

## OPTIMAL BORDER POLICY AND COOPERATION

Georges A. Tanguay\* and Marie-Christine Therrien\*\*

\*University of Maine, Dept. of Economics and Canadian-American Center

\*\*University of Maine Business School and Canadian-American Center

**Keywords:** Security, Border, Terrorism, Perimeter

### Abstract

We consider the case of two countries sharing a common border and argue that the ‘public nature’ of border security may be an obstacle in achieving optimal security against terrorism. We highlight this possibility using the example of Canada and the U.S. We show that efficient border policies could require cooperation among countries but motivating such collaboration may be difficult since joint border security policies may involve a prisoners’ dilemma problem. On the other hand, we show that the likelihood of joint increased security will be higher if there are country-specific benefits for a country improving security at its border. If this is the case, we demonstrate it is possible to reach optimal security using independent border policies.

### 1. Introduction

Border security often has been an issue in many countries. There has been little concern, however, over the security of the Canada-U.S. border in modern times. This changed on September 11<sup>th</sup> 2001. The immediate response has been to increase the amount of resources devoted to the security of the Canada-U.S. border (as well as other borders and ports). However, it is not clear this is the best policy response. It may be the case that the best response might be to make this border freer (i.e., less secure) and to focus on greater joint-security coordination between the United States and Canada. A possibility would be the adoption of a common security perimeter.

Indeed, the concept of a common security perimeter has resurfaced, stronger than ever, in the news and in diplomatic spheres. Given that, we should assess the costs and benefits associated with potential changes of the border. In this paper, we study two potential options. The options are:

1. The *status quo*: continuing a coordination of Canadian and U.S. policies of different matters such as security, immigration and border management.
2. Adopt a common perimeter and eliminate the border.

In section 2, we present the context of the border between Canada and the United States. Next we discuss the two options in terms of sovereignty, territory and security. In section 4, we analyze both options and show that under plausible conditions, conserving independent border policies may be the best option.

### 2. Context of the border

Understanding the security issues related to a border has to be coupled with an understanding of the relationship between two neighbouring countries. In this section we present two important factors showing the specificity of the Canada-U.S. border relationship: trade and border policy management.



## 2.1 Trade

The Canada-U.S. border comprises 130 land border crossings on the longest unguarded border in the world: 8890 kilometers. There are 200 million border crossings between Canada and the U.S. each year and traffic is expected to increase at a rate of 10% each year over the next 10 years ([www.dfait-maeci.can-am.gc.ca](http://www.dfait-maeci.can-am.gc.ca)). This should increase pressures for security measures. In the light of Sept 11<sup>th</sup>, the concept of the border being a place to fend off contraband, criminals and terrorists might be reconsidered: Quoting Flynn (2002): *“developing the means to manage terrorists threats and other transnational muck that is contaminating the integrative process within the global community is essential, but we need to liberate ourselves from the notion that the border is the best place for accomplishing this. Indeed, an over-reliance on the border to regulate and police the flow of goods and people can contribute to the problem”*.

Easy flowing borders are important to the commercial flow between Canada and the United States. Trade has doubled between Canada and the United States since the signing of the first free trade agreement in 1989 and now, more than 1.3 billion dollars worth of goods cross the Canadian-U.S. border each day. This trade partnership is the most important in the world. More specifically, 87% of Canadian exports are destined to the U.S. and 25% of U.S. exports are for the Canadian market ([www.dfait-maeci.gc.ca/can-am/](http://www.dfait-maeci.gc.ca/can-am/)). Canada is concerned with any potential disruptions in the flow of cross-border trade since Canadians are highly dependent on its exports to the United States. For instance, the terrorist attacks of 9-11 caused the United States to close its borders for approximately 24 hours, bringing commercial flows to an almost complete stop. This had a profound effect on people and businesses trading under NAFTA. As an example, Flynn (2002) reports that Ford shut down five plants for a week with estimated losses of \$1 million per hour. But concerns over border issues do not only lie in trade flows. Divergent policies on visa issuance, asylum to refugees and immigration are at the center of security issues as we now explain.

## 2.2 Border Policy and Management

On September 12<sup>th</sup> the U.S. General Attorney accused Canada of being an easy access for terrorists. Canada’s Prime Minister Jean Chrétien responded that it was the responsibility of the U.S. Border Patrol to control U.S. border crossings not Canada’s. Since then announcements were made on moving towards a common security perimeter, although Canada has often stated some concerns with maintaining its sovereignty over the border issues. The U.S. wanting more harmonization of immigration and border policies has created tension in an otherwise very good relationship. Given that the U.S. is an undeniable superpower, this could be read as “do it the American way” or find a lower common denominator. Canadians want closer ties in trade, but they also wish to remain sovereign over their own country. Other concerns, concerning refugee status seekers, were voiced when the alleged Algerian terrorist Ahmed Ressaym crossed the border in Washington State with the intention of bombing the Los Angeles airport on New Year Eve of 2000. Also, the allegations that some of the September 11<sup>th</sup> terrorists had entered the U.S. through Canada, and that Canada is a safe haven for terrorists, has reintroduced debate concerning the establishment of a common security perimeter.

Over the last 10 years, both countries have increasingly coordinated border management. Today, more than 50 agencies (Canada and the United-States combined) are implicated in border management. This represents complex management issues about coordination. Even before September 11<sup>th</sup>, many initiatives were being discussed and put forward by both countries. Initiatives such as the Shared Border Accord, the Border Vision, the Cross-Border Crime Forum and more importantly the Canada-U.S. Partnership Forum (CUSP) ([www.dfait-maeci.gc.ca](http://www.dfait-maeci.gc.ca)) have addressed issues such as promoting trade, reducing costs in control, intelligence sharing and transnational crime. These initiatives were put forward after the first attacks on the World Trade Center in 1993, as concerns for security and terrorists’ threats were



heightened at that moment. The need to create a balance between the easy flow of goods and security factors became a very high burden on agencies.

In December 2001, as a direct result from the CUSP dialogues and the events of 9-11, Canada and the U.S. signed the Smart Border declaration, a 30 point plan to enhance security while facilitating the flow of people and goods ([www.dfait-maeci.can-am.gc.ca](http://www.dfait-maeci.can-am.gc.ca)). This declaration is seen by many as the operational application of moving towards a common security perimeter. The 30 point action plan coordinates many aspects such as risk management for trade and immigration policies. The plan should account for the paradoxes of globalization: more movements of goods and people to promote trade and commerce, and the difficulty of control of transnational threats such as terrorism. Trying to manage border dialectic has become increasingly difficult for policy-makers and the agencies mandated to implement these policies: “(...) Policy makers anxious about reigning in globalization’s dark side look to the border to fend off contrabands, criminals, illegal migrants, and terrorists” (Flynn, 2002).

### 3. The border: sovereignty, territory and security

#### 3.1 Sovereignty

Sovereignty is clearly defined as the right to choose who enters the country. In the **status quo option**, both countries remain completely sovereign over their own policies and coordinate to the level they want, rendering possible a step-by-step approach. On the other hand, keeping the *status quo* means that the U.S. might tighten border control policies leading to potential negative effect on trade and crossing flows. Also, if Canada’s reputation as being easily accessible to terrorists remains unchanged, it could require more investments on its part.

In the **common security perimeter option**, benefits can clearly be seen for U.S. sovereignty but none for Canada’s sovereignty. The higher dependence of Canada on the U.S. would allow the U.S. to impose its immigration, refugee and defense policies through budget and resource allocations. Since the U.S. defense system is more developed and geared towards protection, it would have the upper hand at imposing its views (the Canadian defense system is more oriented towards peace keeping).

#### 3.2 Territory and Security

The security of the territory is ensured by immigration and defense policies.<sup>1</sup> Countries such as Canada and the U.S. exercise control over their territories through different policy and administrative tools such as visas and inspection. For example, recent changes in Canadian law have rendered possible the prosecution of non-citizens under criminal law. These changes have created a shift in the perception that the foreigner is a source of danger for the security of the nation. This destabilization has created a doubt that the border is the best place to ensure the security of the country. Therefore, the concept of security is linked to immigration policies. However, as Macklin (2002) mentions it could be difficult to prove terrorism-related offense under criminal prosecution. If this is the case, it will be easier to deport than to imprison and this will bring on another difficult task. As terrorism knows no border, the deportation of an alleged terrorist to his/her own country could prove difficult for the security of Canada: “*It is not obvious that deporting a person who is determined to engage in acts of terror to, say,*

---

<sup>1</sup> For the purpose of this paper, we consider the territory of each country as the geographic location. Nevertheless, as noted by Macklin (2002), recent events have challenged our understanding of territory and border: “*it becomes obvious that assaults on a given state do not actually require access to its territory*”. When embassies are attacked or cyber crime is perpetrated territories become less clear. If terrorists do not respect borders, Macklin concludes that “*neither do states in pursuit of border control*”. Therefore the world, as a global village, is becoming more and more streamlined along the borders as nations exert their powers over more than their own citizens. Considering these changes in the concept of territory, the security perimeter concept becomes less obvious.



*Afghanistan, Sudan or Iraq will deny him the opportunity to pursue his objective at some later date, perhaps through other means*". These future terrorist acts could be on the Canadian embassy in the country of deportation. But the person could also decide to retaliate in another country creating a potential for an international NIMBY (*Not In My Backyard*) problem.

The concepts of territory and security are also linked to the economy. The Canadian and the American economies are highly, but asymmetrically, interdependent. Therefore, not all security objectives are the same. Golob (2002) shows that the U.S. objective is to develop its security through homeland security as this *"will make the U.S. not only safer but stronger, both absolutely and relative to other countries"*. She also argues that the Canadian notion of security *"is coupled with social inclusiveness and protection which communicates the government's commitment to traditional measures of state legitimation through social program [...]"*. Nonetheless, Canada's economic dependence on its U.S. neighbor makes it more inclined to cooperate with its U.S. counterpart on border security issues. As a direct result of September 11<sup>th</sup>, both countries have increased appropriation of funds for increased security. Canada announced a 7 billion (CAD) investment in "security and intelligence agencies" ([www.dfait-maeci.gc.ca](http://www.dfait-maeci.gc.ca)). The creation of the Homeland Security Department with a 36 billion USD budget is a significant investment in security and represents the largest change in U.S. public management history ([www.dhs.gov](http://www.dhs.gov)). These numbers show the importance of increasing security measures for both countries.

Most of actual discussions between the two countries, through the Smart Border action plan, have been directed at more coordinating mechanisms related to data and intelligence sharing or administrative changes to reduce cost for trade issues. In considering the **status quo option**, the notion of security and territory is being addressed by both countries. The actual costs of maintaining and developing security will require further investments in resources for all of the agencies. This will also require more developments in technologies related to border security. For the private sector, corporations' border crossing wait times are costly, and a potential border closing in the event of another terrorist attack would lead to substantial losses (as the September 11<sup>th</sup> events were). On the other hand, many coordination/collaboration issues are already under way and prove to be effective, increasing the security of both territories. Moreover, with the development and sharing of new technological tools, each country's R&D costs are lowered. This option also renders laws, policies and procedures more harmonious, bringing benefits to both countries.

A **common security perimeter option** would shift all costs for both countries associated with the control agencies of the actual border to the defence of the common perimeter. The benefits of no border are quite high for companies engaged in trade as they would bear no cost linked to customs issues. The creation of a common security perimeter would confer, it seems, more benefits for trade. On the other hand, we will see in the next section, that it will not necessarily increase security efficiency.

#### 4. Border policy and cooperation<sup>2</sup>

Blocking entry by terrorists at the border is often seen as the best way to decrease or eliminate terrorism within a country. For example, the response to 9-11 has been to increase the amount of resources devoted to the security of the Canada-U.S. border. Given the costs and benefits of border security controls, we can assume there is an efficient level of security such that the marginal cost of increased border security is equal to its marginal benefit. But a possible obstacle in achieving the efficient level of border security against terrorists results from the public nature of border security.

First, border security can be seen as a good which is *non-excludable*. For example, consider the case of two countries sharing a common border like Canada and the United States. If Canada

<sup>2</sup> This section is inspired by Lee (1988).



takes measures (invest in border security) to decrease entries by potential terrorists, this could also reduce entries by terrorists into the U.S.<sup>3</sup>. This is especially true given that NAFTA facilitates border crossings between Canada and the U.S. Therefore, the U.S. will benefit from Canadian measures. We cannot exclude a country from the benefits (at least in parts) stemming from investment in higher border security by an adjacent country.

Second, the benefits generated by increased border security are in parts *non-rival* over countries. For one, terrorism imposes varying costs on people in all countries regardless of where a terrorist event occurs. Also, if a lower number of terrorists enters one country, this should benefit a neighbour. As mentioned earlier, this is especially the case if border crossings between the two are numerous and easy (for instance, Canada and the U.S. under NAFTA). Hence, the fact that one country benefits from taking measures to decrease entries by potential terrorists on its territory, does not reduce the benefits therefore available to other targets.

Therefore, since reducing the general threat of terrorist entries through increased security generates a public good for two or more countries, efficient border policies could require cooperation among countries benefiting from increased border security. For instance, this could take the form of a common security perimeter or of an increased collaboration (e.g.: immigration rules) leading to higher security while favouring trade. It is in this vein that the Canadian Foreign Affairs and International Trade Committee and the Canadian Council of Chief Executives (representing 150 of Canada's largest corporations) have called for a North American perimeter and for a customs union between Canada and the United States (National Post, 01/23/03).

However, motivating collaboration may be difficult because joint border security policies may involve a “prisoners’ dilemma” problem. Given that increased border security provides public benefits, each country would hope, to some extent, to free-ride on the increased security of the other. Acting rationally neither country would increase security and that could lead to the worst possible outcome. In the Canadian-American case, assuming that both countries are potential targets, this means that while both countries are better off increasing border security, each may under-invest given the level of increased security expected by the other. It is then possible for countries to free-ride, trying to let the other pay for increased security. At first look, the incentive to free-ride would be greater for countries believing they are secondary targets. For instance, Canada is more likely to free-ride and under-invest in border security if it estimates a very low probability that it could be hit by terrorists and it believes the U.S. is the only target. The negative effects of free-riding would be worst when countries are asymmetric in terms of being primary or secondary targets.

On the other hand, a closer look at this problem suggests that the “prisoners’ dilemma” aspect may not be a significant obstacle to optimal border security. This is the case for two reasons.

First, the likelihood of joint increased security will be higher if there are country-specific benefits for a country improving security at its border. A reduction in terrorism in general necessarily means fewer attacks against specific countries and their citizens. If the United States can discourage terrorist attacks within its borders and against its citizens by implementing border security measures then most of the country-specific benefits accrue to the USA increasing their border security. If this is the case, the benefits of cooperation with Canada are reduced since it is more likely that the U.S. will increase its border security regardless of what Canada does. The obvious question then will concern Canada’s incentives to free-ride since it doesn’t seem to have many country-specific benefits. This leads us to the second reason why both countries will increase border security and why the free-riding or prisoners’ dilemma aspect may not be a significant obstacle to optimal border security.

---

<sup>3</sup> We assume only two neighbor countries in the analysis. It would be a simple task to extend the analysis to more than two countries.



If because of specific benefits the U.S. increases security to reduce terrorism it will generate positive externalities. Increased U.S. border security should reduce the overall level of terrorism in both Canada and in the U.S. However, increased American border security could also generate negative externalities for Canada. This could be the case since increasing U.S. border security changes the relative costs of conducting terrorist activities in both countries (the relative costs of hitting both targets). This change could then shift terrorist activities to Canada.<sup>4</sup> This in turn could lead to Canada increasing its own border security. If this is the case, therefore the country-specific benefits the U.S. would receive from better border security would even be higher! Hence, it is possible that if the U.S. has the motivation to increase border security so will Canada because it is aware that terrorist might be more attracted to attacking Canada given the higher difficulty (costs) to hit the U.S.

Hence, given plausible conditions, it is possible to reach optimal security using somehow independent border policies. Given the two options in the standard prisoners' dilemma setting, cooperation (increase border security for both countries) or non-cooperation (status quo), we believe it is likely that both countries will cooperate and that therefore optimality will be reached.<sup>5</sup>

Let us give an example using a simple and plausible matrix showing that a possible equilibrium would be for both countries to increase border security. In Figure 1, the payoff matrix the rows represent the decision to increase security (not increase) by the U.S. while the columns represent the decision to increase (not increase) border security by Canada. The first number in each cell represents the payoff for the U.S. while the second is the payoff for Canada. The numbers in the matrix reflect the fact that the U.S. is the main target and that Canada can be victimized based on the fact that it is a U.S. friend. Also, we assume that (Increase, Increase) is the optimal outcome. For example, that outcome could be the one we aim to attain with a common security perimeter (complete collaboration).

Figure 1

		CANADA	
		INCREASE	NOT INCREASE
USA	INCREASE	100, 80	80, 50
	NOT INCREASE	70, 40	50, 60

First, note the U.S. advantage is to increase border security regardless of what Canada does. This is because the U.S. has important specific gains from higher border security. In other words, increasing border security is a dominant strategy for the U.S. On the other hand, it is Canada's advantage to increase its border security only if the U.S. does the same. Since the U.S. always decides to increase border security both countries will do so.<sup>6</sup> The free-rider solution is never attractive to the U.S. and therefore will never be attractive to Canada.

<sup>4</sup> For more details on that result see Sandler et al. (1983) and Im et al. (1987).

<sup>5</sup> Lee mentions another possibility in which one country in effect "sells" the public good of reduced terrorism that is generated by the other country. He calls that possibility "paid-riding". We abstract from this possibility.

<sup>6</sup> This is the Nash equilibrium of this game.



Therefore, independent border policies may lead to optimal security. The point is not that collaboration, taking the form of a common security perimeter or common immigration rules, doesn't lead to optimal security. Rather, we should ask ourselves if the costs of losing independent policy-making (sovereignty over trade, immigration etc.), because of the adoption of a common security perimeter, are justified since we may well reach an optimal security level given the incentives we have described.

## 5. Conclusion

In this paper, we considered the case of two countries sharing a common border and argued that the 'public nature' of border security may be an obstacle in achieving optimal security against terrorism. We highlighted this possibility using the example of Canada and the U.S. In this particular case, we demonstrate that there may indeed exist benefits from co-operative border policies. However, we showed that motivating collaboration may be difficult based on the fact that joint border security policies may involve a problem similar to the prisoners' dilemma. That is, given the increased border security provides public benefits, it is then possible for countries to free-ride and try to let others pay for increased security. In the Canada-U.S. case, assuming that both countries are potential targets, this means that while both countries are better off increasing border security, each may under-invest given the level of increased security expected by the other. The consequences of that problem are enormous. For instance, this may call for a solution involving complete co-ordination of policies. For instance, this could take the form of a North American security perimeter leading to higher security while favouring trade. That would be associated with significant losses of sovereignty for Canada.

On the other hand, we also showed that the 'prisoners' dilemma aspect' may not be a significant obstacle to optimal border security if there are country-specific benefits for a country to improve security at its border. For instance, if the U.S. can discourage terrorist attacks within its borders by implementing border security measures then most of the country-specific benefits accrue to the U.S. increasing their border security. If this is the case, the benefits of co-operation with Canada would be reduced and the U.S. would be more likely to increase its border security regardless of what Canada does. We showed that if this is indeed the case, Canada may also have an incentive to increase its security since higher U.S. security could shift terrorist activities to Canada. Therefore, given these incentives it would be possible to reach optimal security using somehow independent border policies. A common security perimeter would not be necessary. Although recent changes in co-ordination through the Smart Border plan talk of a "common security perimeter", the actions put forward show more of an evolution in co-operation. Considering what we discussed in this paper, it seems that this may be a good alternative.

## Acknowledgments

We thank Michele Fratianni, Patrick Crowley, Tom Duchesneau and Philip Trostel for helpful comments. We are responsible for any remaining errors.

## Georges Tanguay's Biography

Professor Tanguay is assistant professor of economics and Canadian studies at the University of Maine. He holds a Ph.D. in economics from Laval University in Quebec City. After completing his Ph.D. he joined McGill University in Montreal as a post-doctoral fellow at the Institute for the Studies of Canada and at the Department of Economics. His research interests are in applied microeconomics. He has published many articles on trade, environmental policies, fiscal competition and border security. Along with microeconomics and international trade courses, he has taught courses covering Canadian economic issues and policies and the North American economic integration.

## Marie-Christine Therrien's Biography



Professor Therrien holds a doctorate in engineering and management from the École des Mines in Paris, France where she was awarded a bursary from European Economic Commission to complete her work. She is an assistant professor at the School of Business of the University of Maine. Her research interests are in crisis management, danger sciences and organizational learning and networks. She has done research in those areas in Europe and North America and has also been called upon by governments for this expertise. Following the 1998 Ice Storm in Quebec, Dr. Therrien was called upon by the Scientific Commission to serve as an expert. She has published articles and reports in the areas of crisis and networks, crisis and the use of technology, and crisis and organizational learning. While completing her degrees, Dr. Therrien has worked for the Canadian Red Cross, the Montreal Urban Community, the Quebec Provincial Government and Science Applications International Corporation (SAIC).

### References

- Flynn, S. (2002). Transforming Border Management in the Post-September 11 World in *Governance and Public Security*. Campbell Public Affairs Institute, Maxwell School of Citizenship and Public Affairs, Syracuse University, pp.37-51.
- Golob, S.R. (2002). North America Beyond NAFTA? Sovereignty, Identity, and Security in Canada-U.S. Relation. *Canadian-American Public Policy*, Vol. 52, December, pp.1-44.
- Im, E.I., Cauley, J. and T. Sandler (1987). Cycles and Substitutions in Terrorist Activities: A Spectral Approach. *Kyklos*, Vol. 40, No 2, pp.223-255.
- Lee, D.R. (1988). Free Riding and Paid Riding in the Fight Against Terrorism. *American Economic Review*, Vol. 78, No 2, pp.22-26.
- Macklin, A. (2002). *Borderline Security*. Public Law and Legal Theory Research Paper No. 02-03. University of Toronto, Faculty of Law.
- National Post (01/23/03) *Manley Rejects Dismantling Border*.
- Sandler, T., Tschirhart, J. and J.Cauley (1983). A Theoretical Analysis of Transnational Terrorism. *American Political Science Review*, March: pp.36-54.

[www.dfait-maeci.gc.ca](http://www.dfait-maeci.gc.ca)

[www.dhs.gov](http://www.dhs.gov)

