

Transatlantic Cooperation in Space: EU-Canada Free Trade Agreement*

Luise Weber-Steinhaus¹

Airbus Defense and Space

Master of European Studies (M.E.S.)

Master of Arts (M.A.) with honors

luisews@gmail.com

ABSTRACT

National governments are keenly aware of the need for investment in space. Canada, as a formal cooperating state in the European Space Agency (ESA), and Germany, as a leading member state of ESA, are interlinked in Europe's space endeavours. Beyond ESA, Germany and Canada additionally have a strong history of bilateral cooperation on a range of space projects.

This paper discusses the novel interdependencies between clear national and now supranational space policies, using the examples of the Canada-European Union (EU) Com-

prehensive Economic and Trade Agreement (CETA). The agreement covers most aspects of the EU-Canada bilateral economic relationship and includes space. The paper focuses on international space policies, strategic bilateral co-operation, and technical accomplishments. It takes a closer look at German-Canadian collaboration in space programs and offers some reflection on the effect of both the EU and ESA's transatlantic involvement in space.

Key words: CETA, Canada, EU, Europe, ESA, Germany, free trade, aerospace, space, international cooperation, transatlantic, economy.

* Recibido: 6 de diciembre de 2014 / Modificado: 7 de diciembre de 2014 / Aceptado: 7 de diciembre de 2014

Para citar este artículo

Weber-Steinhaus, L. (2014). Transatlantic Cooperation in Space: EU-Canada Free Trade Agreement. *OASIS*, 20, 81-94.

¹ **DISCLAIMER:** This article reflects exclusively the opinion of the author.

Cooperación entre ambos lados del Atlántico en el sector espacial: tratado de libre comercio entre la UE y Canadá

RESUMEN

Los Gobiernos nacionales son plenamente conscientes de la necesidad de invertir en el espacio. Canadá, en tanto Estado que ha tenido una colaboración formal con la Agencia Espacial Europea (ESA), y Alemania, como uno de los Estados miembros líderes de ESA, están estrechamente vinculados entre sí en las iniciativas espaciales de Europa. Además de su relación a través de ESA, Alemania y Canadá poseen por añadidura un sólido historial de cooperación bilateral en una serie de proyectos espaciales.

Este trabajo razona la novedosa interdependencia que se plantea entre políticas espaciales claramente nacionales, y en la actualidad supranacionales, citando ejemplos del Comprehensive Economic and Trade Agreement (Acuerdo Económico y Comercial Global - CETA) entre Canadá y la Unión Europea. El convenio abarca la mayoría de los aspectos de la relación económica bilateral entre la UE y Canadá, incluso el ámbito espacial. El trabajo se centra en las políticas espaciales internacionales, la cooperación bilateral estratégica y los logros técnicos. Examina más de cerca la

colaboración germano-canadiense en programas espaciales, y presenta una cierta reflexión sobre las consecuencias de la participación transatlántica tanto de la UE como de la ESA en el ámbito espacial.

Key words: CETA, Acuerdo Económico y Comercial, Canadá, UE, ESA, Alemania, espacio, participación transatlántica, cooperación internacional.

INTRODUCTION

Space is playing an ever-growing role in the everyday life of citizens, governments, and industry. We rely on daily weather forecasts, which are provided by meteorological satellites, precise positioning, which is brought to us by navigation satellites and precise mapping of Earth's surface for the prevention of natural disasters and security by Earth observation and radar satellites².

The EU –with a population of over 500 million– and Canada, which is the world's second largest country in terms of landmass with a population of just over 30 million – both have a vested interest in space applications.

As space projects are costly, they have always been based on international cooperation, the most prominent example being the International Space Station (ISS).

This international cooperation is governed by a special International Government Agreement (IGA) that has its basis in the UN Treaties

² See Weber-Steinhaus (March 2014). Accessible at: <http://online.liebertpub.com/doi/abs/10.1089/space.2013.0039>

(United Nations Office for Outer Space Affairs, 1967) and customary international law.

The ties between Europe and Canada have long been established, but the new Comprehensive Economic and Trade Agreement (CETA) will take the transatlantic cooperation to a higher level. If the deal is signed, it could be the most far-reaching free trade agreement to date signed between the EU and one of the G-7 members. It is expected to boost bilateral trade by 20 percent amounting to 26 billion Euros (37 billion Canadian Dollars) a year (Roberts, 2014).

This paper highlights CETA's individual chapters on goods, labor and services and how they might apply to the space community. It will also take a closer look at German-Canadian collaboration in space programs and offers some reflection on the effect of both the EU and ESA's transatlantic involvement in space.

STATUS QUO: CANADA AND EUROPE IN SPACE

The European Space Agency & The European Union

There are two distinct European stakeholders in Space: On the one hand, the European Union (EU), which is a supranational legal body comprised of 28 Member States and on

the other hand, the European Space Agency (ESA), which is an intergovernmental organization of European States that want to cooperate in space research and technology as well as in space applications. ESA currently comprises 20 member states, some of which are not part of the EU (Norway and Switzerland)³.

The European Space Agency & The Canadian Space Agency (CSA)

The Canadian Space Program is headed by the Canadian Space Agency (CSA) and its mandate is "to promote the peaceful use and development of space, to advance the knowledge of space through science and to ensure that space science and technology provide social and economic benefits for Canadians" (Canadian Space Agency, 2014).

Canada has been an associate member of ESA since 1979 and renewed its membership in 2010 for a further ten years (European Space Agency, 2010). Through the association agreement Canada participates in a number of ESA programs and provides, for example, scientific instruments for ESA probes and satellites. By contributing to the general budget Canada can participate in ESA's so-called optional programs and take part in ESA's decision-making bodies such as the ESA Council⁴. In the framework of ESA's geo-return or industrial return policy Canadian firms can bid for and receive contracts to work on ESA programs.

³ Switzerland and Norway are, however, members of the European Economic Area (EEA) For more information, see European Space Agency (2014).

⁴ For more information, see European Space Agency (2014).

Whether the new transatlantic cooperation in the form of the EU-Canada Economic Trade Agreement will have an impact on how the countries cooperate in the space domain will be investigated further below.

EU Space Competence and EU Member States

The EU's competence in space is relatively new and some might argue that it is expanding its competences significantly in an area, which was previously reserved to Member States who cooperated in ESA programs.

Now under Article 4 and Article 189 of the Treaty on the Functioning of the European Union (TFEU), known as the second treaty within the Lisbon Treaty, the European Union (EU) has gained an explicit space competence to “draw up a European space policy” to “coordinate the efforts needed for the exploration and exploitation of space” and to “establish any appropriate relations with the European Space Agency [ESA]”. This has brought space to the supranational level and added a new player – namely, the EU – into the space domain. This competence is often described as a “parallel” competence “as the exercise of this competence will not result in Member States being prevented from exercising theirs” (Official Journal of the European Union, 2010). This means national governments may still continue with their own space programs.

EU-ESA Framework Agreement

Under Article II of the ESA Co-operation Convention, the agency draws up and implements

a long-term European Space Policy (ESP) in accordance with its Member States. Since establishment of the joint European Space Council in 2004, the ESP is defined together with the EU. The EU-ESA Framework Agreement and the provisions in the Lisbon Treaty are the bedrock on which the cooperation of the two institutions is founded. ESA, however, coordinates the European space program and implements the activities and programs in the space field for its member states and the EU. At the ESA Ministerial Council in December 2014, the future collaboration between the EU and its member states was decided.

EU-CANADA COMPREHENSIVE ECONOMIC AND TRADE AGREEMENT (CETA)

CETA: Scope & Chronology

The EU-Canada Comprehensive Economic and Trade Agreement (CETA) is a free trade agreement between Canada and the European Union. The agreement is under negotiation since 2004.

The aim of the free trade agreement is to promote bilateral trade by eliminating tariffs, reducing non-technical barriers as well as supporting the flow of goods, services, investment and labor. The ultimate goal is economic growth, job creation and the harmonization of standards.

An agreement in principle was signed by Canadian Prime Minister Stephen Harper and former European Commission President José Manuel Barroso on October 18, 2013.

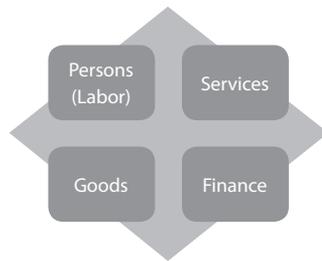


DIAGRAM 1. CETA - THE FOUR ECONOMIC FREEDOMS

The negotiations were concluded one year later on August 5, 2014. The trade agreement was officially presented and initialized by Harper, Barroso and the European Council President Herman van Rompuy during the EU-Canada summit, which was held on Parliament Hill in Ottawa on September 26, 2014.

Prior to that, the consolidated CETA text was leaked to the German media, which started a debate about investor protection clauses and led Germany, the biggest trading power in the EU as well as contributor to ESA, to threaten to block the signature of the agreement (Wagstyl, 2014). The background is that a lot of the areas in which CETA operates are not exclusive EU areas of competence, but rather areas of shared competence between the EU as a supranational body and its Member States.

Despite Germany's objections the European Commission and Canada initialed the CETA text during the EU-Canada Summit. Article 207 TFEU grants the European Commission an exclusive competence in international trade, which some Member States see as an infringement on their sovereignty.

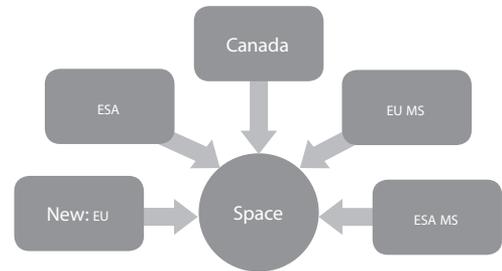


DIAGRAM 2. THE DIVISION OF THE SPACE COMPETENCE IN EUROPE

The next steps in the process include the translation of the CETA text into 24 EU languages and the ratification by the Canadian Parliament, the European Parliament and the 28 EU Member States – a process which can take up to two years. The question arises whether the free trade agreement will already be put into practice prior to all the EU Member States having ratified the text.

CETA: WHY?

Both Canada and the EU are members of the World Trade Organization (WTO), so the question arises why both stakeholders have decided to conclude a bi-lateral trade deal and grant each other most-favorite-nation treatment.

The commercial relations between Canada and the EU are growing. With CETA, Canada will become the first highly developed economy to obtain privileged access to the EU's 500 million consumers in 28 Member States, which means an increase in jobs, but also in investment. Currently, Canada's ties to the US

outweigh those to Europe⁵, but if CETA comes close to fulfilling its potential, the benefits for both Canadian and European companies could be extraordinary. Canada is looking for inward investment, especially in the areas of hardware and infrastructure. And as relates to the aerospace market, both Canada and the EU might be able to bypass US ITAR⁶ regulations, should (government) procurement fall under the trade deal.

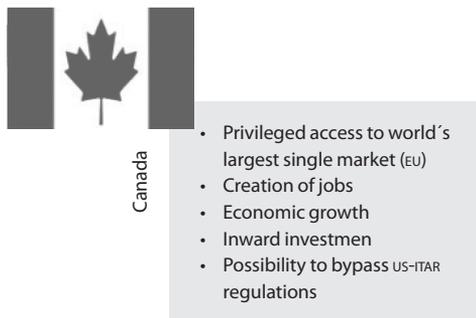


DIAGRAM 3. CETA: WHAT'S IN IT FOR CANADA?

With growing energy concerns and conflicts just outside its borders, the EU is looking across the Atlantic for increased market access. The EU is especially interested in Canada's raw materials and wants access not just to the Canadian, but also to the US market. CETA is therefore thought to act as a blue print for a future EU-US Transatlantic Trade and Investment Partnership (TTIP).

The US, Mexico and Canada have already liberalized their trade under the North American

Free Trade Agreement (NAFTA). CETA's regulations will open the door to European companies to compete with US exporters on the Canadian market. This will level the playing field, as the EU will benefit from preferential treatment going beyond NAFTA in the area of government procurement, and in certain service sectors, such as maritime transport and possibly space transportation (EU Commission, 2013).



DIAGRAM 4. CETA: WHAT'S IN IT FOR THE EU?

A trend can be observed in that trade is conducted more and more between bi- or multi-lateral trading blocs grouped by continents, rather than between countries. Therefore some might argue that the WTO has become a political talking shop and that it has lost part of its steam.

This is definitely the case with the European-Canadian transatlantic free trade agreement, which is thought to act as a blue print for the EU-US free trade agreement (TTIP). Should

⁵ In 2010 about 75% of Canada's trade was with the US. For more statistics, see Gauthier & Guevin-Nicoloff (2011).

⁶ ITAR = International Traffic in Arms Regulations.

both CETA and TTIP come into force, we might see in a next step the creation of a whole new trading block in the form of a multilateral trade agreement between the WTO members Canada, EU, Mexico and the US being established in the future, acting as a counter balance to the Asian market.



WTO

- Both EU and Canada Members
- World Trade organisation (WTO) has lost steam
 - Trade hampered by politics
- Trend: trading blocks grouped by continents, rather than bi-lateral alliances

DIAGRAM 5. INTERNATIONAL TRADE: CANADA, EU & THE WTO

CETA AND SPACE

The aerospace and defense market is a highly regulated market, which benefits from national public subventions. At first sight it looked as if CETA would not have any major effects on the space sector beyond the already existing cooperation in the framework of the Canadian association agreement with ESA or bi-lateral agreements between Canada and the EU Member States.

CETA*, however, explicitly covers the areas of space insurance and (aerospace) transport and will remove restrictions on trade and financial services. Article 7(1) in CETA allows ac-

cess to space launching and liability insurance, including satellite insurance:

1. Article 7(1) applies to the cross-border supply of or trade in financial services [...] with respect to:

(a) insurance of risks relating to:

(i) maritime transport and commercial aviation and space launching and freight (including satellites), with such insurance to cover any or all of the following: the goods being transported, the vehicle transporting the goods, and any liability deriving therefrom; and (ii) goods in international transit; [...]

CETA, once implemented, will foster regulatory cooperation especially regarding harmonization of standards, general rules and regulations in the space sector.

It is also expected that CETA will have a positive effect on transatlantic labor mobility and will lead to investment in the High Tech sector, beyond the Investment Canada Act, which is already in place (Minister of Justice, 1985). Furthermore, CETA tariffs are expected to drop close to zero, which will make it easier to trade equipment between Europe and Canada.

The EU-Canada Impact assessment lists the aerospace sector as one of the key beneficiaries, should CETA be implemented. The main sectors of interest for Canadian and EU companies are in the field of aerospace and defense, information and communication technologies, life sciences, services and technologies (Foreign Affairs Trade and Development Canada, 2012).

Existing EU-Canadian Agreements such as the Air Transport Agreement, which was

signed in December 2009 (European Community, 2009), will remain in force under CETA and complement cooperation aims in the field of aerospace. The agreement, negotiated under Canada's Blue Sky Policy, provides flexibility for airlines to offer more convenient air services and lower fares for the benefit of travelers, shippers, as well as the tourism and business sectors (Foreign Affairs Trade and Development Canada, 2012).

Nevertheless, there are some questions regarding CETA, which will only become clearer once the EU-Canada free trade agreement comes into force.

These questions include:

1. Will EU nationals and companies be treated according to the most-favorite-nation principle and receive "national treatment" in Canada and vice versa?
2. Will the EU have a security exemption under CETA and will it be able to bid on defense and strategic government contracts?
3. Will there be a mutual recognition of patents, certificates and degrees under CETA?

If all of these questions are answered in the affirmative, Canada will effectively join the European single market.

Limitations to CETA

As space applications are often dual-use in nature and linked to national security, they may be exempted from free trade agreements, such as CETA.

This traditionally applies to contracts, which are linked to secure government communication as well as Research & Development (R&D). Both of the aforementioned areas may be exempted from free trade for geo-political reasons.

The national telecommunications network often has to be run by a national provider and Research & Development is seen as a competitive advantage and each country's backbone to success. Therefore countries do not often open their strategic assets and core capabilities to free trade regulations.

Foreign companies, however, are already able to bid on defense contracts, dual-use space contracts and strategic ground station contracts under so-called "Offset" or in Canada known as "Industrial and Regional Benefits (IRB)" clauses. The IRB or Offset policies ensure that defense and security procurements generate return for the national industry and citizens. Industry Canada defines the policy as follows: "Canada's Industrial and Regional Benefits (IRB) Policy ensures that Canadian industry benefit from Government defense and security procurement. The Policy requires companies that win defense and security contracts with the Government of Canada place business activities in Canada at the same value of the contract" (2013).

The Policy requires companies to undertake business activities in Canada valued at 100 percent of the value of the defense or security contract. The Offset percentage may, however, differ from industry and from country to country.

DIFFICULTY: INVESTOR DISPUTE SETTLEMENT (ISDS)

Whilst both the Canadian government and the European Union are promising economic growth, foreign investment and jobs, NGOs and other groups are scared that with CETA not just customs duties will disappear but that CETA will also lead to the disappearance of protective regulations for workers, agricultural products, the environment, and lead big corporations to sue governments under investor protection rules, which are embedded in CETA.

Under the so-called “Investor-State-Dispute Settlement Clauses (ISDS)”, CETA allows foreign corporations to sue states if they claim to have suffered losses because a state has violated its non-discriminatory treatment obligations (European Commission, Directorate General for Trade, 2014) or because of a violation of the guaranteed investment protection.

The ISDS clauses are thought to give foreign investors increased security in countries they may otherwise not invest in. Should political pressures arise in a country, companies have the possibility to bring their claims in front of arbitration tribunals, which are embedded in CETA. These investor protection clauses are also included in NAFTA, but under CETA there is to be an increased degree of transparency for NGOs and other stakeholders.

However, public sector bodies and NGOs, especially, share a concern that companies owned by hedge funds might sue governments under the investor protection rules, if subsequent legislation impacts on their revenues.

BI-LATERAL AGREEMENTS: CANADIAN-GERMAN COOPERATION IN SPACE EXAMPLE

Multilateral agreements such as CETA do not replace bi-lateral agreements between countries, especially in the space domain. German-Canadian cooperation in space dates back to 1971, even before Canada became an associate member of ESA (Federal Ministry of Education and Research - International Bureau, 2011). The cooperation received another push in 2012, during the state visit of German Chancellor Angela Merkel to Canada. One of the topics on the agenda discussed with Prime Minister Stephen Harper was bi-lateral cooperation in the aerospace sector between the two countries. This led to the signature of a Memorandum of Understanding between the German Aerospace Centre (DLR), the Canadian Space Agency (CSA) and the Canada Centre for Mapping and Earth Observation (CCMEO, formerly Canada Centre for Remote Sensing) in 2013 (Federal Ministry of Education and Research, 2014). Later in the same year, a German-Canadian Framework Agreement on space science and technology was signed during the International Astronautical Conference (IAC) in Beijing, China. The Framework Agreement focused on the areas of Earth observation, satellite operations, space exploration systems and space technology.

WHY SHOULD CANADA AND GERMANY COOPERATE BILATERALLY IN SPACE?

Cooperation is defined as the action or process of working together to the same end (Oxford,

2014). Canada and Germany both possess a legal regulatory infrastructure, a national space program and adhere to a national and international legal and political framework in space.

The German Aerospace Center (DLR) and the German government are interested in working together with Canada in the areas of earth observation and remote sensing. Canada is building the RADARSAT-2 Earth Observation fleet and is a world leader in C-Band Radar systems.

Germany, on the other hand, is specialized in X-Band Radar and sees a potential in exchanging data from the German earth observation satellites TerraSAR-X/Tandem-X and RADARSAT-2 and future RADARSAT Constellation data. The German-Canadian Cooperation in space has already borne fruits. One flagship project is the strategic DLR ground station L/S/X-Band Antenna in Inuvik, Northwest Territories, Canada. From here the German Aerospace Center can download TerraSAR-X and Tandem-X data. Providing Canada with an access to a strategic ground station in Neustrelitz, Germany is currently being negotiated.

As the second largest country in the world, with a variety of landscapes and climatic conditions, Canada sees the practical and economic benefits of using space for Earth observation. Therefore Earth observation and protecting natural resources are a key priority of the Canadian Space Program (CSP) (2014).

Germany's interests lie in the areas of security, energy and the Arctic. Germany possesses a vast experience in ice detection, ice monitoring, maritime surveillance (ship de-

tection) and detecting secure shipping routes. Monitoring the Northwest Passage, for example, with the help of UAVS is an area in which Germany and Canada are already working together. Another field of cooperation is robotics. Canada, for example, built the Canadarm atop the International Space Station (ISS).

IMPACT OF CETA ON THE CANADIAN AND EUROPEAN ECONOMIES

The Canada-European Union (EU) Comprehensive Economic and Trade Agreement (CETA) opens the market for Canadian companies to bid on European calls for tender and for European companies to bid at the Canadian industrial and government level. Through the trade agreement, both countries will gain increased access to the respective public procurement markets.

The impact of CETA and the change it invokes in the market will be perceived much more in Canada, where European competitors will be able to bid at the provincial and local level of government.

Although Canada is a part of NAFTA, opening up the market to foreign investment from 28 EU Member States will lead to a change in perception and to a change in the number of foreign bidders on the Canadian market.

The EU, on the other hand, already has 28 Member States, which by means of non-discrimination are able to bid in other countries within the EU. Canada entering the market will in terms of trade feel like a 29th EU Member State entering the European Common Market.

SUMMARY: CETA & SPACE

The Canada-European Union (EU) Comprehensive Economic and Trade Agreement (CETA) is going to open up markets and bring mutual benefits to both Canada and the EU. The impact of CETA on the (aero)space sector is currently limited to insurance, transportation and qualified labor. The agreement could have a greater impact if Canada and the EU decide to harmonize some more technical standards as envisaged in the CETA chapter on technical barriers to trade (TBT) (EU Commission, 2013).

Additionally, CETA could have a possible 'added-value' by providing an impulse for both the EU and ESA to agree on their future division of responsibilities.

The EU currently only has a parallel competence in space under Article 4(3) and Article 189 TFEU, which is shared with its Member States.

The EU's competence in common transport policy is regulated in Article 90 TFEU. The EU also has a shared competence over aviation, but exclusive competence over aviation safety (EASA Regulation 216, 2008); this is part of the single skies (one market) policy.

Given future developments for aerospace policy, this might leave the EU to follow through suborbital transport under its competence in the transport area and leave science missions to the ESA. This would help allocate competence over aerospace transport to the EU. Leaving space exploration and scientific missions to the ESA.

CONCLUSION

Space projects are seldom accomplished by one nation alone, but are rather characterized by international cooperation and trading partnerships. Article IX of the Outer Space Treaty (OST) explicitly states that "In the exploration and use of outer space, including the Moon and other celestial bodies, States Parties to the Treaty shall be guided by the principle of cooperation and mutual assistance and shall conduct all their activities in outer space, including the Moon and other celestial bodies, with due regard to the corresponding interests of all other States Parties to the Treaty" (United Nations Office for Outer Space Affairs, 1967).

In 2013 Canada was the EU's 12th most important trading partner, accounting for 1.7% of the EU's total external trade. In the same year the EU was Canada's second most important trading partner, after the U.S., with around 9.8% of Canada's total external trade (EU Commission, 2014). Over the next years the commercial relations between Canada and the EU are expected to grow even closer.

Studies say that the trade agreement will boost bilateral trade in goods and services between Canada and EU by over 20 per cent, fostering growth and employment on both sides of the Atlantic (EU Commission, 2013). CETA will only have a positive impact on the space sector if Canada and the EU decide to harmonize some of the more general rules and regulations. Bi-lateral relations between the EU's Member States and Canada are also expected to grow further. Multilateral trading partnerships such as the Canada-European Union (EU) Comprehensive Economic and

Trade Agreement (CETA) will not replace long-established bi-lateral trading partnerships.

CETA, however, is thought to open new market opportunities for companies in both Canada and the EU. According to Prime Minister Stephen Harper: “This [historic free trade agreement] is deeper in ambition and broader in scope than any other trade agreement in Canadian history. It will reshape our commercial relationship with the world’s largest market and create thousands of jobs for Canadians” (2014).

REFERENCES

- Canadian Space Agency (2014). 2014-15 Estimates, Report on Plans and Priorities, Catalogue Number: ST96-7/2014E-PDF. Canadian Space Agency Communications and Public Affairs. Retrieved from: <http://www.asc-csa.gc.ca/pdf/eng/publications/rpp-2014-eng.pdf>
- Canadian Space Agency (2014, October 03). RADARSAT-2. Retrieved from: <http://www.asc-csa.gc.ca/eng/satellites/radarsat2/default.asp>
- ESA Convention and Council Rules of Procedure (2010, December). Article II. *ESA Communications ESA SP-1317*.
- EU Commission (2013, October 18). DG Trade, Facts and figures of the EU-Canada Free Trade deal. Retrieved from: European Commission: <http://trade.ec.europa.eu/doclib/press/index.cfm?id=974>
- EU Commission (2014, October 9). DG Trade, Facts and figures of the EU-Canada Free Trade deal. Retrieved from: <http://ec.europa.eu/trade/policy/countries-and-regions/countries/canada/>
- European Commission, Directorate General for Trade (2014, September 26). CETA Consolidated Text (5 August 2014), Section 3. 156. Retrieved from: http://trade.ec.europa.eu/doclib/docs/2014/september/tradoc_152806.pdf
- European Community (2009). Agreement on Air Transport between Canada and the European Community and its Member States. Retrieved from: http://ec.europa.eu/transport/modes/air/international_aviation/country_index/doc/canada_final_text_agreement.pdf
- European Space Agency (2010, December 15). ESA and Canada renew partnership in space science and technology. Retrieved from: http://www.esa.int/About_Us/Welcome_to_ESA/ESA_and_Canada_renew_partnership_in_space_science_and_technology
- European Space Agency (2014, February 10). Ministerial Council Meetings. Retrieved from: http://www.esa.int/About_Us/Law_at_ESA/Ministerial_Council_Meetings2
- European Space Agency. (2014). New Member States. Retrieved from: http://www.esa.int/About_Us/Welcome_to_ESA/New_Member_States
- Federal Ministry of Education and Research - International Bureau. (2011). Canada. Retrieved from: <http://www.internationales-buero.de/en/1004.php>
- Federal Ministry of Education and Research (2014, May 26). Key Areas of Cooperation between Germany and Canada. Retrieved from: <http://www.bmbf.de/en/5244.php?hilit=Canada>
- Foreign Affairs Trade and Development Canada (2012, February). Canada-European Union: Comprehensive Economic and Trade Agreement (CETA) Negotiations, Annex 5, Initial Strategic Environmental Assessment. Retrieved from: <http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/eu-ue/initialEA-ceta-aecgEEinitiale.aspx?lang=eng>

- Gauthier, A. & Guévin-Nicoloff, R. (2011, September 15). *Canadian Trade and Investment Activity*. Canada: Parliament of Canada Retrieved from: <http://www.parl.gc.ca/Content/LOP/ResearchPublications/2011-06-e.htm>
- Industry Canada. (2013, October 11). Industrial and Regional Benefits Definition. Industry Canada. Retrieved from: <https://www.ic.gc.ca/eic/site/042.nsf/eng/home>
- Minister of Justice. (1985, June 20). Investment Canada Act. Retrieved from: <http://laws-lois.justice.gc.ca>
- Official Journal of the European Union* (2004, August 6). Framework agreement between the European Community and the European Space Agency. *Official Journal of the European Union*, 64-68.
- Official Journal of the European Union*. (2010, March 30). Treaty on the Functioning of the European Union. *Consolidated Versions*, 4(3) and 4(4).
- Oxford. (2014). Cooperation. Oxford Dictionary Online. Retrieved from: <http://www.oxforddictionaries.com/definition/english/cooperation>
- Prime Minister of Canada Stephen Harper. (2014, September 18). PM to host Canada-European Union Summit. Retrieved from: <http://www.pm.gc.ca/eng/news/2014/09/18/pm-host-canada-european-union-summit>
- Regulation (EC) No 216/2008. (2008, February 20). European Parliament and of the Council (20 February 2008) on common rules in the field of civil aviation and establishing a European Aviation Safety Agency. Retrieved from: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02008R0216-20130129&from=EN>
- Roberts, H. (2014, September 26). Canada, Europe sign long-awaited free trade deal. *Toronto Sun*. Retrieved from: <http://www.torontosun.com/2014/09/26/canada-europe-sign-free-trade-deal>
- Schmidt-Tedd, B. (2011). The relationship between the EU and ESA within the framework of European Space Policy and its consequences for space industry contracts. In Smith, L. J. & Baumann, I. *Contracting for Space* (pp. 26-28). Farnham: Ashgate.
- Treaty on the Functioning of the European Union, Consolidated Versions (2010/C 83/01). (2010, March 30). Article 189(2). *Official Journal of the European Union*.
- United Nations Office for Outer Space Affairs (1967, October 10). UN Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space, including. Retrieved from: http://www.oosa.unvienna.org/pdf/publications/ST_SPACE_061Rev01E.pdf
- United Nations Office for Outer Space Affairs (1967). UN Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, Article IX. Retrieved November from: http://www.oosa.unvienna.org/pdf/publications/ST_SPACE_061Rev01E.pdf
- Wagstyl, S. (2014, September 25). Germany expresses concerns about US and Canada trade deals. *Financial Times Online*. Retrieved from: <http://www.ft.com/intl/cms/s/0/671841da-44c1-11e4-bce800144feabdc0.html#axzz3EdTnAXUj>
- Weber-Steinhaus, L. (2014, March). Germany's role within the European Space Policy; Encouraging National versus European Space Industry Applications. *New Space*, 2(1), pp. 10-15. Retrieved from: <http://online.liebertpub.com/doi/abs/10.1089/space.2013.0039>

GLOSSARY

- CCMEO – Canada Centre for Mapping and Earth Observation
- CETA – Canada-European Union (EU) Comprehensive Economic and Trade Agreement
- CSA – Canadian Space Agency
- CSP – Canadian Space Program
- DLR – German Aerospace Center
- EASA – European Aviation Safety Agency
- EEA - European Economic Area
- ESA – European Space Agency
- ESP – European Space Policy
- EU – European Union
- FTA – Free Trade Agreement
- IAC – International Astronautical Conference
- IRB – Industrial and Regional Benefits
- ISDS – Investor-State-Dispute Settlement Clauses
- ITAR – International Traffic in Arms Regulations
- NAFTA – North Atlantic Treaty Organization
- NGO – Non Governmental Organization
- OST – Outer Space Treaty
- UAV – Unmanned Aerial Vehicle
- UNOOSA – United Nations Office for Outer Space Affairs
- TBT – Technical Barriers to Trade
- TEFU – Treaty on the functioning of the European Union
- TTIP – EU-US Transatlantic Trade and Investment Partnership
- WTO – World Trade Organization