak
manner that can become subject to highly contingent events. This suggests
globalization theorists need to address why trade-dependent states would pursue trade-
contracting policies through heightened border control scrutiny that followed the rogue
deeds of a few non-state actors.

The final 9/11 implication, which contributed to accelerating ABC program
implementation, involves the diminished prospects for the World City Network (WCN) of
centers of global significance. Instead, the combination of changing air transport
patterns (e.g. new aircraft technology such as the Boeing 787 that permit long-haul
trans-national flights between medium and even smaller cities) and the ability for states
to “project border control power” to virtual and extra-territorial locations requires further
WCN theorist attention. In this regard, it is necessary to reconsider how these potential
changes, and the many others identified in the thesis, will facilitate global access to
more than the few traditional gateways that have taken advantage of the “historically
fixed and territorially bounded location of border controls”.

366
9.5.  Globalization/Trade versus National Security Implications

In light of the research findings that civil aviation firms contributed to both trade and national security objectives, it is necessary to consider the implications for the structure of the relationship reflected in Figure 3. As noted, much of the literature on these two major topics rests in silos, with globalizing economic activities considered separately from the traditional but misperceived view of the state having exclusive domain over sovereign space through territorial frontier controls. Instead, a more realistic perspective of border controls would include the role of civil aviation, which has for decades contributed to national security through ABC program innovations. Similarly, only in the post-9/11 period has the trade versus security debate emerged in the literature, although Figure 3 clearly illustrates that trade expansion would not have been possible without effective attention by states to trade facilitation mechanisms in the earlier periods of globalization. Accordingly, two further theoretical implications emerge when considering Figure 3 as a framework for examining the evolution of the civil aviation industry in dealing with passenger traffic growth across territorial frontiers.

First, this thesis argues that the literature that deals with national security and international relations needs more balance. The literature should include broader perspectives that relate to the trade-off between economic and national security policies, which can otherwise lead to inaccurate views of the potential consequences for investment and trade flows. Fortunately, political geographers such as Coleman (2005) articulated similar views, as follows:
“...the conflict between U.S. geopolitical and geo-economic goals... suggests that 9/11 is not easily typified as a watershed event marking a succession of border regimes... In this sense, although border policing has certainly intensified... I want to caution against reading the 2001 attacks in terms of the replacement of a permeable geo-economic border with a newly hardened, either/or geopolitical border. The events of 9/11 seem important not because they mark a transition from a predominantly trade-oriented to a predominantly security-oriented border regime but because they visibly and tangibly surface two countervailing trends in U.S. statecraft” (p. 200).

These perspectives are also in keeping with Slaughter (2004) who identified that states must recognize the need to engage non-state actors on traditional state policies that have implications for trans-national opportunities and threats. For example, while former Ambassador Cellucci maintains the “security trumps trade” statement requires viewing within the context of the day, unfortunately, the powerful rhetoric that such a concept can encourage has persisted in some quarters. As such, according to Canada’s former Deputy Prime Minister, John Manley (2008), the 9/11-oriented national security language has precipitated into damaging policy influences. For trading nations such as Canada and the Netherlands, a misdiagnosed understanding of the best policies to adopt can lead to improperly “tipping” the balance that makes for an effective global system of trade and mutual national security protections.

Second, some of the influential literature in the sphere related to the research topic (Andreas, 2003; Brunet-Jailly, 2007) posit that 9/11 had the effect of obliterating history, and the new era of national security dominant policy is quite removed from what came before, especially as related to the adoption of virtual and extra-territorial border control techniques. This view becomes evident when considering the literature in previous chapters that implies that pre-9/11 border control practices were inadequate.
Instead, the findings repeatedly document that the USPC, ABK, and APIS programs were long underway before the 2001 Canada-U.S. Smart Border Declaration (SBD). Rather, the major pre-9/11 investments by both the public and private sector over the previous decades were vitally necessary to enable program acceleration in the post-9/11 period. Consequently, another major gap in the literature is the lack of identification of the private-public partnerships that enabled the ABC programs to become vitally necessary to combat modern existential threats. Furthermore, as civil aviation firms have long been subject to trans-national security threats, the adoption of a “trade with security” strategy before-9/11 made eminent sense for internal corporate purposes.

In sum, the contemporary literature on post-9/11 border control programs may make for controversial reading, but the lack of a historically rich explanation of state-firm relations leaves a gap in understanding the evolution of this important topic. While this thesis has completed its principal objective of filling in some of the literature gaps, the implications of additional issues also require attention, as noted in the next section.

9.6. **Transportation Network Implications**

Keeling (1995) argued in *Transport and the World City Paradigm* that globalization is bringing about a new set of trans-national relations, which, in part, can be recognized by systemic civil aviation linkages between the *World City Network* (WCN). While these relationships remain generally valid after accounting for the recent rise of the BRIC states (i.e. Brazil, Russia, India, and China), the thesis has identified that ABC programs contribute to changing global mobility in a material way. Even
though Canada and the Netherlands have formidable and long-established trading capabilities, then Canadian Minister of Industry, David Emerson (Canada Ministry of Industry, 2005), expressed doubt that these historical strengths were sufficient in a "hyper-connected" world. In this regard, the research has found that efforts by these two states in partnership with civil aviation firms to relocate territory to non-traditional locations contributes to improving industry competitiveness, reduces system costs, improves flexibility, and generates goodwill in dealing with national security obligations. Thus, in keeping with Ullman (1954), this thesis argues that the transportation system benefits from ABC programs have been sufficient to alter network development across “space”, and are creating network-based advantages for the firms and states involved.

Admittedly, the network-optimizing advantages of these programs still face numerous challenges including political, business, and technical complications, which include lack of border control resources, inter-state disputes with regard to personal privacy, and ensuring the security of data portals used by states to receive information from firms. However, the research respondents collectively indicated that no practical alternative exists to moving forward with these types of forward-located frontier inspection processes, and the next-generation system proposals are “exciting”.

Accordingly, the implications for civil aviation nodes (i.e. airports) are significant. As noted by the Canadian Airports (2008), the inherent bi-national travel advantage offered by the USPC program becomes a major hindrance when the industry scope switches to a global platform. Hence, for major hub airports, the new tools (e.g. In-Transit Preclearance) facilitate “seamless” travel. As evident in both case studies, these ICT-based systems create new pathways for international travelers that increase
competition amongst airlines, and encourage airports to innovate further. In this regard, it would appear that the underlying dispute between KLM Royal Dutch Airlines and the Amsterdam “Schiphol” Airport with regard to border control innovation thus conceptually rests on this competitive conflict. For Schiphol, border control innovation reduces the “friction” for all airlines serving this European hub, although the research interview identified that KLM would prefer that domestic operators retain facilitation benefits arising from engagement with the Dutch state. Similarly, Toronto, Montreal, and Ottawa airports identified that they eagerly await the results of the Electronic-Primary Inspection Line (E-PIL) trial at the Vancouver airport. As E-PIL and the corresponding Dutch No-Q program have the potential to completely re-work the crossing of borders, and should these ground breaking innovations prove viable, the process improvements will spread quickly from these pioneering airports given the competitive forces at work.

Moreover, the ABC programs have benefits for more than the WCN centers of commerce and social interaction. The thesis purposefully included the Ottawa and Aruba airports to assess the spatial implications of these systems on smaller-scale, state-firm relations. Again, evidence emerged that ABC programs caused important changes, although in these cases, these smaller nodes gained a higher prominence in civil aviation networks through the reduction of border control “frictions” through pre-departure inspections. Conceptually, these changes reduce the “distance” between origin and destination airports, which in network terms has the effect of reducing overall route costs. In a similar manner, when the 9/11 tragedy demanded immediate action on safeguarding border crossings, the early APIS program development efforts proved to be highly advantageous. The industry-supported 1999 U.S.-Canada Preclearance treaty
established both the treaty principles and the technical requirements for expanded cross-border data sharing in the post-9/11 era. Although initially conceived of as a facilitation tool, research respondents identified that the availability of APIS in 2001 was vitally important to avoiding a deadlock in air travel between the U.S. and elsewhere.

In concluding this section, the implication of partnership-based ABC programs remains untold in the transportation geography literature. Thus, the consequences for civil aviation network development remain understudied, and with further analysis could conceptually identify how networks will change in the future when frontiers are more frequently located in virtual and extra-territorial spaces. This also means a commensurate analysis of state policy and corporate strategy is required to understand how these influences affect the balance between trade and national security objectives.

9.7. **Critical Geographies Implications**

Before concluding, it is necessary to admit that undertaking this thesis was fraught with problems, including the limited pool of respondents to the empirical research component. Furthermore, the lack of attention to this subject area by contemporary literature made the project pioneering in some ways. Fortunately, the contributions to the literature by Torpey (2000), Lloyd (2003), and Robertson (2010) were inspirational in identifying that the Canadian and Dutch case studies were modern manifestations of border control trajectories commencing more than a century ago in the “fast” steamship era. What remains is to critically assess the findings with regard to the evolution of co-dependent relations between border control agencies and civil aviation
firms. Moreover, the undertaking of this critical assessment proved useful in reinforcing the broader criticisms by noted academics of advanced border control programs in general.

Accordingly, and despite the numerous geo-political complications that will emerge as ABC programs become mainstream, a disturbing future may become evident without appropriate firm and human rights safeguards. First, it must be re-stated that the civil aviation industry in a short two-decade period has been transformed from a domestic market orientation with mostly state ownership to a privatized globally-based industry which is on the brink of becoming footloose as the 1944 bilateral state-to-state air service agreement regime quickly disintegrates. Second, and despite the assertions in this thesis that 9/11 had limited implications at the ABC program operational level, it would be incorrect to suggest that strategic level national security policy changes have not occurred. As such, Cellucci (2005) amongst other commentators correctly articulated that 9/11 has become the new “Pearl Harbour”, with both events demonstrating to U.S. policy-makers the need for continuous vigilance from both known and unknown threats into the foreseeable future. Third, while much academic criticism correctly identifies the methods employed by states to “discipline the population”, what is generally ignored in these anti-enforcement perspectives are the capabilities of trans-national non-state actors that can now threaten the existential sovereignty of even the largest states with the surreptitious transportation of Weapons-of-Mass Destruction (WMD) to globally important centers (Napoleoni, 2008). As noted by the Can/Am Border Trade Alliance (CABTA), these highly lethal actors were not “disciplined” by the ABC
programs under study, nor might these systems halt this type of “dangerous class” of travelers.

Consequently, the trajectory of ABC programs and other “Smart Border” control practices could lead to circumstances where individuals anywhere in the world will be subject to biometric and related dossier controls prior to trans-national travel. As such, the emergent political discourse that relates to “Trusted Travelers” may appear benign. However, the European Commission (E.C.) interviewee reflected that such a statement presumes citizens are originally “suspect” or “untrustworthy”. Thus, in a pre-cleared world, citizens could only participate in global travel through the state first performing some form of “sanitization” that re-instated “trustworthiness”. Moreover, while these emergent control technologies were first applied in the aviation sector for practical reasons, the “Beyond the Border” announcements by President Obama and Prime Minister Harper in February 2011 clearly demonstrate that the entire transportation network, both for passenger and goods movement, will become the subject of an expanded regime of virtual and extra-territorial controls.

Yet, should the CABTA be correct that ABC type programs would not halt well-resourced trans-national non-state belligerent actors, then the crucial question emerges as to whether these systems lead to a permanent form of local incarceration on the basis of mass suspicion of the “unknown”? Thus, in the absence of individuals possessing the vaunted “trusted” label, states may then proceed to “interdict” mobility solely on the basis that the traveler has not received some form of pre-clearance. This approach makes mockery of the current forms of international travel documentation, the principal document being the passport issued to citizens and permanent residents as an
identity verification tool. Therefore, the underlying assumption of pre-clearance appears to consider individuals as “threats” unless first proven otherwise. However, for states to determine whether individuals are “free” to travel at some future point, this would require intensive levels of personal scrutiny, a system already in place with the ABK programs that goes much further than the data required by the USPC and APIS programs. Worryingly, the Canada-U.S. “Beyond the Border” announcement explicitly calls for a NEXUS enrollment blitz to expand the privileged “trusted traveler” base (Sparke, 2006).

Furthermore, pre-clearance systems, which enable virtual and extra-territorial border controls, require a constant updating of personal data. The Australian ETA and U.S. ESTA programs already require pre-travel registration that is valid for a year, but permits the state to verify the travel authorization at any time during this period without further agreement from the individual traveler (Australia Department of Immigration and Citizenship, 2011; U.S. DHS, 2008a). Thus, the state premises these ongoing investigations for even pre-approved travelers as necessary because no class of individuals can be viewed as being above “suspicion”, regardless of whether the individual has a track-record that warrants further concern. Even for those rare individuals that have previously demonstrated a predilection to cause harm to individuals and/or the state, such past behaviours are not necessarily indicators of future harm. Travel pre-clearance systems may thus endanger Western justice concepts where the premise of “due process” no longer applies as guilt applies without state assessment of individual *bona fides*.

In *Canada’s Passenger Protect Program (PPP): Too Guilty to Fly, Too Innocent to Charge?* (Kutty, 2007), these questionable public policy approaches already appear
in the field of aviation security. In this particular article, the author identifies that the Canadian Council on American Islamic Relations makes the forceful argument that Canada's traveler identity screening regulations create the presumption of guilt without the state first undertaking a transparent judicial review process. While the Canadian government provides a redress function for the invariable classification error, the traveler will only discover his/her inability to fly when unexpectedly denied boarding at a Canadian airport, rather than after a procedurally fair determination through the judicial system. Similarly, the growing use of border control pre-clearance systems that circumvent judicial review prior to the application of state sanctions against the individual is highly troublesome, and fails to acknowledge that mostly “good” people are involved in global mobility. Finally, and at least in the case of Canada, should the “trusted traveler” categorization became the basic requirement for trans-national travel, the presumption that travelers must prove their right to travel may come into conflict with basic human rights principles.

As noted in Part II, the Canadian Charter of Rights and Freedoms, premised on similar democratic principles evident in the U.S. and Europe, expressly provides for the overriding right of the individual over central state authority. Any alienation of individual freedom of action is thus acceptable only in overwhelming situations, and where the state establishes that curtailment becomes vital, the intrusion must be proportional to the public interest goal. Therefore, mandatory pre-clearance systems that establish new classifications of “safe” travelers become fraught with risk for the protection of enshrined rights of entry and exit mobility, which may nullify the rule of law (Butler, 2004). Instead, when the right to trans-national travel disappears for the individual, the state becomes a
prison where no escape is possible from an abusive regime. As Torpey (2000) repeatedly documented, these types of “paper walls” have resulted in the death of millions over the past century. In the modern era, when the passport is replaced by biometric tools that are conveniently administered by civil aviation firms at foreign airports, these virtualizing technologies become the ready mechanism for the state to deal with contingent issues away from sovereign territory which can prevent the traveler from availing themselves of fundamental constitutional protections.

In response, the state argues that some loss of personal liberty is necessary given the challenge of safeguarding society from those threats that originate from outside the territory. This may be true with respect to the physical inspection of travelers prior to entering secure airport areas in order to board a highly vulnerable confined aircraft or for the rare random occurrence where non-targeted travelers may receive random scrutiny by border control agencies. Such temporary interruptions in the traveler’s journey may represent unpleasant annoyances, with the consequential loss of time and impact on personal dignity possibly representing a fair balance to ensure national security protections in the modern world. However, in a future pre-clearance world the loss of mobility rights through a pre-emptive trans-national travel authorization program can be devastating to individuals employed in global corporations, for immigrants to maintain family relations, and for communities to expand global relations.

In addition, states also understand that a “gap-proof” pre-clearance program is not realizable anytime in the foreseeable future, and instead use the language of “risk management” recognizing that the best that can be achieved is the reduction of obvious threats. Thus, the promise of improved “travel facilitation” becomes an elusive target,
where new and more challenging threats emerge, begetting more stringent border control protocols, and thereby negating the previous round of travel facilitation gains. The technologies and border control practices may improve from a customer service perspective with commensurate reductions in obvious travel obstacles, but what can be lost in the process sophistication are the rights of individual travelers to personal privacy, freedom of mobility, and the right of association. This last concern is likely the most problematic of all, as powerful border control algorithms will create “threat scenarios” from widely gathered intelligence that will cause individuals to question their relationships, as even tangential linkages to “unsafe” travelers might create challenges for the most legitimate of travelers. As the state pursues traveler data “warehousing” for future scrutiny, which is currently provided for in various U.S. statutes, individuals become concerned with any associations that may prove to be a future “threat”. Thus, when a “new” terrorist or criminal conspirator “appears” in the view of the state, this will generate waves of historical data searches for potentially culpable relationships.

Granted, in those states served by a robust judicial system, the probability of systemic abuse from a pre-clearance “trusted” classification system is likely small. Unfortunately, Canada-U.S. relations remain under strain from the “Maher Arar abduction”. While Western laws protect from such negation of “due process”, this particular situation demonstrates that the fine theories of individual rights can be set aside through robust border control methods. Moreover, this type of human rights problem is evident in the literature (e.g. Bobbitt, 2008) reviewed for this thesis and from some of the research interviewees who strongly expressed that “nobody wished a police state” and that consequently states must enact greater safeguards. The very existence
of these views in both academic and empirical thought should cause states to re-think how future ABC programs will evolve in order to avoid “sleep-walking” society into a situation where the state must sanction all trans-national mobility.

Another problematic situation arises from these “remote-control” tools and practices. For transportation firms, as already evident in the aviation industry, the danger emerges of the “re-nationalization by stealth” of corporate assets, particularly through states usurping control of information and telecommunication networks that have become strategic tools in corporate life. As evident in the E.U - U.S. APIS conflict, the future for transportation firms will hold heightened conflicts when states use these techniques in different ways. For example, transportation firms may choose to eliminate their presence in foreign markets where data disclosure policies are inconsistent with domestic legislation. In fact, this issue has just emerged into an open conflict with the European based telecommunication industry prohibited by E.U. directives to provide client access to “Cloud Computing” systems that utilize U.S. based data networks that are subject to the Patriot Act (EurActiv, 2011). Thus, the functionality of global transportation networks may face serious compromise should the state continue to expand the practice of “remote-control” border controls through civil aviation firms.

In concluding this section, conceptually the potential for the state to abuse human rights and firm assets with ABC tools may reflect a broader technological determinism that reduces actor choices through constraints in global mobility. For those researchers interested in the spread of innovation and the “territoriality” of economic activity, Advanced Border Control (ABC) tools will have implications for globalization. As such, should the ABC tools lead to discontinuities in global networks, Bunnell and Coe
(2001) have much to say on this topic as they conclude in *Spaces and Scales of Innovation* that:

“We suggest that the way forward is not merely to posit a need for multi-scalar approaches, but rather to explore inter-connections and inter-relations between and across scales. This is an undertaking which, we believe, has not been aided by the ‘territorial presupposition’ of the bounded region in much existing work on innovation…we [also] suggest that greater attention to networks and flows that transcend and cross-cut existing scales of innovation will bring studies of innovation more in line with the ‘reality’ of contemporary innovative processes”. (p. 583)

This critical assessment does not suggest that the ABC programs under study are problematic by definition. Rather, the evidence in this thesis is clear that states, firms, and travelers do benefit in various ways from these innovations. However, this evolving situation warrants caution to understand how these technologies and processes can enhance mobility for more than a few privileged elites (Sparke, 2006).

9.8. **Policy and Future Research Implications**

The research findings are only relevant for the cases of the Netherlands and Canada, and thus an obvious task is the assessment of other sites and other techniques that are currently in use at ports-of-entry. Furthermore, this work has only addressed civil aviation. A more comprehensive approach would be to assess how ABC programs have had implications for other passenger transportation modes, including those that serve marine and land ports-of-entry. In addition, as smaller communities in various countries have already had some access to these programs, a targeted
assessment of how ABC have enabled such sites to access global markets and production centers would be useful.

From a policy perspective, the most pressing issue is to change bilateral and multi-lateral agreements to facilitate global border control harmonization in a way that is sensitive to local interests. Some conflict exists here, as the findings indicate that airlines wish for a consensus at a global scale, while the airports argue that locality matters in how they deliver services to their clientele. However, the airlines and airports in both the case study sites complained about the lack of integration between border control and other national security agencies that materially affect industry practices. Thus, considerable advantages may exist from the cross-utilization of staff and technologies that combine aviation security and border control best practice. For example, the sophisticated technologies that automatically search through passenger bags seeking explosive devices may be able to perform additional functions such as contraband identification. While many complications might exist to such an approach, the prevention of narcotics trafficking remains an important public good, can support harm reduction strategies, and may provide public health benefits (Abadinsky, 1997).

Another major issue for states involved in these programs is in determining how best to manage a system failure that enables a calamity in transit and receiving states. A dialogue that aims to find ways to revolve grievances is most effective prior to the political fray that will certainly emerge after an event with trans-national origins. As well, attention is necessary to changing labour dynamics, with the re-skilling of both private and public sector staff in a way that integrates the ABC program technologies with the
sophisticated intelligence and interdiction methods employed by modern border control agencies.

For civil aviation firms, a better understanding must emerge on how the private sector can actively participate in pre-journey data systems, but in way that is sensitive to the recent privacy protection issues in various jurisdictions. In addition, further market and supply-side research can identify the potential opportunities that arise from the displacement of border controls to non-traditional gateways via virtual and extra-territorial methods. Finally, firms and advanced states must determine how to best support developing states to avoid trans-national threats from exploiting airline routes and/or hub airports that have less capable national security systems.

9.9. Concluding Remarks

The case studies demonstrated that consistent with globalization and trade expansion theories, cooperation between private and public sector firms in the Netherlands and Canada was workable in the field of ABC programs. While 9/11 and recent attacks on European transport nodes placed greater emphasis on migration - securitization controls, these new border control programs withstood the heightened agency scrutiny. Although both these jurisdictions followed a similar program development path with private sector leadership, only the Dutch continued fully with this approach after 9/11. In Canada, during this later period, greater public sector leadership emerged that facilitated cooperation with the U.S., although the private sector remained strongly involved in expansion of ABC programs.
These changes do not suggest that Canadian civil aviation firms no longer had interest in ABC program expansion. Instead, these border control innovations proved crucial to responding to 9/11-related pressures for change, and the successful program development efforts during the 1990s enabled sufficient maturity for further expansion in the current era of heightened national security policy. Furthermore, the revised 1995 Canada-U.S. Shared Border Accord, which became the 2001 Smart Border Declaration continues to challenge the public and academic clichés that 9/11 started a completely new epoch. This perspective may very well be true in other national security related fields, but the research clearly demonstrated this was not the case in Canada and the Netherlands with regard to ABC program relations with civil aviation firms.

Looking forward, this author agrees that public diligence is required, as some risk exists that the state could abuse these tools. As noted, Bobbitt, Agamben, Sparke, and others including some of the research interviewees share these concerns. However, the alternative of eliminating these tools from the state’s arsenal is unrealistic, for both reasons of national security and trade facilitation. As Torpey (2000) noted, the lack of advanced facilitation tools a century ago meant that only premium steamship customers had easy passage through the U.S. immigration system on Ellis Island in the New York harbour. In order to avoid a repeat of historical circumstances where only limited numbers of elite trans-national travelers received streamlined access to border crossing systems, the ABC programs in question require the broadest possible application to legitimate international travelers. The fundamental challenge to achieve this public good is the demand by airlines for globally inter-operative systems, while airports desire locally based solutions that serve catchment area market needs. At the same time, the
civil aviation industry must do its part to engage with states to thwart the politically
violent and the criminal element from using the industry for societal harm.

Accordingly, the ABC programs studied herein have the potential, in the longer
term, to re-work the fabric of international and local spaces. Even the notion of what a
port-of-entry constitutes requires re-thinking, as the ability to permit entry or exit from
the state via virtual and extra-territorial methods remains under-explored. All of these
issues need further academic, policy, and corporate attention to ensure that the vast
majority of passengers with legitimate travel purposes can access global networks and
take advantage of the diversity of wealth and experiences offered by a mobilized global
society.
Bibliography


Aruba Airport Authority N.V. (2008). *Departure Terminal Signage Photographs taken by author with permission*.


Groenewege, A.D. (2003). Content for Figure 3 obtained from The Compendium of Civil Aviation, 3rd Ed. Aviation Development Corporation with diagram prepared by author.


Leinberger, E. (2012). Diagram created by and with permission, University of British Columbia, Vancouver, Canada.


Appendices
Appendix A: Research Project Methodology
Research Methodology Overview

Appendix A contains details of the research topic, explains the research interview structure, and identifies the types of documents assessed.

A. Research Topic Details

The research involved collecting and assessing: (a) the history of the ABC programs in Canada and the Netherlands; (b) corporate strategies and interviews with professionals involved in the civil aviation industry; and, (c) the public statements from public officials and policy documents.

It is also necessary to identify the topics excluded from the research project. As such, the research does not involve the entry visa process that typically occurs at overseas embassies or similar pre-journey processes by the state and/or civil aviation firms at overseas airports prior to passenger boarding. For example, the Government of Canada has undertaken such pre-inspections through the Migration Integrity Officer Program for two decades (Canada Border Services Agency, 2009).

B. Research Interview Structure

The interview of elites can generate doubt over the merits of what can become a combative approach to knowledge finding. The issues that arise revolve around the validity and reliability of interviewee commentary. Thus, questions arise as to how
appropriate the measuring instrument is to the task-at-hand, and how consistent are the results with the chosen measuring instrument (Berry, 2002). Yet, Berry recommended the best approach to overcome these issues is to remain flexible, and engage in a meaningful conversation. This perspective may seem obvious and an appropriate tactic in order to remain open to ideas and concepts not previously considered in developing the interview questions. However, the view from Berry is worth noting as the question of consistency and replication emerges, as open-ended questioning may result in each interview producing a completely different set of results. Thus, the interview process invited broader thoughts to emerge, but a consistent approach was sought with regard to the core set of questions was consistently sought, albeit in indirect means as the situation dictated.

Accordingly, the preparation of the interview questions planned for administration to senior executives with the goal of confirming publicly available information. This approach generated far more content than expected, often resulting in hours of continued discussion. In order to ensure the proper translation of discussions in an accurate manner, the thesis uses a conversational style of reporting. While this may appear tedious in some circumstances, Berry (2002) further observed that considerable merit exists in identifying the “voice” of the respondents within the reporting mechanism, which permits other researchers direct access to the inputs.

In considering the validity of interviews with topic professionals, it is worth commenting that the knowledge available through this interview process is fraught with possible conflict. As the research topic involves an important component of state sovereignty, the expectation did not exist that the interviews would expose structural
gaps in policy and corporate strategy. Instead, the interview approach expectations involved confirmation of known perspectives from publicly available documents, and identify other issues not documented elsewhere. In order to encourage thoughtful response, the interviewees received the questions in advance of the planned dialogue. The benefit of this approach was to increase research transparency, and enabled participants to consider the questions in advance of the formal discussion, which proved most useful in some circumstances.

The interview contacts included policy and corporate strategy professionals involved in ABC program development. Such individuals, with no exception, were located in organization headquarters as the innovative automated border control programs involved complex internal and external coordination, which reinforced agency centralization. This is not to suggest that operational staff could not provide insights to the workability of such programs. However, it is not likely that such individuals could provide perspectives on broad policy issues that relate to state-firm relations, nor might such input lead to different normative or theoretical conclusions. However, during the interviews, queries were made as to how in-field operations informed ongoing policy development. Consistently, the interview contacts reiterated the foregoing interview hierarchy was appropriate for this type of research project.

Another research issue is the scope of the contact list, which depended on the case study selection as described in the previous section. Given the small group of individuals involved, the structure of the research program involved the engagement with nearly all parties contributing to ABC program development. Despite the considered an overly ambitious objective, and recognizing the research period is more
25 year research period, nearly all key individuals involved in the Netherlands and Canada were identified and engaged through a significant outreach effort. As the interviews represent nearly the entire population, this avoided the typical research problem of having to assess the validity of a random sample, or the use of a snowball technique that potentially captures irrelevant content from tangential sources. As such, the interviews with past managers and advisors enabled the research project to trace much of the history of the ABC programs, as described in Chapter 3 of Part II. In order to supplement these historical discussions, conversations also involved contemporary professionals who are better versed in describing events over the past few years.

In order to obtain interview permission, in compliance with university ethics standards, multiple contacts were usually necessary. The interviews were held in-person, or via telephone, and in some situations involved both. The research also involved engagement with public and private sector participants at the “Global Border Management” conference held in London, England on October 28 and 29, 2010.

For Canada, efforts focused on the Canada Border Services Agency, the Department of Foreign Affairs and International Trade, Air Canada, United Airlines, Canadian airports, industry advisors, and related associations. However, as the remaining major Canadian airports had similar ABC program operations, the research method excluded these sites. In order to verify this approach was valid, a further interview was conducted with another major Canadian airport, the results of which confirmed that new insights were not evident from either the discussion or the document reviews. Consequently, inputs from this interview are not included in the manuscript. As well, to improve understanding of the U.S. perspective on inter-state relations, Paul
Cellucci, the former U.S. Ambassador to Canada before, during, and after 9/11 agreed to an interview.

For the Netherlands, documents were gathered and interviews held with the Department for Immigration and Naturalization, KLM Airlines, the Amsterdam Airport, the Aruba Airport, along with the European Commission (E.C.) in Brussels.

In order to obtain a global view on this topic, various industry associations including the IATA, and the Airport Council International agreed to an interview. One other contact agreed to participate based on non-attribution for their involvement.

Moreover, in only one situation did the outreach effort fail, a case that involved efforts to interview two individuals from the same organization located in each of the case study states. The internal process to obtain interview approvals proved unproductive and thus the identity of the organization will remain undisclosed. In order to overcome the gap that this lack of interview created, the research pursued further attention to publicly available documents. A complementary approach used to overcome this interview omission arose when another interviewee identified that the individuals from the missing organization were new in their positions, and had little knowledge or organizational history about the ABC programs in question. Instead, a number of interviewees recommended that an effective contact would be the key individual at the center of the U.S. response in Canada to 9/11, namely former Ambassador Paul Cellucci. As described in Chapter 4 in Part II, this discussion was remarkably productive, and proved instrumental in enlightening some of the incorrect assumptions inherent in this challenging research project.
Consequently, the lack of research interview from a single, although important organization does not invalidate the other interviews, or the research project itself as being incomplete. Moreover, the thesis is replete with documentary accounts from this organization, although not explicitly identified as a research target. Rather, the entire interview process is just one part of the process of gathering and understanding the issues surrounding the research questions. This recognizes that in any research process, a robust outcome is dependent on considering multiple perspectives and understanding the nuances from the combination of sources. Given the general consistency of responses from the public and private sector interviews, the addition of another set of views, even if conflicting, would only add incremental meaning, rather than fundamentally altering the overall conclusions.

As such, the design of the interview questions had a core focus on engaging with the various elite actors. For example, questioning occurred in an open manner that dealt with the early history of the various ABC programs, recognizing that given the lengthy passage of time details may not be forthcoming without prompting. Another set of questions related to the role of the organization in pursuing ABC programs and the associated implications for relations with other parties. The final set of questions intended to reveal how state policy and firm strategy evolved before and after 9/11, with particular emphasis on the relative priority of trade facilitation versus national security. The interviews also included general questions relating to the organization’s background in the field; the types of ABC programs used; how the citizenry viewed the programs; the degree of policy-maker support; the risk management approaches utilized; how the programs influenced firm and inter-state competition; and the
implications of the extra-territorial nature of these programs. Appendix C contains the basic interview question set.

In recognizing the different roles within the various organizations, the interview questions differed slightly between the private and public sector participants, reflecting the potentially divergent perspectives on trade facilitation and national security. For example, border control officials in both Canada and the Netherlands identified the challenge of operating within a political decision-making framework.

The merit of interviewing other parties is also worth attention. For example, border control policy-makers (e.g. elected officials) are not likely able to offer the potential for gaining new insights into the sensitive ABC program topic. Such high-level interviews tend to replicate the organization’s published view, as the interviewees are likely to receive topic briefs from staff prior to any external interviews. Additionally, no policy-maker within the case study states has the sole authority to implement new border control policy without ratification by constitutionally approved measures. It is worth noting the most prominent research contact was the former U.S. Ambassador to Canada before and after 9/11. The other parties of potential interest were technology service providers, or related state agencies (e.g. legal departments). Rather, where necessary and relevant, a review of documents from such organizations replaced formal interviews.

It is worth noting that the views captured through the interviews regarding market and supply sector trends require attention to the reality that policy implementation is fraught with contingency. For example, while 9/11 reinforced the importance of national security in both Canada and the Netherlands, what became evident from the research is
that trade remains critically important. Consequently, how this careful balance will unfold in the years to come will be highly impacted by contingent circumstances that are beyond this project to assess.

C. Document Review

First, the bibliography contains the numerous public policy and corporate strategy documents examined for this thesis. In advance of the formal interviews, a further review of relevant documents became quite useful in facilitating dialogue, and confirming interpretation of various public statements. The following table identifies the types of document, and provides relevant examples.
Second, the states in the case studies are generally required to provide public disclosure for informing legislative processes, where such disclosure does not have national security implications. Accordingly, the opposing forces of transparency and confidentiality are important to understand in order to avoid this research project becoming just a series of conjectures. Of course, certain sensitive policy and corporate documents are not publicly available, which could influence the understanding of ABC programs and associated state-firm relations. However, in order to overcome this situation, the research methodology involves a combination of qualitative interviews, and the document assessments. This should provide a more complete, albeit not perfect view in resolving the research question.

Third, in addition to providing multiple interviews, a private consultancy in the field permitted access to an extensive corporate archive that contained a longitudinal history of Canada-U.S. civil aviation and border crossing relations. The archive also
included documents related to dialogue between airports in Canada and Amsterdam. In order to avoid disclosing confidential matters, non-public documents were considered in the research in a general manner only. For example, archive records identified which parties were involved, the timing of decisions, and the types of issues raised by stakeholders. The availability of this record simplified the public research process.

Finally, while most documents were in English, a knowledgeable source translated a few legal documents concerning the Dutch case study. In order to minimize interpretation errors, parallel sources from the European Commission became invaluable.
Appendix B: Case Study Interview Schedule
<table>
<thead>
<tr>
<th>M/YR</th>
<th>Place</th>
<th>Interview</th>
<th>Name / Organization</th>
<th>M/YR</th>
<th>Place</th>
<th>Interview</th>
<th>Name / Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], AUA</td>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], INTERPOL</td>
</tr>
<tr>
<td>09/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], InterVISTAS</td>
<td>11/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], Schiphol Group</td>
</tr>
<tr>
<td>09/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], ICAO</td>
<td>10/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], YVRAA</td>
</tr>
<tr>
<td>09/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], AC</td>
<td>10/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], DFAIT</td>
</tr>
<tr>
<td>09/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], DFAIT</td>
<td>10/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], CBSA</td>
</tr>
<tr>
<td>09/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], [Redacted]</td>
<td>10/10</td>
<td>N. America</td>
<td>In-Person</td>
<td>[Redacted], ADMTL</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], DGHA</td>
<td>11/10</td>
<td>N. America</td>
<td>Telephone</td>
<td>[Redacted], GTAA</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], DGHA</td>
<td>11/10</td>
<td>N. America</td>
<td>Telephone</td>
<td>[Redacted], IATA</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], Schiphol Group</td>
<td>11/10</td>
<td>N. America</td>
<td>Telephone</td>
<td>[Redacted], ACI</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], Schiphol Group</td>
<td>11/10</td>
<td>N. America</td>
<td>Telephone</td>
<td>[Redacted], UA</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], IND</td>
<td>11/10</td>
<td>N. America</td>
<td>Telephone</td>
<td>[Redacted], OMCIAA</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], KLM</td>
<td>11/10</td>
<td>N. America</td>
<td>Telephone</td>
<td>[Redacted], CABTA</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], DGHA</td>
<td>11/10</td>
<td>N. America</td>
<td>Telephone</td>
<td>[Redacted], ATA</td>
</tr>
<tr>
<td>10/10</td>
<td>Europe</td>
<td>In-Person</td>
<td>[Redacted], FRONTEX</td>
<td>02/11</td>
<td>N. America</td>
<td>Telephone</td>
<td>P. Cellucci (Retired)</td>
</tr>
</tbody>
</table>
Appendix C: Case Study Interview Questions
Participant Identification

- Name
- Department/Agency/Organization
- Position

1. Please describe, in general, the responsibilities that your position entails.
2. What is the breadth of current extra-territorial border control programs?
3. Does the state have publicly available policy statements regarding such programs?
4. What legislative underpinnings have been necessary to permit such programs?
5. What general degree of policy-maker, stakeholder, and public support might exist for current programs or future expansion?
6. Are the ABC programs being considered for expansion or new concepts?
7. What political, technical, financial, institutional, and national security challenges might already exist or are arising from the current and/or future programs?
8. How do extra-territorial border control programs relate to other national policy objectives in other fields of state responsibility?
9. What inter-state challenges have emerged from such programs?
10. How are states coping with commercial transportation systems advances that facilitate global travel but may make it easier for threats to national security?
11. For states, what long-term implications arise from the physical or virtual presence of border control programs operating within the territory of allies or others?
12. What other policy considerations are states facing with their extra-territorial presence?