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19 January 2009

Online at <https://mpra.ub.uni-muenchen.de/17240/>

MPRA Paper No. 17240, posted 11 Sep 2009 06:41 UTC

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Canadian prosperity critically depends on the maintenance of an open and secure border between Canada and the United States. The reality is that 70 percent of our international trade is with the United States and that production has become highly integrated with value chains running back and forth across the border, sometimes many times. Even though it has become almost platitudinous to say that Canada and the United States have the world's longest undefended border, that does not necessarily mean that the border has not been an obstacle impeding the flow of trade, investment and people between the two countries. Over the years, Canadian governments have faced many challenges keeping the border open and have successfully approached the US government. Engaging the new Obama Administration in the United States to ensure a more open and secure border for trade, investment and people must be a high priority for the Canadian government.

The Thickening of the Border after September 11

Even though the border was reopened quickly following the September 11th attacks, it was not the same as it had been. Under first the Canada-US Free Trade Agreement (FTA) and subsequently the North American Free Trade Agreement (NAFTA), Canadian exports to the United States had soared. After September 11, even though the NAFTA remained in effect, the new mantra became "security trumps trade" because of US concerns to prevent another terrorist attack.

While the Smart Border Declaration, which was signed on December 12, 2001, established a cooperative framework that may have helped to shield Canada from the full brunt of the tightening, it did not prevent the US government from taking aggressive action to tighten security at the Canada-US border. The number of US CBP agents at the Canada-US border, for example, was raised from 340 in 2001 to 1,128 agents in May 2008 and is scheduled to rise further to 1,845 by the end of October 2009 (US CBP, 2008a). This will be almost a six-fold increase and has obviously provided the extra hands and eyes required to tighten up the border. And it could suggest that even more tightening is in store as there has been a recent ramp-up in agents.

In addition, the Secure Border Initiative (SBI) was announced on November 2, 2005. It is a comprehensive, multi-year plan to secure America's borders and reduce illegal migration (US DHL, 2005). SBInet is the new border surveillance system launched in late 2006 with Boeing as the prime contractor (US GAO, 2008, p.7). It seeks to meet the security needs at the border through technology and tactical infrastructure, including the application of sophisticated defence

technologies. This includes radar, sensors, cameras, biometric information and radiation detectors that are being introduced at the border to prevent criminals and terrorists from entering the United States.

That the United States has legitimate grounds for questioning the security of its northern border was confirmed by Canada's Auditor General in a recent report. It concluded that "The threat and risk assessments that the [Canadian Border Services] Agency has put in place are not satisfactorily supporting its efforts to achieve a border management approach that is based on risk" and that "the Agency's lookout system, which was designed to identify and intercept high-risk individuals and shipments, is not working as intended." (Auditor General, 2007, 1-2)

While US efforts to improve security are not intended to interfere with legitimate trade and travel, they have certainly sideswiped Canadian trade and travel and kept alive Canadians fears of large lines of trucks waiting at the border as they saw on TV after September 11.

Canadian Ambassador Michael Wilson said calls it "a thickening of the border" (Ryan, 2007). Most recently, former Federal Industry Minister Jim Prentice complained about mounting border delays and warned about the "thickening of the border" resulting from enhanced security measures (Alberts, 2008). Many observers have commented on this phenomenon and provide many concrete examples of tightening (Robson and Goldfarb, 2003; Goldfarb, 2007; Hart, 2008a&b; Hufbauer and Brunel, 2008a; Hufbauer and Schott, 2008b; Corcoran, 2008; and Gastle and Martyn, 2008).

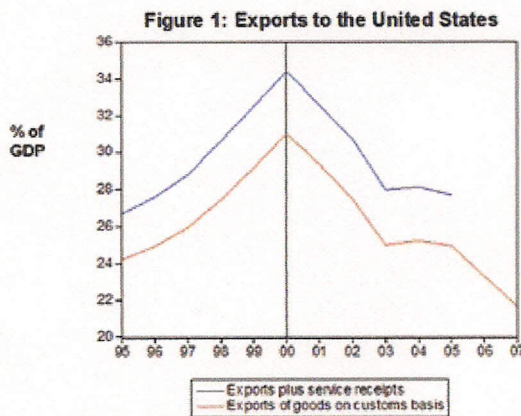
In a joint report prepared earlier this year, the Canadian and US Chambers of Commerce contended that based on the feedback that they had received from Canadian and US businesses there was "an increase in border costs and a 'thickening' of the border because of increased wait times; direct fees for crossing the border; additional and duplicative border programs; additional costs for participating in trusted shipper and traveler programs; and increased inspection times." (Canadian Chamber of Commerce, 2008, 1). Because of their concern about the "increasing costs and delays associated with crossing the border," they made many practical recommendations to reduce border costs without compromising security.

Drawing on the Conference Board's study and the Chamber of Commerce report as well as his own interviews with exporters, journalist Barric McKenna (2008) provided many specific examples to support his argument that the "increasingly unpredictable border" has caused companies to move from "just-in-time" inventory management to "just-in-case." This involves such costly coping strategies as: inventory stockpiling, the pre-shipment of orders, night and weekend border crossings, the use of empty trucks to make pick-ups and the shipment of duplicate orders.

In its report to NAFTA Leaders, The North American Competitiveness Council lamented that "Businesses in Canada, Mexico and the United States are bearing the burden of new measures to enhance security, as well as more rigorous enforcement of existing rules," and complained that "this means that businesses in all three countries are facing longer delays, higher inspection

rates, additional fees and more layers of security when they can afford it least” (North American Competitiveness Council, 2008, 4-5). These articles and studies contribute to a growing literature documenting the various ways in which US border controls have been tightened after September 11, restricting trade between Canada and the United States.

A Fraser Institute study summarized the studies attempting to measure increased border costs after September 11 and estimated that the “waiting, processing and security measures costs at 2 to 3 percent of total trade” (Moen and Cust, 2008, 12).¹ The important contribution of these studies is that they quantify the costs imposed on traders by the tightening of US border controls.



The data for exports of goods provide *prima facie* evidence of a “thickening of the border.” After more than a decade of exceptionally strong growth following the 1989 Canada-US Free Trade Agreement, the growth of Canadian exports of goods to the United States expressed in current dollars stalled after the year 2000, declining slightly from \$334.1 billion in 2000 to \$331.4 billion in 2007. The share of exports of goods going to the United States fell more significantly from 86.7 percent in 2000 to 79.3 percent in 2007. The decline

in exports of goods to the United States as a share of GDP from 31 percent in 2000 to 21.6 percent in 2007 is even more striking as exports had grown more rapidly than GDP after the implementation of the FTA/NAFTA (Figure 1).

Exports of services to the United States also exhibited significant weakness after September 11, falling from 3.4 percent of GDP in 2000 to 2.7 percent of GDP in 2005 (Figure 1 also shows exports of goods and exports of goods and services, the difference being services). The weakness was more pronounced in travel and transportation services with commercial services continuing to increase after September 11, albeit at a much slower pace.

Econometric analysis supports the many complaints made that there has been a “thickening of the border” after September 11 (Grady, 2008; Gliberman and Storer, 2008). My own analysis estimated equations in logarithmic form explaining exports excluding energy and forestry products in terms of demand as measured by GDP and relative prices measured in a common currency allowing for exchange rate changes. Exports of energy and forestry products were excluded from the estimate because their levels were likely affected by other factors than the

1 The studies surveyed for the estimate were done by: KPMG; the Michigan Department of Transportation; Transport Canada; the Canada-US Trade Center at the State University of New York at Buffalo; and the Conference Board.

thickening of the border. On the one hand, energy flowed to the United States in increasing volumes through pipelines and transmission lines to satisfy growing US energy demand. And the value of energy increased even more because of increasing energy prices. On the other hand, exports of forestry products were restricted by the softwood lumber dispute. The estimated equation included a dummy variable equal to 1 for the period after September 11 to measure the extent to which the explanatory equation shifted. This shift was attributed to the impact of the thickening of the border.

Utilizing this simple technique, it was estimated that Canadian exports of goods, excluding energy and forestry products, to the United States have been 12.5 percent lower after September 11 than would have been expected based on estimated relationships (Grady, 2008, 14). The reduction in the exports of goods excluding energy and forestry products amounted to \$30.6 billion in 2007 in current dollars. This is a substantial negative impact on exports in anybody's book, even in comparison with the likely positive impact of the FTA/NAFTA, which, even though it reduced non-tariff barriers, only eliminated tariffs averaging around one percent. My econometric analysis also confirmed that there was an 8-per-cent negative impact on the exports of services to the United States (or \$3.1 billion in 2007 in current dollars) and an almost 13 percent on the imports of travel services (Grady, 2008, 14).

Restrictions on exports are important because of their potential impact on Canadian productivity and, ultimately, living standards. According to the Competition Policy Review Panel, labour productivity in the business sector was only 75 percent of that in the United States in 2007 and only 60 percent in manufacturing (2008, 19). Much of this gap can be attributed to barriers to the free flow of goods and services, people and trade between the two countries that have been mentioned above. The corollary to this is that a reduction in these barriers can be expected to decrease the productivity and hence income gaps.

Existing Border Trade Issues

Reports from the Chambers of Commerce (2008), North American Competitiveness Council (2008) and Conference Board (Goldfarb, 2007) have documented the growing number of infra-structural and administrative impediments facing Canadian exporters at the border. These include: bottlenecks in border infrastructure at such key places as the Ambassador and Peace Bridges; increased security requirements at the border slowing shipments; increased inspection requirements and fees both slowing shipments and making them more expensive; longer border wait times. Apparently, the Smart Border Agreement has not prevented these barriers from proliferating.

It is particularly discouraging that disagreements over jurisdiction prevented an extension of pre-clearance at the Peace Bridge between Fort Erie and Buffalo, which could have served as a model for other border crossings in reducing bottlenecks. Unless Canadians and Americans are willing to grant a certain degree of extraterritorial jurisdiction in order to allow the customs and border enforcement officers of the other country to operate on the opposite side of the border

with full authority in defined circumstances, it will be impossible to implement preclearance without sacrificing security. Canada and the United States signed a Container Security Initiative partnership agreement in October 2005 to facilitate the pre-screening of goods destined for North America. But while sealed pre-screened cargo arriving in Canadian ports for onward shipment to the United States will not have to be scanned at the border, Canadian cargo will still have to be scanned, that is at least until arrangements are made for joint inspection, which again is being held up by concerns over extraterritoriality.

There have also been increased administrative barriers for personal and business travel. This has resulted in dramatic declines in cross-border travel. The number of Canadians traveling to the United States declined sharply after September 11 and has only recently returned to pre-September 11 levels. The number of American residents traveling to Canada was down by 42 percent in 2007 compared to 2000.

The Western Hemisphere Travel Initiative (WHTI), which is a US law requiring Canadian residents entering the United States and returning American residents to present passports at the border to gain entry, was a key factor reducing cross-border travel. The implementation of the WHTI was delayed and it came into effect for air travel only after January 23, 2007. For land and water travel, at least a government-issued photo ID, such as a driver's license and a birth certificate or a citizenship card was required for adults after January 8, 2008. And passports or other WHTI-compliant document, such as a NEXUS or FAST card, will be required after June 1, 2009. The impact of the WHTI started much earlier than these dates would suggest because of the resulting confusion over requirements at the border. Many Americans who heard about the initiative believed it was already fully in effect and that they would need a passport not only to return home, but to enter Canada. And those planning large events like conventions tended to avoid Canada because of the uncertainty. To some extent, the low level of business travel may have reflected the weakness of Canada-US trade after September 11, but it could also have contributed to the weakness.

Key Measures to Make the Border More Open and Secure

- making the NEXUS and FAST cards really work as intended;
- drivers' licenses that qualify as WHTI-compliant real IDs;
- adequate border infrastructure with effective pre-clearance;
- substantial reductions in inspections of pre-vetted low-risk shippers;
- pre-clearance for containers originating in Canada under the Container Security Initiative partnership;
- the elimination of inspection fees;
- harmonizing visa requirements;
- enhanced security screening of immigrants from countries with terrorism problems;
- the preparation of a joint contingency plan for keeping the border open in the event of a terrorist attack;
- stepped-up efforts to secure mutual recognition of regulatory standards that cause problems at the border.

People Issues

There were some small steps to increased labour mobility under the NAFTA. The TN visa was established. It granted a one-year, renewable visa, which has now been extended to three years, to high-skilled workers from Canada and Mexico who are in eligible occupations and have US job offers. In 2000 around 110 thousand such visas were granted to Canadians. After September 11, the number granted fell off to about 60 thousand. Nevertheless, the availability of NAFTA TN visas gives Canadians a unique advantage in terms of ability to work in the United States and helps to promote economic integration.

The Safe Third Country Agreement for Refugees, which took effect at the end of 2004, has substantially decreased the number of refugee claims at the Canada-US border. It has made it more difficult for refugees to country shop between Canada and the United States, reducing the potential for abuse and should thus provide for a more orderly handling of refugee claims.

The existence of different visa exemption lists can cause problems at the border. While Canada requires visas for nationals of 27 states that also require visas to enter the United States, it allows nationals of another 25 states that need visas for the US to enter visa free (CIC, 2008; US CBP, 2008b). This includes Mexico as well as Hong Kong and a number of Commonwealth countries. It provides an opportunity that allows visitors to enter Canada without getting a visa and to take advantage of the lower level of scrutiny at the Canada-US land border to gain entry to the United States. This makes it more difficult for the US to prevent the entry of illegal immigrants, not to mention people who may be threats to national security. US officials have often voiced their concerns that Canada needs to scrutinize more carefully those people allowed into the country.

The increasing number of immigrants coming from countries with terrorist problems is also likely to become a major issue at some point. Since 2001 and up to 2007, Canada took in 270 thousand immigrants from countries that have major problems with terrorism, either domestically or by inflicting it on other countries (by 2008 the number should be over 310 thousand based on a continuation of recent trends). These countries include: the Republic of Pakistan, Iran, Algeria, the United Arab Emirate, Lebanon, Morocco, Afghanistan, Saudi Arabia, Turkey, Egypt, Iraq, Kuwait, Somalia and the Democratic Republic of Sudan. The immigrants themselves are not screened adequately for security because of their large numbers and the relative scarcity of security personnel. Once these immigrants become Canadian citizens, they will have visa-free access to the United States. Canada's laws for deporting security threats and for dealing with terrorist threats, which were never strong, have been weakened by recent judicial decisions and the expiry of key protective provisions of the Anti-Terrorism Act.

The risk is that it would only take a small number of "Canadian terrorists" to cause big problems for bilateral Canada-US relations. And if the incident was bad enough, Canadians could even risk losing the visa-free access to the United States that they have so long taken for granted.

Existing Investment Issues

Canadian investments in the United States are subject to the Foreign Investment and National Security Act of 2007. Under it, certain investments that raise “national security” concerns must be approved by the Committee on Foreign Investment, which is comprised of representatives from the Departments of the Treasury, Defense, State, Homeland Security, Commerce and Energy. But, in effect, this has not resulted in any significant restrictions on Canadian investments in the United States.

On the other hand, there are more substantial restrictions on US investment in Canada. These include specific ownership restrictions in telecommunications, transportation, cultural industries, media and the financial sector. In addition, approvals are required under the Investment Canada Act for large takeovers (over \$295 million in gross assets in 2008 except for financial services, transportation services (including pipelines), uranium mining and cultural businesses where a \$5 million threshold applies). Specific guidelines have been issued for oil and gas acquisitions and for state-owned enterprises. The latter is not a particular concern for the United States, but the former is. During the recent election, Prime Minister Harper promised to ease some restrictions on foreign investment. They included: an increase in the threshold for reviews on foreign investments to \$1 billion; a rise in the allowed level of foreign investment in airlines to 49 percent from 25 percent; and permission for foreign companies to own Canadian uranium mines provided that Canada was given reciprocal rights (Vieira, 2008).

The big issue from Canada’s point of view is not investment restrictions *per se* but the domestic and foreign investment that would have been made in Canada if the border had not thickened. As Canada’s market is less than 10 percent of the United States, there should be no surprise about which side of the border investors chose given the proliferation of barriers at the border.

Dealing with the New US Administration

During the US election campaign, Senator Obama said that he would use the hammer to get a better deal under NAFTA with improvement in labour standards and the environment. Canadians can take some comfort from the fact that in raising these two issues he more likely had Mexico than Canada in mind. Moreover, it was not long before one of Obama’s advisors provided additional comfort when he told a Canadian diplomat that this statement was more for political consumption. This was confirmed by Senator Obama in a subsequent interview in *Fortune Magazine*, where the candidate himself admitted that “sometimes during campaigns the rhetoric gets overheated and amplified,” and stressed that he did not believe in unilaterally reopening NAFTA, but rather in “opening up a dialogue” with Canada and Mexico (Easton, 2008). With a large trade deficit and rising unemployment due to the financial crisis, there are always grounds for concern about protectionist measures emerging from the Congress. Nevertheless, the Canadian Government should take the President-elect at his word on his intentions with regard to renegotiating NAFTA and instead of being defensive should take the opportunity to open up constructive dialogue.

Terrorism and Contingency

It can not be denied that there is a risk of a terrorist attack either in Canada or from Canada, particularly with the large number of new immigrants coming from countries with terrorist problems. Americans have frequently voiced concerns about terrorist threats coming from Canada. These concerns were fueled by the arrest at the border of Ahmed Ressam in December 1999 on his way to blow up the LA International Airport and by the disruption of the 2006 bomb plot in Toronto. If there were to be a successful major terrorist incident involving Canada in any way, it is likely that the border would be temporarily closed as it was after September 11 and that there would be a further tightening of border security which would adversely affect the cross-border flow of trade and people. This tightening would be a reflexive action that would probably occur regardless of the new President's support for free trade with Canada.

There is thus a need for a contingency plan to keep the border operating in the event of a terrorist attack. It is only by establishing such a plan in advance, while heads are cool, that an overreaction can be avoided. The plan would include details of how border security could be stepped up with the minimal impact on trade and travel. It would also have to provide for the highest level of cooperation of police and intelligence agencies on both sides of the border. The Arar affair and its aftermath have made this task more difficult to achieve because of concerns over the possible repercussions for Canadian citizens and residents of unrestricted information sharing.

The Border

With the new Obama Administration taking over in the United States, the Canadian Government could just continue along its current track of cooperatively pursuing the NAFTA and SPP work plans and thereby chipping away at the income and productivity gap between Canada and the United States. But this is clearly not enough given the problems facing Canadian exporters and the continued deterioration in Canada's relative productivity and living standards.

The Competition Policy Review Panel clearly recognized this when it recommended that "addressing the thickening of the border should be the number one trade priority for Canada" and that "Canada should act to create a more seamless US border crossing process, focusing on priorities jointly identified by the Canadian Chamber of Commerce and US Chamber of Commerce in their February 2008 report, while responding to legitimate US security needs and funding and expediting vital border infrastructure." (2008, p.85)

The Canadian Government definitely needs to tackle the problems created by the thickening of the border head on by preparing an ambitious and far-sighted proposal for an open and secure border that addresses legitimate US security concerns, but eliminates all the unnecessary red tape that has been bottlenecking the border. The proposed new border arrangements should be integrated with the US Secure Border Initiative (SBI). The proposal should contain measures addressing all the problems discussed in this paper, including: making the NEXUS and FAST cards really work as they were intended for low risk cross border traffic and shipments; the speedy

introduction of drivers' licenses that qualify as WHTI-compliant real IDs; the establishment of adequate border infrastructure with effective pre-clearance; substantial reductions in inspections of pre-vetted low-risk shippers; the establishment of pre-clearance for containers originating in Canada under the Container Security Partnership Initiative; the elimination of inspection fees; harmonizing visa requirements; enhanced security screening of immigrants from countries with terrorism problems; the preparation of a joint contingency plan for keeping the border open in the event of a terrorist attack.

On the regulatory front, there should be stepped-up efforts to secure mutual recognition of regulatory standards so as to reduce the impediments to the flow of goods at the border. This could result in significant improvements in the flow of trade and people. With a new Administration taking over in the United States, the time is ripe for Canada to advance bold initiatives to make sure it becomes an integral part of a new 21st border-control system designed to protect North America. Otherwise there is a risk that, under President Obama as under President Bush, the border could continue to thicken, leaving exports stagnating and our economy lagging.

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References

- Alberts, Sheldon (2008) "Prentice sounds alarm over 'thickening' US border," *Financial Post*, May 07, p.A1.
- Auditor General of Canada (2007) *Report*, "Chapter 5, Keeping the Border Open and Secure – Canada Border Services Agency," October.
- Burt, Michael (2007) "Tighter Border Security and Its Effect on Canadian Exports," Report, International Trade and Investment Centre, Conference Board of Canada, June.
- Canadian Chamber of Commerce and US Chamber of Commerce (2008) *Finding the Balance: Reducing Border Costs While Strengthening Security*, February.
- Citizenship and Immigration Canada (2008) "Countries and territories whose citizens require visas in order to enter Canada as visitors," <http://www.cic.gc.ca/english/visit/visas.asp>
- Competition Policy Review Panel (2008) *Compete to Win: Final Report*, June
- Corcoran, Terence (2008) "US border is killing free trade," *Financial Post*, February 12.
- Easton, Nina (2008) "Obama: NAFTA Not So Bad After All," *Fortune Magazine* June, 18.
- Gastle, Chuck and Murdoch Martyn (2008) "NAFTA just not what it used to be: The inability to solve the softwood lumber dispute points to the trade deal's weakness," *The Toronto Star*, Mar 9.
- Globerman, Steven and Paul Storer (2008) *The Impacts of 9/11 on Canada-US Trade* (Toronto: University of Toronto Press).
- Goldfarb, Danielle and William BP Robson (2003) "Risky Business: US Border Security and the Threat to Canadian Exports," CD Howe Institute Commentary, No. 177, March.

- Goldfarb, Danielle (2007) "Reaching a Tipping Point: Effects of Post 9/11 Border Security on Canada's Trade and Investment," Report, International Trade and Investment Centre, Conference Board of Canada, June.
- Grady, Patrick (2008) "How Much Were Canadian Exports Curtailed by the Post-9/11 Thickening of the US Border?" May 30, <http://www.cic.gc.ca/english/visit/visas.asp>.
- Grady, Patrick and Kathleen Macmillan (1998) "Why is Interprovincial Trade Down and International Trade Up?" *Canadian Business Economics*, Vol.6, No. 4 (summer), pp.26-35.
- Hart, Michael (2008b) "What about the Border?" in *One Issue: Two Voices*, the Canada Institute, Woodrow Wilson International Center for Scholars, February, pp.8-13.
- Hart, Michael (2008b) "Canada blew it: Security barriers raised since 9/11 divide Canadians and Americans more than they ward off terrorists," *Financial Post*, February 12.
- Hufbauer, Gary and Clare Brunel (2008) "Economic Integration in North America," in *One Issue: Two Voices*, the Canada Institute, Woodrow Wilson International Center for Scholars, February, pp.2-7.
- Hufbauer, Gary Clyde and Jeffrey J. Schott (2008b) "NAFTA's Bad Rap It's sound bites and bumper stickers versus real facts and statistics," *The International Economy*, Summer, pp.19-23.
- McKenna, Barrie (2008) "Dead end for free trade," *Globe and Mail*, May 16.
- Moens, Alexander and Michael Cust (2008) "Saving the North American Security and Prosperity Partnership: The Case for a North American Standards and Regulatory Area," Fraser Institute Digital Publication, March.
- North American Competitiveness Council (2008) *Meeting the Global Challenge: Private Sector Priorities for the Security and Prosperity Partnership of North America*, 2008 Report to Leaders, April.
- Orrenius, Pia and Daniel Streitfeld (2006) "TN Visas: A Stepping Stone Toward a NAFTA Labor Market" Federal Reserve Bank of Dallas, *Southwest Economy* Issue 6, November/December.
- Ryan, Missy (2007) "Trade, travel issues at US border rankle Canada," *Reuters*, June 25.
- US Customs and Border Patrol (CBP) (2008a) "Reinstatements to the Northern Border," May 19. http://www.cbp.gov/xp/cgov/border_security/border_patrol/reinstate_nborder.xml.
- US Customs and Border Patrol (2008b) "Which countries participate in the Visa Waiver Program?" https://esta.cbp.dhs.gov/esta/WebHelp/ESTA_Screen-Level_Online_Help_1.htm#Who%20is%20eligible%20to%20use%20the%20Visa%20Waiver%20Program?
- US Department of Homeland Security (DHS) (2005) "Fact Sheet: Secure Border Initiative," November 2. http://www.dhs.gov/xnews/releases/press_release_0794.shtm.
- US Government Accountability Office (GAO) (2008) "Secure Border Initiative (SBI) Fiscal Year 2008 Expenditure Plan Shows Improvement, but Deficiencies Limit Congressional Oversight and DHS Accountability," Report Number GAO-08-739R, June 27.
- Vieira, Paul (2008) "Harper to loosen foreign ownership limits for airlines, uranium mines," *Financial Post*, September 12.
- Whitman, Janet (2008) "American voters to have say on NAFTA: Reopening agreement could put everything from labour standards to energy on the table," *National Post*, February 27