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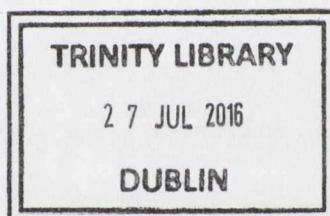
*Ollscoil Átha Cliath
Coláiste na Tríonóide
Scoil an Dlí*

**REGULATION OF SUBSIDIES IN THE CIVIL AIRCRAFT INDUSTRY
UNDER THE WTO FRAMEWORK**

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*Thesis submitted for the Degree of Doctor of Philosophy in Law
Supervised by
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Dublin, Ireland
2016



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Declaration

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Summary

The regulation of subsidies has long been an intractable issue in terms of international trade regulation. When it involves the civil aircraft industry, the question of subsidies is even more complex. Conflicts over the use of aircraft subsidies date back to the GATT period and have lingered for decades. As the most important global organisation dealing with trade rules between nations, the WTO has a critical role in dealing with the subsidy problem in the civil aircraft industry.

The primary aim of this thesis is to examine whether WTO rules on subsidies are effective in dealing with issues that are unique to the civil aircraft industry. It mainly carries out qualitative research on the application of the WTO rules in the sector. The thesis first critically examines the WTO subsidy rules since the GATT period. Then, the characteristics of the civil aircraft industry that render subsidy issues in that industry more contentious are discussed. It also investigates the conflicts over the use of aircraft subsidies that have developed since the GATT period. After that, the thesis goes on to assess the rulings of the WTO adjudicating bodies on legal issues regarding the subsidisation of the aircraft sector. This thesis also examines the effectiveness of the WTO's dispute settlement mechanism in the context of the civil aircraft industry. Although the civil aircraft market has been dominated by the US and the EU, China, amongst others, has entered the sector in a significant way. Thus this thesis pays particular attention to the use of aircraft subsidies in China and their possible legal consequences under the WTO legal framework.

On the basis of the foregoing analysis, this thesis concludes that the WTO subsidy rules and its dispute settlement mechanism are not fully effective in dealing with the subsidy problem in the civil aircraft industry. The application of stringent disciplines to the industry is impractical and could discourage competition and stifle innovation. Finally, this thesis ventures in search of a solution to the legal problems of subsidy use that it has highlighted. It concludes by indicating that these historical and ongoing issues can be ameliorated, and to this end suggests workable changes to existing international legal arrangements in this area.

Acknowledgements

After four years of research, there are a number of people to whom my gratitude is owed. I wish to thank, first and foremost, my PhD supervisor Dr. Caoimhin MacMaolain, who provided me essential guidance throughout this research with incisive expertise. The completion of this thesis would not have been possible if it were not for his constant encouragement and advice.

I also wish to thank Professor Alex Schuster, Professor Neville Cox and Kelley McCabe at the Law School of Trinity College Dublin, for their support during my research work over these years. I must sincerely thank Dr. Joseph Harrington, Dr. Álvaro Paúl, Dr. Gerald Byrne, Dr. Brian Barry, Gerard Downey, Joel Hanisek for commenting or proofreading parts of my thesis. I thank all my friends at Trinity College Dublin, especially those in the Chinese Society; I would never have had such a pleasant four years' time in Ireland without their company.

I also wish to thank Professor Shouping Li at the Law School of Beijing Institute of Technology, for his constant support and guidance over many years. I am also grateful to the China Scholarship Council, for sponsoring me in the pursuit of this PhD. Finally, I would like to thank my parents and Yingfei, for their love and patience during the exciting yet sometimes arduous journey.

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Chapter 1 - Introduction

The regulation of subsidies is a complex issue with great legal, political and economic implications.¹ As will be discussed in chapter two of this thesis, subsidies are viewed as protectionist and trade-distorting. However, they can also be a useful government instrument for pursuing important and wholly legitimate economic and social policy objectives.² As a result, there are different attitudes towards government subsidisation among countries. The question of subsidy regulation has long been intractable in terms of international trade regulation. It has even been said that no question in international trade law is more contentious than this one.³

However, subsidy issues become more intractable when they involve the civil aircraft industry. Conflicts over the use of aircraft subsidies date back to the GATT period and have lingered for decades.⁴ The civil aircraft industry is of great significance both from economic and political perspectives. As will be discussed in detail in chapter three, it can play an essential role in national economies in terms of generating revenue, promoting exports and creating jobs, etc.⁵ In addition to its significance in economic terms, the industry also has great strategic and political importance due to its close connection with

¹ Claire Micheau, *State Aid, Subsidy and Tax Incentives under EU and WTO Law* (Kluwer Law International 2014), at 1.

² Michael Trebilcock, Robert Howse and Antonia Eliason, *The Regulation of International Trade* (4th edn, Routledge 2012), at 355.

³ Andreas F Lowenfeld, *International Economic Law* (2nd edn, Oxford University Press 2008), at 216.

⁴ The General Agreement on Tariffs and Trade (GATT 1947) was signed in 1947 during the course of broader negotiations aimed at the establishment of the International Trade Organisation (ITO). However, the US Congress failed to ratify the ITO, and therefore the GATT took over its role. From 1948 until the establishment of the WTO, the GATT was the main international agreement regulating trade between nations. It functioned as an organisation and was considered as the predecessor to the WTO. See John H. Jackson, *The Jurisprudence of GATT and the WTO: Insights on Treaty Law and Economic Relations* (Cambridge University Press 2000), at 17; Yi-Chong Xu and Patrick M. Weller, *The Governance of World Trade: International Civil Servants and the GATT/WTO* (Edward Elgar Publishing 2004), at 61.

⁵ For instance, the civil aircraft industry is one of the largest exporting industries in the US, and the trade surplus resulting from the civil aircraft industry is higher than that resulting from any other manufacturing industry. For more discussion, see chapter three of this thesis.

the national defence sector and its leading role in high-tech industries. It is usually regarded as a symbol of national pride and a reflection of national strength.⁶

Compared with other industries, the civil aircraft industry is distinctive because of its unique economic and competitive nature. It is characterised by, for instance, very high market entry barriers resulting from huge up-front development costs and capital requirements, immense technological risk and large economies of scale.⁷ These barriers would defeat typical market forces and result in a natural monopoly in the industry.⁸ Therefore, the civil aircraft industry is one of the most highly concentrated industries in the world. There are only a very limited number of civil aircraft manufacturers worldwide, located mainly in the US and the EU.⁹ Due to these characteristics, government subsidisation is required in order to achieve success in the civil aircraft industry. They also lead to great government subsidisation and intervention in the sector.¹⁰

As the most important and the only global international organisation specifically dealing with trade rules between nations, the WTO's role, and in particular that of its subsidy rules, is crucial in dealing with the subsidy problem in the industry. Subsidy rules under the WTO framework were established during the GATT period and have continued to develop since then.¹¹ However, disputes concerning the use of aircraft subsidies lingered throughout the GATT period and have remained unresolved since the formation of the

⁶ Oliver Stehmann, 'Export Subsidies in the Regional Aircraft Sector' (1999) 33 *Journal of World Trade* 97, at 97.

⁷ For instance, the cost of developing an indigenous airliner lies between \$4 to \$6 billion in up-front expenditure and materials. For further discussion, see Laura D'Andrea Tyson, *Who's Bashing Whom? Trade Conflict in High Technology Industries* (Institute for International Economics 1992).

⁸ *Ibid.*, at 156.

⁹ For the purpose of consistency, reference is made throughout the thesis to the European Union (EU), even if it relates to the time when the official title was 'European Communities' (EC).

¹⁰ Civil aircraft manufacturers in both the EU and the US have benefited from huge government assistance and subsidies, although through different ways. This will be discussed in detail in chapter three of this thesis.

¹¹ As the Havana Charter never entered into force, the first effective set of subsidy rules under the GATT/WTO legal framework was contained in Article VI and Article XVI of the GATT 1947.

WTO. The disputes were not well addressed and have even intensified under the WTO framework. After Canada and Brazil brought dispute proceedings, the US and the EU followed them by bringing their own disputes regarding subsidies granted to the world's leading aircraft manufacturers, Airbus and Boeing, to the Dispute Settlement Body (DSB) of the WTO.¹² The Airbus-Boeing subsidy disputes have proven to be the most expensive and high-profile cases to come before the DSB in WTO history. Their significance is discussed throughout this thesis.

Although the civil aircraft market has been dominated by the US and the EU, a number of countries, such as China, have more recently become major players in the sector.¹³ There is, therefore, a real concern that the subsidy problem in the industry may intensify when additional countries join the aircraft market and the competition intensifies. Due to the historical, ongoing and possible future disputes over subsidies in the civil aircraft industry, an exploration of whether the WTO subsidy rules are effective in dealing with subsidy issues in the industry is thus of great significance. This is also the main research question of this thesis. The thesis essentially examines whether WTO rules on subsidies are fit for purpose when it comes to the civil aircraft industry. The question is critical in terms of securing the future development of the global civil aircraft industry. Moreover, it is also a critical test for the WTO as a credible forum for international trade regulation more generally.

1.1 Thesis Structure

¹² See Chapter 3.4 of this thesis.

¹³ Keith Crane and others, *The Effectiveness of China's Industrial Policies in Commercial Aviation Manufacturing* (Rand Corporation 2014), at 66.

In order to address the central research question, the thesis is divided into eight chapters. Chapter one functions as an introductory chapter setting out the purpose, research question and also the overall structure of this research. Chapter two begins by outlining the problem with international subsidy regulation. Due to their great legal, political and economic implications, as well as the different attitudes among countries towards government subsidisation, the regulation of subsidies has long been a contentious issue. The chapter also provides an overview of the subsidy rules of the WTO, including their historical development since the GATT period. In this regard, the Agreement on Subsidies and Countervailing Measures (SCM Agreement) is the most important agreement concerning international subsidy regulation. The SCM Agreement establishes a comprehensive set of subsidy rules under the WTO framework. It makes different arrangements for subsidies in the civil aircraft sector.¹⁴

The third chapter of this thesis deals with the regulation of subsidies in the civil aircraft industry and conflicts over their use since the GATT period. It first discusses the significance and the unique economic and competitive nature of the industry which renders subsidy issues in the industry more intractable. The civil aircraft industry is of great significance in economic terms.¹⁵ It is an extremely lucrative industry with global average annual sales of more than \$100 billion.¹⁶ It is one of the largest exporting industries in the US.¹⁷ The trade surplus resulting from the civil aircraft industry is higher than that

¹⁴ In this regard, some of the rules in the SCM Agreement are not applicable to the civil aircraft sector. This will be discussed in detail in chapter two of this thesis.

¹⁵ Robert J. Carbaugh, 'Strategic Trade Policy and Commercial Jet Aircraft' (1993) 7 *The International Trade Journal* 393, at 394.

¹⁶ Ron Kendler, 'Delayed Fight: The World Trade Organisation Dispute Settlement Mechanism, Negotiation, and the Transatlantic Conflict over Commercial Aircraft' (2012) *Boston College International and Comparative Law Review* 253, at 254.

¹⁷ US Congress, Office of Technology Assessment, *Competing Economies: America, Europe, and the Pacific Rim* (US Government Printing Office 1991), at 341. For further discussion, see chapter three of this thesis.

resulting from any other manufacturing industry.¹⁸ Besides its significance in economic terms, the industry also has great strategic and political importance due to its close connection with national defence sectors and its leading role in high-tech industries. A successful civil aircraft industry is usually regarded as a symbol of national pride and reflection of national strength.¹⁹

In terms of its unique economic and competitive nature, the civil aircraft industry is characterised by very high market entry barriers resulting from huge up-front development costs and capital requirements, immense technological risk, large economies of scale and steep learning curve. It is here shown that government subsidisation is essential for achieving success in the industry due to these characteristics.²⁰ The civil aircraft industry is one of the most highly concentrated industries in the world. Boeing in the US and Airbus in the EU are the only two dominant civil aircraft suppliers in the world, and occupy a great majority of the global civil aircraft market.²¹ Given the significance of the industry, governments are inclined to subsidise civil aircraft manufacturing, rendering it an industry with deep government intervention.²² The chapter also explores the conflicts between the US and the EU over aircraft subsidies since the GATT period. To deal with these conflicts, there have been two agreements: the Agreement on Trade in Civil Aircraft (the Civil Aircraft Agreement) and the 1992 US-EU Agreement Concerning the Application of the GATT Agreement on Trade in Civil Aircraft on Trade in Large Civil Aircraft (the 1992

¹⁸ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce, 'Flight Plan 2011: Analysis of the US Aerospace Industry' (2011).

¹⁹ Stehmann (n 6), at 97.

²⁰ Ron Kendler (n 16), at 263.

²¹ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce, 'Flight Plan 2010: Analysis of the US Aerospace Industry' (2010).

²² Civil aircraft manufacturers in different countries have all benefited from huge government assistance and subsidies, although through different ways. This will be discussed in detail in chapter three of the thesis.

LCA Agreement). Both of the agreements were concerned with the regulation of government subsidisation in the civil aircraft industry. Chapter three concludes by highlighting how these agreements failed to prevent new conflicts arising over aircraft subsidy use.

The fourth chapter of this thesis deals with the legal issues concerning the use of subsidies in the industry. Subsidies in the civil aircraft industry involve many complex legal issues, mainly including financial contribution and benefit, specificity, adverse effects of subsidies, and the determination of export subsidies.²³ These legal issues are of great importance as they determine whether the aircraft subsidies at issue are legitimate under WTO rules. As mentioned above, the US and the EU have referred their disputes concerning aircraft subsidies to the WTO for adjudication. The rulings of the WTO adjudicating bodies on these legal issues, which will be examined in the chapter, may have a great impact on the subsidy regulation in the industry, and thus the future development of the global civil aircraft industry and market. Chapter four highlights how the WTO subsidy rules are applied to the civil aircraft sector and assesses whether these rules allow enough policy space for government support in the sector.

The fifth chapter of this thesis deals with the effectiveness of the WTO dispute settlement mechanism in the context of the civil aircraft industry. All of the disputes over aircraft subsidies have been brought before the WTO dispute settlement mechanism. Thus, whether the disputes can be effectively resolved also depends to a large extent on the way in which the WTO dispute settlement mechanism operates in this area. In this regard, the SCM Agreement sets out specific and additional procedures and rules for dealing with

²³ These legal issues will be discussed in detail in chapter four of this thesis.

subsidy disputes. This chapter evaluates the effectiveness of the WTO dispute settlement mechanism by assessing each procedure under the mechanism, including the consultation, panel and appellate procedure, and in particular the implementation of the DSB rulings with respect to aircraft subsidy disputes in the WTO.

The sixth chapter of the thesis is concerned more specifically with the use of subsidies in China's civil aircraft industry and the possible legal consequences of this. Although the civil aircraft market has been dominated by the US and the EU for a long time, China, amongst others, has entered the sector in a significant way. This chapter first provides an overview of the civil aircraft industry in China. Compared with the US and the EU, China's civil aircraft industry remains relatively underdeveloped. However, China has begun to take steps towards building up an indigenous large civil aircraft industry. The establishment of the state-owned Commercial Aircraft Corporation of China (COMAC) in 2008 reflected the resolution of China to nurture its own LCA manufacturer. The development of the industry will almost certainly have an impact on the market for the incumbent players.²⁴ Like Airbus and Boeing, COMAC has received various kinds of subsidies from the government. This chapter discusses the subsidy regime and measures concerning the industry in China. As demonstrated in this chapter, these measures involve great legal uncertainties under the WTO subsidy rules. Consequently, the incumbent players may challenge China's subsidy programmes for the purpose of keeping their dominant positions in the sector. However, even so, it is here contended that it is unlikely that China will cease subsidising the industry. The Chinese government is drafting the Regulation on the Development of the Civil Aircraft Industry, which will provide the main

²⁴ Ron Kendler (n 16), at 265.

legal basis for government support in the civil aircraft industry.

The final chapter of the thesis provides a more fundamental reflection on the application of WTO subsidy rules in the civil aircraft sector. In this regard, the strategic trade policy argument and the infant industry argument are particularly relevant. These arguments provide economic rationales for allowing policy space for subsidising the civil aircraft industry under certain circumstances. Moreover, applying stringent subsidy disciplines to the civil aircraft industry is unrealistic and would cause some practical problems. This chapter also discusses whether the application of stringent rules on the use of subsidies is fair to newcomers to the industry. Finally, the chapter makes some suggestions for ameliorating the subsidy problem in the industry that is highlighted throughout the thesis. In this regard, specific multilateral legal arrangements for aircraft subsidies have been expected from the inception of the WTO.²⁵ The future arrangements for the regulation of subsidies in the civil aircraft industry should be based upon an acknowledgement of the role of government subsidies in the industry. Moreover, it is important to ensure greater transparency in future subsidy programmes of WTO members and long-term reduction of government intervention in the industry. This chapter also provides some suggestions on how to resolve the historical and ongoing aircraft disputes between the EU and the US.

1.2 Research Methodology

This thesis mainly carries out qualitative research on the application of the WTO

²⁵ Footnote 15, footnote 24 of the SCM Agreement.

subsidy rules in the context of the civil aircraft industry. It queries whether these rules can deal with the subsidy problem concerning the civil aircraft industry in an effective way. Most of the research was conducted in Dublin and Beijing. The data and information required for this research was largely drawn from the library of Trinity College Dublin.

At the beginning of this research, the author conducted a literature review of primary sources and secondary materials in order to plan and organise the research work. The overarching structure of each chapter was formed under the supervision of the author's research supervisor at regular meetings. The author read and analysed many textbooks and journal articles that were relevant to the research topic. The previous works on the topic of subsidy regulation were very helpful in developing the author's own critical analysis of the WTO subsidy rules in the context of the civil aircraft industry. The author also had recourse to various online data aggregators in order to access more comprehensive and further materials. In particular, the WTO online database provides abundant information and data on relevant WTO adjudications and case-law concerning subsidy rules.

This thesis adopts a doctrinal research approach grounded in qualitative data. Doctrinal research involved library-based reading and rigorous textual analysis of the primary and secondary materials that were gathered. In the case of this thesis, the doctrinal research examines the WTO subsidy rules by introducing a discussion of relevant trade agreements, codes and WTO case-law. The research methods adopted in this thesis are interdisciplinary, as many of the legal issues in this area are relevant to economic theories and analysis. In particular, with regard to analysis of the rationales for disciplining the use of subsidies under the WTO framework, the thesis refers to relevant economic theories and

analysis. The impact of these economic theories on WTO subsidy rules is also discussed. Moreover, the historical and political background is also considered when addressing the development of the WTO subsidy rules and the conflicts over aircraft subsidies since the GATT period. This thesis also carries out comparative analysis when investigating the main EU and US subsidies to their respective aircraft manufacturers, in order to demonstrate the similarities and differences between the two sides as regards government subsidisation in the civil aircraft industry.

In respect of the subsidy regime and measures concerning the civil aircraft industry in China, this thesis refers mainly to official government documents and publications. In addition, newspapers, magazines and relevant government websites provide important information for the research and analysis. Further original research has also been carried out through conducting interviews or telephone interviews with drafters of the Regulation on the Development of Civil Aircraft Industry in Beijing. This enabled the author to keep abreast of the latest developments in relevant policies and ongoing legislative work relating to government support for the civil aircraft industry in China. The author also participated in a research project sponsored by COMAC on policy incentives for promoting the development of the civil aircraft industry. Through the research project, the author collected extensive information on the government's policies in support of the civil aircraft industry in China. The author also obtained empirical experience regarding the attitudes of the government and aircraft manufacturers towards subsidies in the civil aircraft industry. The compilation and analysis of the research involved in the production of this thesis benefited from all of these sources.

Chapter 2 - Overview of the WTO Subsidy Rules

2.1 Introduction

The regulation of subsidies is a complex issue. It has been said that no issue is as contentious as this one in terms of international trade regulation.¹ While subsidies are generally viewed as protectionist and trade-distorting, they can also be a useful government instrument for pursuing important and fully legitimate economic and social policy objectives. The balancing of these two sides of the same coin is partly responsible for the complexity of subsidy regulation. A key question in this regard is how to create a regulatory framework that addresses the problems that subsidies may cause, such as trade distortion and economic harm to trading partners, without limiting the ability of governments to use subsidies for pursuing legitimate economic and social policy goals.² In addition, countries view government subsidies as within the scope of internal policy matters, thus making international regulation of subsidies more politically sensitive.³ It has even been said that disputes over subsidies are, first and foremost, disputes between governments.⁴ This also leads to the intractability of subsidy issues.

The WTO subsidy rules have evolved for several decades since the GATT period. The effectiveness of GATT rules in dealing with subsidy issues was generally regarded as

¹ For instance, see Andreas F Lowenfeld, *International Economic Law* (2nd edn, Oxford University Press 2008), at 216.

² Simon Lester and Bryan Mercurio, *WTO Trade Law: Text, Materials and Commentary* (Hart Publishing 2008), at 422.

³ Dominic Coppens, *WTO Disciplines on Subsidies and Countervailing Measures: Balancing Policy Space and Legal Constraints* (Cambridge University Press 2014), at 222.

⁴ Terry Collins-Williams and Gerry Salembier, 'International Disciplines on Subsidies - The GATT, the WTO and the Future Agenda' (1996) 30 *Journal of World Trade* 5, at 17.

limited. The WTO subsidy rules are the result of difficult negotiation and compromise among members. Compared with previous GATT rules, the WTO made great progress in several aspects in terms of subsidy regulation. The Agreement on Subsidies and Countervailing Duties (the SCM Agreement) contains a rather comprehensive set of rules on the use of both subsidies and countervailing duties. This chapter first outlines the subsidy problem in international trade regulation. It then reviews the historical development of the subsidy rules since the GATT period, including those established in the GATT 1947 and the Tokyo Round Subsidies Code. Finally, it provides an overview of the WTO subsidy rules that are mainly contained in the SCM Agreement.

2.2 Overview of the Problem with Subsidy Regulation

In economic literature, ‘subsidies’ are defined as a payment or transfer of non-financial resources from a government to select economic entities that are not in line with normal market transactions.⁵ Generally, the term can be used to describe situations in which something of economic value is transferred by a government to the advantage of a recipient.⁶ The result of subsidisation is usually that the subsidised production can be done at lower production costs, and thus it confers a benefit to the producer.⁷

As mentioned above, subsidies are generally viewed as protectionist and trade-distorting, thus unfair for foreign competitors.⁸ Traditionally, tariffs and quotas were

⁵ Andreas Knorr, Jorg Bellmann and Rahel Schomaker, ‘Subsidies in Civil Aircraft Manufacturing: The World Trade Organisation (WTO) and the Boeing-Airbus Dispute’ (2012) 11 European State Aid Law Quarterly 585, at 586.

⁶ Appellate Body Report, *US - Softwood Lumber IV*, WT/DS257/AB/R, para. 51.

⁷ Stephanie Schwartz Driver, *Economic Literacy: A Complete Guide* (Marshall Cavendish 2010), at 172.

⁸ William A. Kerr and James D. Gaisford, *Handbook on International Trade Policy* (Edward Elgar Publishing 2007), at 347.

the main instruments for protecting domestic producers. Subsidies began to play a greater role by the early 1900s.⁹ This was partly because countries had limited the use of tariffs and quotas through trade agreements.¹⁰ The general impression is that subsidies could distort resource allocations, affect international trade flows, and enable the survival of otherwise uncompetitive industries.¹¹ The main rationales for regulating the use of subsidies are outlined as follows.¹²

First, subsidies will reduce the efficiency of resources allocation, as government subsidisation violates the theory of comparative advantage.¹³ A WTO study has concluded that subsidies can distort trade flows through conferring an artificial competitive advantage to exporters or import-competing industries;¹⁴ therefore, the interests of the subsidising country's trading partner may be adversely affected.¹⁵

Another rationale for regulating the use of subsidies is that subsidies are unfair for foreign competitors and will disturb the 'level playing field' in international trade.¹⁶ As Professor Jackson pointed out, it is not fair if a domestic industry of the importing country has to 'compete against a foreign government's treasury'.¹⁷ Other arguments advocating strict subsidy disciplines include those regarding adjustment costs, predatory purposes, etc.¹⁸ Due to the foregoing reasons, some countries are of the view that subsidies should be

⁹ Simon Lester, 'The Problem of Subsidies as a Means of Protectionism: Lessons from the WTO EC - Aircraft Case' (2011) 12 Melbourne Journal of International Law 345, at 348.

¹⁰ Ibid, at 348.

¹¹ Ibid, at 346; Patrick J McDonough, 'Subsidies and Countervailing Measures' in Terence P Stewart (ed), *The GATT Uruguay Round: A Negotiating History (1986-1992)* (Kluwer Law and Taxation Publishers 1993), at 844.

¹² For more discussion, see Michael Trebilcock, Robert Howse and Antonia Eliason, *The Regulation of International Trade* (4th edn, Routledge 2012), at 389.

¹³ Ibid, at 389.

¹⁴ World Trade Organisation, 'World Trade Report 2006: Exploring the Links Between Subsidies, Trade and the WTO' (2006).

¹⁵ John H Jackson, *The World Trading System: Law and Policy of International Economic Relations* (2nd edn, MIT Press 1997), at 247.

¹⁶ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 390.

¹⁷ Jackson (n 15), at 284.

¹⁸ For more discussion, see *ibid*, at 282-83.

subject to strict regulation and can be countervailed, so as to offset their negative effects.¹⁹

Although attitudes towards subsidies are generally negative, it is also argued that countries should be able to use subsidies to pursue a wide range of important economic and social policy objectives.²⁰ For instance, governments can use subsidies to improve the quality of education, promote disadvantaged areas, protect the environment or boost technological innovation in their country. Moreover, some of the rationales for limiting their use have been called into question. For instance, the fairness rationale mentioned above is subject to criticism as it is argued that this is difficult to unravel and may be abused. Many activities within basic government functions, such as developing infrastructure and investment in public education or healthcare system, could in one way or another benefit companies in the country.²¹ Therefore, if there is no appropriate boundary, the fairness claim can be pushed to almost any length.²² In addition, there are some economic rationales for granting subsidies, such as the market failure rationale, the infant industry argument and the strategic trade policy argument.²³ The contradiction makes subsidy regulation a quite complex issue. As mentioned above, a key question in this regard is how to distinguish between 'good' and 'bad' subsidies, or how to balance the need to deal with the problems which subsidies may cause and the ability of governments to use subsidies for important policy goals.²⁴ Due to the foregoing reasons, disputes over the use of subsidies continued to arise in the GATT period and under the WTO.²⁵ The

¹⁹ From 1979 to 1988, the US initiated 371 countervailing duty actions while all other countries initiated only 58. See P. Messerlin, 'Antidumping' in Jeffrey J Schott (ed), *Completing the Uruguay Round: A Results-Oriented Approach to the GATT Trade Negotiations* (Institute for International Economics 1990), at 110.

²⁰ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 355.

²¹ Ibid, at 391.

²² Jagdish N. Bhagwati, *The World Trading System at Risk* (Princeton University Press 1991), at 22.

²³ These rationales will be discussed in chapter seven of this thesis.

²⁴ Simon Lester (n 9), at 347.

²⁵ Jackson (n 15), at 285. The WTO database shows that there have been 109 WTO cases citing the SCM Agreement

problem is thus considered one of the most difficult conundrums in terms of international trade regulation.²⁶

2.3 Development of the GATT/WTO Subsidy Rules

Subsidy rules under the WTO framework were established in the GATT period and continued to evolve since then. During the Second World War, the importance of enhancing international economic cooperation and restricting ‘beggar-thy-neighbour’ trade policies was broadly recognised.²⁷ In complement to the International Monetary Fund (IMF) and the World Bank, the International Trade Organisation (ITO) was intended to be established as the third pillar of the international economic architecture for regulating international trade.²⁸ The use of subsidies, in particular the use of export subsidies, was one of the major concerns during that process. The Havana Charter, which was drafted in 1947 for establishing the ITO, reflected the international efforts to deal with the subsidy problem.²⁹

The Havana Charter firstly set forth a requirement to notify trade-affecting subsidies. If an ITO member granted or maintained any subsidies for increasing its exports to or for reducing imports from other members, this member should notify the ITO of the extent and nature of the subsidisation, its estimated effects and the circumstances making the subsidisation necessary.³⁰ Besides, the Havana Charter established specific rules on the

in the request for consultations under the WTO dispute settlement mechanism. See also Kara Leitner and Simon Lester, ‘WTO Dispute Settlement 1995-2009 - A Statistical Analysis’ (2010) *Journal of International Economic Law* 205, at 210.

²⁶ Collins-Williams and Salembier (n 4), at 5.

²⁷ Dominic Coppens (n 3), at 21.

²⁸ *Ibid*, at 21.

²⁹ The Havana Charter for an International Trade Organisation (Havana Charter) was included in the Final Act of the United Nations Conference on Trade and Employment, which was held at Havana, Cuba in 1948. There was a section specifically dealing with subsidies in the Havana Charter, namely Section C of the Charter, which is entitled ‘Subsidies’.

³⁰ Article 25 of the Havana Charter.

use of export subsidies. It was provided that no member should grant any subsidies on the export of any product, resulting in the sale of such product for export at a price lower than the comparable price in the domestic market.³¹ However, as regards primary products, export subsidies were only prohibited if the subsidies had the effect of maintaining or acquiring more than an equitable share of world trade in that commodity.³² Finally, the Havana Charter set forth some basic rules on the imposition of countervailing duties. Members were allowed to countervail injurious foreign subsidies by imposing countervailing duties up to the amount of the subsidies.³³ In sum, the Havana Charter reflected an ambitious attempt to regulate subsidies. Nevertheless, mainly because the US government failed to get it approved by Congress, the Charter never came into effect and the ITO was stillborn.³⁴

2.3.1 GATT 1947

As the Havana Charter did not come into effect, the first effective subsidy rules under the GATT/WTO framework were established through the GATT 1947. The GATT 1947 was basically an extraction of the core disciplines on tariff schedules and reductions from the Havana Charter.³⁵ As it was recognised that domestic subsidies may have limiting effects on imports and undermine the benefit of tariff concessions, the GATT 1947 kept

³¹ Article 26:1 of the Havana Charter.

³² Article 28:1 of the Havana Charter.

³³ Article 34 of the Havana Charter.

³⁴ Dominic Coppens (n 3), at 22.

³⁵ *Ibid.*, at 22. The GATT 1947 was applied through a Protocol of Provisional Application. As the Havana Charter never came into force, the GATT 1947 remained provisionally in force until its provisions became part of the GATT 1994.

the procedural rules for dealing with trade-affecting subsidies.³⁶ However, the rules on export subsidies were not included in the original GATT 1947. This was partly because the GATT contracting parties pinned their hope on the eventual enforcement of the more comprehensive Havana Charter.³⁷ As a result, the original GATT 1947 rules on subsidies were quite limited and considerably less stringent than those in the Havana Charter.³⁸ It only had two brief articles concerning subsidy rules, namely Article VI and Article XVI.

Article XVI of the GATT 1947 was nearly a copy of the provisions of the Havana Charter. It required the subsidising contracting party to notify subsidies that were export stimulating or import reducing, including the extent and nature of the subsidisation, its estimated effects and the circumstances making the subsidisation necessary.³⁹ If serious prejudice to the interests of other contracting parties was caused or threatened, the subsidising party was only required to discuss the possibility of limiting the subsidisation upon request.⁴⁰

Article VI set forth general rules for reacting against foreign subsidisation.⁴¹ Contracting parties whose domestic industry was injured by subsidised imports were allowed to impose countervailing duties up to the amount of the subsidies.⁴² In this regard,

³⁶ Ibid, at 22.

³⁷ Second Session of the GATT Contracting Parties - Report of Working Party No. 3 on Modifications to the General Agreement (GATT/CP.2/22), 27 August 1948.

³⁸ J. J. Piernas Lopez, *The Concept of State Aid Under EU Law: From Internal Market to Competition and Beyond* (Oxford University Press 2015), at 33. See also John H Jackson, William J Davey and Alan O Sykes, *Legal Problems of International Economic Relations: Cases, Materials, and Text on the National and International Regulation of Transnational Economic Relations* (4th edn, West Group 2002), at 773; Dominic Coppens (n 3), at 22.

³⁹ Article XVI:1 of the GATT 1947. The original Article XVI of the GATT 1947 was limited to paragraph 1 of Article XVI. All GATT contracting parties were bound by Article XVI:1. For further discussion, see Collins-Williams and Salembier (n 4), at 6; Dominic Coppens (n 3), at 23.

⁴⁰ However, the term 'serious prejudice' was not defined in the GATT 1947. See Article XVI:1 of the GATT 1947.

⁴¹ This article also addressed the issue of imposing anti-dumping duties. Subsidisation and dumping are similar in the regard that both of them involve unfair pricing of exports. This was partly the reason why countervailing duties actions and antidumping actions were linked with each other. The concepts of dumping and subsidisation were not sharply distinguished from each other by early commentators on trade. See Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 365; Jackson (n 15), at 285.

⁴² Countervailing duty was defined as 'a special duty levied for the purpose of offsetting any bounty or subsidy bestowed directly or indirectly upon the manufacture, production or export of any merchandise'. Article VI:3 of the

it must be established that the subsidised imports caused or threatened to cause material injury to a domestic industry of the importing contracting party, or retarded materially the establishment of a domestic industry.⁴³

As mentioned above, the original rules on subsidies in the GATT 1947 were quite limited and brief. They merely established a loose obligation to notify subsidies and a possibility of countervailing duties.⁴⁴ There was no definition of subsidy or elaborated rules over the imposition of countervailing duties.⁴⁵ Even if serious prejudice was caused, the subsidising party was only required to discuss the possibility of limiting the subsidisation. In fact, there was no record of any GATT contracting party having limited government subsidisation as a result of consultations under Article XVI.⁴⁶ Moreover, these rules could not deal with foreign subsidies affecting domestic exporters' interests in a third country market.⁴⁷ In such a situation, the concerned contracting party had no other option but to respond by subsidising its own exporters, so as to secure their interests in third country markets. This might lead to destructive subsidy competitions.⁴⁸

During the 1954-1955 GATT Review Session, Article XVI was amended in order to introduce some commitments to reduce the use of export subsidies.⁴⁹ Additional rules on export subsidies were introduced in the GATT 1947.⁵⁰ These rules were largely in line

GATT 1947.

⁴³ Article VI:6 of the GATT 1947.

⁴⁴ Alan O. Sykes, *The Economics of WTO Rules on Subsidies and Countervailing Measures* (John M Olin Program in Law and Economics Working Paper 2003), at 12.

⁴⁵ Dominic Coppens (n 3), at 23.

⁴⁶ R. R. Rivers and J. D. Greenwald, 'The Negotiation of a Code on Subsidies and Countervailing Measures: Bridging Fundamental Policy Differences' (1979) 11 *Law and Policy in International Business* 1447, at 1460.

⁴⁷ Besides imposing countervailing duties, GATT contracting parties could also bring a non-violation complaint under the GATT Article XXIII:1(b), if the subsidisation nullified the benefits of tariff concessions (or of other GATT obligations) to their exporters. Non-violation complaint can only deal with foreign subsidies affecting exporters' interests in the subsidising country resulting from tariff concessions, while CVDs deal with foreign subsidies' effects in the home country. See Dominic Coppens (n 3), at 24.

⁴⁸ *Ibid*, at 24.

⁴⁹ Collins-Williams and Salembier (n 4), at 6.

⁵⁰ Section B of Article XVI of the GATT 1947.

with the relevant provisions in the Havana Charter. They also distinguished between primary and non-primary products.⁵¹

In terms of primary products, the US insisted during the negotiations that there should not be too stringent regulation of primary products.⁵² As a result, Article XVI only provided that GATT contracting parties should 'seek to avoid' the use of export subsidies for primary products. Moreover, these subsidies were subject to a highly ambiguous trade-effect test: they could not be used in a way which would result in the subsidising contracting party having 'more than an equitable share of world export trade' in the subsidised product.⁵³ However, the meaning of the term 'equitable share of world export trade' was not elaborated in the GATT 1947.

As regards non-primary products, Article XVI:4 provided that all contracting parties had, from 1958 or the earliest practicable date thereafter, to cease to grant any export subsidies that could result in export sale at a price lower than that in the domestic market (bi-level price test).⁵⁴ This prohibition of export subsidies on non-primary products was not fully observed by GATT contracting parties, and thus a GATT working party was established for implementing this Article.⁵⁵ In 1960, the working party drafted the Declaration Giving Effect to the Provisions of Article XVI:4.⁵⁶ The Declaration included a

⁵¹ Article XVI:2 of the GATT 1947. For more discussion, see John H. Jackson, *World Trade and the Law of GATT: A Legal Analysis of the General Agreement on Tariffs and Trade* (Bobbs-Merrill Company 1969), at 371; Dominic Coppens (n 3), at 25.

⁵² Several European countries, such as France, opposed - but finally gave way to - the obstinate position of the US. See Dominic Coppens (n 3), at 25.

⁵³ Article XVI:3 of the GATT 1947.

⁵⁴ Article XVI:4 of the GATT 1947. This article also provided for a standstill obligation: until 31 December 1957 no contracting party should extend the scope of export subsidies to non-primary products beyond that existing on 1 January 1955 by introducing new subsidies or extending existing subsidies. The standstill obligation was extended several times. After 1967, GATT contracting parties which did not accept the 1960 Declaration were no longer subject to this obligation. See Dominic Coppens (n 3), at 25.

⁵⁵ World Trade Organisation (n 14), at 190.

⁵⁶ The Declaration became effective on 14 November 1962. See Jan Wouters and Dominic Coppens, 'An Overview of the Agreement on Subsidies and Countervailing Measures' in Kyle W. Bagwell, George A. Bermann and Petros C. Mavroidis (eds), *Law and Economics of Contingent Protection in International Trade* (Cambridge University Press 2010),

non-exhaustive list of export subsidies on non-primary goods, which provided guidance for implementing the export subsidy disciplines over non-primary products.⁵⁷ In part due to the different rules on primary and non-primary products, most developing countries were unwilling to adopt the Declaration.⁵⁸ Only seventeen GATT contracting parties accepted it; most of them being developed countries.⁵⁹

Through the above-mentioned articles in the GATT 1947, some preliminary subsidy rules were established during the GATT period. However, in addition to the problems described above, another general defect with the GATT rules was the ‘grandfather right exception’ to GATT contracting parties.⁶⁰ According to the Protocol of Provisional Application which brought the GATT 1947 into effect, Part II of the GATT 1947 applied only to the extent to which they were not inconsistent with the existing legislation of the contracting parties.⁶¹ In other words, this allowed contracting parties to retain their existing legislation which was inconsistent with Part II of the GATT 1947. As Article XI and Article XVI were both in Part II, this further affected the effectiveness of GATT rules on subsidies.⁶²

at 9.

⁵⁷ Dominic Coppens (n 3), at 26.

⁵⁸ Some GATT contracting parties, such as the US, accepted the 1960 Declaration with reservations. See Jackson, Davey and Sykes (n 38), at 773; Dominic Coppens (n 3), at 26.

⁵⁹ World Trade Organisation (n 14), at 190. See also R. R. Rivers and J. D. Greenwald (n 46), at 1462. For a full list of all seventeen countries, see Uruguay Round - Group of Negotiations on Goods - Negotiating Group on Subsidies and Countervailing Measures - Note by the Secretariat (MTN.GNG/NG10/W/4), at 75.

⁶⁰ Gilbert R Winham, *International Trade and the Tokyo Round Negotiation* (Princeton University Press 1986), at 116. See also Tracey Epps and Michael J. Trebilcock, *Research Handbook on the WTO and Technical Barriers to Trade* (Edward Elgar Publishing 2013), at 22; Jackson (n 15), at 287.

⁶¹ Paragraph 1 of the Protocol of Provisional Application of the General Agreement on Tariffs and Trade provided that signatories of the GATT 1947 undertook to apply provisionally on and after 1 January 1948 ‘... (b) Part II of that Agreement to the fullest extent not inconsistent with existing legislation’.

⁶² However, GATT contracting parties were not allowed to adopt new legislation where it would be inconsistent with Part II of the GATT 1947 after its provisional application commenced. Therefore, the role of this grandfather right exception decreased in years as GATT contracting parties gradually updated their regulations. See Tracey Epps and Michael J. Trebilcock (n 60), at 22.

2.3.2 Tokyo Round Subsidies Code

Due to the economic downturn in the 1970s and the ineffectiveness of the GATT subsidy rules, extensive subsidisation programmes were widely adopted by countries to maintain stagnant industries and promote exportation.⁶³ International trade in various sectors was to a large extent based on 'competitive subsidisation' from government rather than on market forces.⁶⁴ Therefore, it became imperative to establish a set of subsidy rules that were more effective. This was also one of the main issues in the GATT Tokyo Round trade negotiations.⁶⁵

However, there were different views on government subsidisation among GATT contracting parties. While European countries generally regarded government subsidisation as an internal policy matter, the US viewed it as protectionist and unfair trade action and insisted on imposing stringent rules on subsidy use.⁶⁶ Moreover, as a result of the increased competition from countries such as Japan in the global market during the 1970s, the US tended to take extensive countervailing duty measures in order to limit the use of subsidies by other countries.⁶⁷ The EU and other countries were worried that countervailing duties measures may be abused by the US. As such, these countries wanted to limit their extensive use by the US. After intensive negotiations, the Tokyo Round Subsidies Code was finally reached.⁶⁸

⁶³ McDonough (n 11), at 815; Dominic Coppens (n 3), at 28.

⁶⁴ Dominic Coppens (n 3), at 28.

⁶⁵ Ibid, at 27.

⁶⁶ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 366; Winham (n 60), at 119; Collins-Williams and Salembier (n 4), at 7.

⁶⁷ Dominic Coppens (n 3), at 28.

⁶⁸ The full name of the Tokyo Round Subsidies Code was the Agreement on Interpretation and Application of Articles VI, XVI and XXIII of the General Agreement on Tariffs and Trade.

The Tokyo Round Subsidies Code adopted a so-called ‘two-track’ approach to regulate the use of subsidies and countervailing duties.⁶⁹ Track I was concerned with unilateral imposition of countervailing duties. In this regard, a signatory was allowed to impose countervailing duties unilaterally if material injury was caused to its domestic industry by the subsidised imports.⁷⁰ According to the Subsidies Code, the determination of injury should be based on an objective examination of the volume of the subsidised imports and their effects on prices in the domestic market, and the consequent impact of these imports on domestic producers of like products.⁷¹ Rules on the determination of injury were further elaborated in the Tokyo Round Subsidies Code.⁷² Apart from the unilateral approach, signatories could opt for the multilateral method to deal with foreign subsidies.⁷³ They could bring a complaint to the GATT for remedies under the dispute settlement procedures mapped out in the Subsidies Code.⁷⁴ If the complaint was upheld, it would be authorised to take countermeasures as retaliatory sanctions to address illicit foreign subsidies.⁷⁵

Track II of the Tokyo Round Subsidies Code was concerned with the rules on the use of subsidies.⁷⁶ First, the Subsidies Code categorically prohibited export subsidies on non-primary products. It was provided that signatories ‘shall not grant export subsidies on

⁶⁹ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 366.

⁷⁰ Article 4 of the Tokyo Round Subsidies Code. Article VI:6(a) of the GATT 1947 already requires the determination of (threat of) material injury. However, the US CVD law (1897) dated from before the GATT 1947 and was therefore grandfathered from Article VI of the GATT. GATT Committee on Subsidies and Countervailing Measures - Minutes of the Meeting Held on 8 May 1980 (SCM/M/3), at 4. See also Dominic Coppens (n 3), at 28.

⁷¹ Article 6:1 of the Tokyo Round Subsidies Code.

⁷² Article 6 of the Tokyo Round Subsidies Code.

⁷³ John J. Barcelo, ‘The Two Track Subsidies Code - Countervailing Duties and Trade Retaliation’ in John Quinn and Philip Slayton (eds), *Non-Tariff Barriers After the Tokyo Round* (Institute for Research on Public Policy 1982), at 121; Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 366.

⁷⁴ Article 12 of the Tokyo Round Subsidies Code.

⁷⁵ Article 13 of the Tokyo Round Subsidies Code.

⁷⁶ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 366.

products other than certain primary products’.⁷⁷ This was more stringent than the rules on export subsidies in the GATT 1947, as it abandoned the bi-level pricing test requirement in the latter.⁷⁸ The Tokyo Round Subsidies Code also introduced an illustrative list of export subsidies, which provided guidance for determining their existence.⁷⁹ In terms of primary products, the Subsidies Code provided that signatories should not grant any export subsidies on certain primary products that would result in the subsidising country having ‘more than an equitable share of world export trade in such products’.⁸⁰ The term ‘more than an equitable share of world export trade’ included any case where the effect of export subsidies was to displace the exports of another signatory.⁸¹

Apart from the rules concerning export subsidies, the Tokyo Round Subsidies Code introduced, for the first time, a set of substantive rules on the use of domestic subsidies.⁸² However, these rules were to a large extent ambiguous. On the one hand, the Subsidies Code provided that domestic subsidies were widely used as an important instrument for promoting economic and social policy objectives, such as addressing environmental problems, facilitating the restructuring of certain sectors and encouraging R&D in high-tech industries.⁸³ Therefore, it did not intend to restrict the rights of signatories to use domestic subsidies for those policy objectives. On the other hand, the Subsidies Code acknowledged that domestic subsidies may cause adverse effects to the interests of other signatories.⁸⁴ Hence, signatories should seek to avoid causing adverse effects through the

⁷⁷ Article 9:1 of the Tokyo Round Subsidies Code.

⁷⁸ Dominic Coppens (n 3), at 28.

⁷⁹ The list was annexed to the Tokyo Round Subsidies Code. It was not exhaustive and was based on that of the 1960 Declaration mentioned above. Jackson (n 15), at 289.

⁸⁰ Article 10:1 of the Tokyo Round Subsidies Code.

⁸¹ Article 10:2 of the Tokyo Round Subsidies Code.

⁸² Jackson (n 15), at 289.

⁸³ A non-exhaustive list of these objectives was included in Article 11.1 of the Tokyo Round Subsidies Code.

⁸⁴ Article 11:2 of the Tokyo Round Subsidies Code. Dominic Coppens (n 3), at 29.

use of subsidies.⁸⁵ This so-called ‘outcome-oriented’ or ‘effect-oriented’ approach of regulating domestic subsidies was mainly a result of the compromise between the US and other GATT contracting parties.⁸⁶

Through raising the infant industry argument and threatening to refrain from signing the Tokyo Round Subsidies Code, developing countries successfully incorporated some special and differential treatments for themselves in the Subsidies Code.⁸⁷ In this regard, the Subsidies Code regarded subsidies as ‘an integral part of economic development programmes of developing countries’.⁸⁸ It did not prevent developing country signatories from taking measures to assist their industries, including those in the export sector.⁸⁹ Moreover, developing countries were only prohibited from using export subsidies for industrial products in a manner which would cause serious prejudice to other signatories.⁹⁰ In other words, export subsidies were not categorically prohibited for developing countries. The Subsidies Code also made it more difficult to challenge domestic subsidy programmes of developing countries. For instance, according to the Subsidies Code, as governments in developing countries may play a large role in promoting economic growth and development, government intervention in their economy should not, by itself, be considered a subsidy.⁹¹

The Tokyo Round Subsidies Code was the first agreement specifically concerning subsidy rules under the GATT/WTO system. It established, for the first time, a rather

⁸⁵ Article 11:2 of the Tokyo Round Subsidies Code.

⁸⁶ R. R. Rivers and J. D. Greenwald (n 46), at 1473-74.

⁸⁷ These special and differential treatments were initially proposed by developed countries, and were substantively broadened after discussions with developing countries. Due to developed countries’ weak consensus on subsidies, the bargaining position of developing countries was strengthened. For further discussion, see Robert E. Hudec, *Developing Countries in the GATT Legal System* (Gower 1987), at 87.

⁸⁸ Article 14:1 of the Tokyo Round Subsidies Code.

⁸⁹ Article 14:2 of the Tokyo Round Subsidies Code.

⁹⁰ Article 14:3 of the Tokyo Round Subsidies Code.

⁹¹ Article 14:7 of the Tokyo Round Subsidies Code.

comprehensive set of rules on subsidies.⁹² The Subsidies Code reflected the sensitive balance between the US stance of restricting the use of subsidies, and the European attitude to allow space for a subsidy policy.⁹³ However, this also led to the ineffectiveness of the Subsidies Code in dealing with subsidy issues.

First, the Subsidies Code still did not provide a definition of 'subsidy'.⁹⁴ As a result, what government actions could constitute 'subsidies', and were thus subject to the code, remained unclear. Contracting parties had considerable discretion to define 'subsidy'. This may lead to disputes as to the use of both subsidies and countervailing duties.⁹⁵ Secondly, some provisions of the Subsidies Code were quite ambiguous. For instance, the ambiguity in the rules over the use of domestic subsidies described above rendered the effectiveness of these rules rather limited.⁹⁶ The signatories could not agree on the interpretation of the rules in the Subsidies Code.⁹⁷ Third and foremost, as a 'side agreement' in the GATT legal system, the Subsidies Code was only legally binding on its signatories, rather than on all GATT contracting parties.⁹⁸ In fact, only 24 out of 128 contracting parties signed the code, most of which were developed countries.⁹⁹ Due to the foregoing defects, the role that the Tokyo Round Subsidies Code played in dealing with subsidy issues proved only modestly effective.¹⁰⁰ It was even argued that the Subsidies Code might have weakened the GATT

⁹² Jackson (n 15), at 288.

⁹³ GATT Committee on Subsidies and Countervailing Measures - Minutes of the Meeting Held on 8 May 1980 (SCM/M/3), at 4, 8; McDonough (n 11), at 817.

⁹⁴ To define subsidies was considered 'neither necessary nor feasible' due to the huge disparities of stances between contracting parties. See GATT Report on 'Operation of the Provisions of Article XVI' adopted on 21 November 1961, para. 23.

⁹⁵ See Jackson (n 15), 288; Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 367; Jackson (n 15), at 288.

⁹⁶ Jackson (n 15), at 289.

⁹⁷ Even the Subsidies and Countervailing Measures Committee which oversaw the operation of the Tokyo Round Subsidies Code could not agree on the interpretation of the rules in the code. See Dominic Coppens (n 3), at 31.

⁹⁸ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 366.

⁹⁹ Some GATT contracting parties accepted the Tokyo Round Subsidies Code with exceptions or reservations. See *ibid.*, at 366.

¹⁰⁰ *Ibid.*, at 367.

subsidy rules.¹⁰¹

2.4 Overview of the WTO Subsidy Rules

In the 1980s, the economic recession and generally rising government deficits drove countries to make an increasing use of subsidies to support their domestic firms and industries.¹⁰² Government subsidies became a primary source of unfair competition, and resulted in some intractable trade disputes.¹⁰³ The Tokyo Round Subsidies Code was largely unsuccessful in halting detrimental subsidy wars and dealing with subsidy issues because of the flaws it contained. In addition, due to the problems in the GATT dispute settlement system, subsidy disputes between GATT contracting parties could not always be resolved effectively.¹⁰⁴ These difficulties led to the demand for more effective subsidy rules.¹⁰⁵

The GATT Uruguay Round negotiations were held from 1986 to 1994, leading to the formation of the WTO. Compared with the GATT, one of the most prominent features and achievements of the WTO is a much more elaborate and effective legal system. The WTO adopts the idea of 'single undertaking' approach, which means that all WTO members were obliged to accept all the multilateral trade agreements as a single body of law.¹⁰⁶ This

¹⁰¹ Robert E. Hudec (n 87), at 39.

¹⁰² Dominic Coppens (n 3), at 30.

¹⁰³ Arthur Dunkel, *Trade Policies for a Better Future: The 'Leutwiler Report', the GATT and the Uruguay Round* (Martinus Nijhoff 1987), at 46.

¹⁰⁴ For instance, a determined losing party could unilaterally block the adoption of panel reports under the GATT dispute settlement system. The Subsidies and Countervailing Measures Committee was not able to adopt any panel report before the completion of the Uruguay Round negotiations. In 1994 and 1995, the Committee finally adopted three of the GATT panel reports that had been blocked previously. See Andreas F. Lowenfeld, *International Economic Law* (Oxford University Press 2003), at 146; McDonough (n 11), at 836; Dominic Coppens (n 3), at 31. The dispute settlement mechanism of the GATT and WTO will be discussed in chapter five of this thesis.

¹⁰⁵ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 367.

¹⁰⁶ Initially, the single undertaking approach was to prevent WTO members from 'cherry-picking' results or 'harvesting'

approach guaranteed a unified and integrated WTO legal system, including agreements on goods, services and intellectual property, dispute settlement mechanism, and trade policy review mechanism.

During the Uruguay Round negotiations, the US maintained its anti-subsidy position and insisted on strengthening regulations on the use of subsidies. On the other hand, the EU and other countries advocated more policy space for government subsidisation and stricter rules on the imposition of countervailing duties.¹⁰⁷ After difficult negotiations, the Agreement on Subsidies and Countervailing Measures (the SCM Agreement) was finally agreed upon and incorporated into the WTO Agreement, within Annex 1A on multilateral agreements on trade in goods.¹⁰⁸ The SCM Agreement is the sole and primary multilateral agreement that specifically concerns subsidy rules under the WTO legal framework.¹⁰⁹ Unlike the Tokyo Round Subsidies Code, the SCM Agreement is legally binding on all WTO members, due to the ‘single undertaking’ approach described above.¹¹⁰ As the provisions of the GATT 1947 were incorporated into the GATT 1994 under the WTO legal system, GATT Article VI and Article XVI discussed above are still a part of the WTO

early outcomes from the Uruguay Round negotiations unless all parties agreed. Negotiators believed that they were maximising trade-off opportunities and no one would be denied negotiating leverage by keeping the whole agenda joined up, to be settled at the end. Under this version of the single undertaking, no GATT contracting parties could become a founding member of the WTO without accepting the entire Uruguay Round package. Later, the single undertaking has become a requirement to assume obligations across the board, on pain of foregoing WTO membership. See Diane Desierto, *Public Policy in International Economic Law: The ICESCR in Trade, Finance, and Investment* (Oxford University Press 2015), at 181; Gail E. Evans, *Lawmaking under the Trade Constitution: A Study in Legislating by the World Trade Organisation* (Kluwer Law International 2000), at 37; Gary P. Sampson, *The WTO and Sustainable Development* (The United Nations University Press 2005), at 268; Elimma C. Ezeani, *The WTO and Its Development Obligation: Prospects for Global Trade* (Anthem Press 2011), at 1.

¹⁰⁷ John H. Barton and others, *The Evolution of the Trade Regime: Politics, Law, and Economics of the GATT and the WTO* (Princeton University Press 2006), at 115-16; Dominic Coppens (n 3), at 31.

¹⁰⁸ The WTO legal system is established mainly through the Agreement Establishing the World Trade Organisation (the WTO Agreement) and its four Annexes of trade agreements in different areas. Annex 1 includes a variety of agreements on trade in goods, the General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS); Annex 2 is the Dispute Settlement Understanding (DSU); Annex 3 is concerned with the Trade Policy Review Mechanism of the WTO; Annex 4 includes a variety of plurilateral trade agreements, which are only legally binding on signatories.

¹⁰⁹ The rules concerning agricultural subsidies are specified in the Agreement on Agriculture in the WTO. See World Trade Organisation (n 14).

¹¹⁰ Rolf H. Weber and Mirina Grosz, ‘Governments’ Interventions into the Real Economy under WTO Law Revisited: New Tendencies of Governmental Support of the Automobile Industry’ (2009) 43 *Journal of World Trade* 969, at 992.

subsidy rules.¹¹¹ If there are any conflicts between the SCM Agreement and the GATT 1994 in terms of subsidy rules, the SCM Agreement should prevail.¹¹² Due to its more elaborate rules on both the use of subsidies and countervailing measures, the SCM Agreement goes ‘well beyond merely applying and interpreting’ relevant articles of the GATT 1947.¹¹³

The SCM Agreement itself does not contain a purpose clause. As the Appellate Body has pointed out, the SCM Agreement reflects a delicate balance between WTO members that intended to impose more disciplines on the use of subsidies, and those who sought to keep more subsidy policy space and discipline the imposition of countervailing measures.¹¹⁴ In light of its negotiating history, the Appellate Body summarised the object and purpose of the SCM Agreement as intending ‘to strengthen and improve GATT disciplines relating to the use of both subsidies and countervailing measures, while recognising at the same time, the right of Members to impose such measures under certain conditions’.¹¹⁵

2.4.1 Identification of Subsidies that are Subject to the SCM Agreement

As discussed above, while subsidies are generally regarded as trade-distorting and protectionist, they can also be used for a wide range of important social and economic

¹¹¹ Eun Sup Lee, *World Trade Regulation: International Trade under the WTO Mechanism* (Springer 2012), at 32; Isabel Feichtner, *The Law and Politics of WTO Waivers: Stability and Flexibility in Public International Law* (Cambridge University Press 2011), at 174.

¹¹² Appellate Body Report, *Brazil - Desiccated Coconut*, WT/DS22/AB/R, 12-13. See also Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 367.

¹¹³ Appellate Body Report, *Brazil - Desiccated Coconut*, WT/DS22/AB/R, at 17.

¹¹⁴ Appellate Body Report, *US - Countervailing Duty Investigation on DRAMS*, WT/DS296/AB/R, para. 115. See also Luca Rubini, *The Definition of Subsidy and State Aid: WTO and EC Law in Comparative Perspective* (Oxford University Press 2009), at 57.

¹¹⁵ Appellate Body Report, *US - Softwood Lumber IV*, WT/DS257/AB/R, para. 64.

policies in ways that do not distort trade in any significant manner.¹¹⁶ Therefore, an appropriate subsidy regulation framework must answer the questions of what subsidies are and when should they be disciplined.¹¹⁷ To that end, the SCM Agreement provides a definition of the term ‘subsidy’. This was, for the first time, a definition of a subsidy was introduced in the GATT/WTO subsidy rules.¹¹⁸ It is considered one of the most important achievements of the SCM Agreement.¹¹⁹

As pointed out by Professor Jackson, the definition of subsidy is critical.¹²⁰ On the one hand, if the definition was too broad, the scope of the SCM Agreement could have covered government assistance measures that are within basic government functions, such as assistance to improve general infrastructure, protect the environment or promote disadvantaged regions.¹²¹ This may improperly limit the policy space of governments to use subsidies for pursuing important and fully legitimate economic and social policy goals. Moreover, as most products would virtually benefit from such government actions, this broad definition may lead to the extensive use of countervailing measures by the governments of foreign competitors. In such situation, ‘the whole system of post-World War II GATT liberal trade (including the reduction in tariffs) would be undermined’.¹²² On the other hand, if the definition of subsidy is too narrow, the scope of the SCM Agreement may become too limited to allow legitimate countervailing measures or other remedies against injurious foreign subsidies. This could also undermine the overall effectiveness of the SCM Agreement. Therefore, it is critical to have a proper subsidy definition, which can

¹¹⁶ Simon Lester and Bryan Mercurio (n 2), at 421.

¹¹⁷ Ibid, at 422.

¹¹⁸ Collins-Williams and Salembier (n 4), at 9.

¹¹⁹ Panel Report, *US - FSC*, WT/DS108/R, para. 7.80. See also Collins-Williams and Salembier (n 4), at 9.

¹²⁰ For further discussion, see Jackson (n 15).

¹²¹ Ibid, at 293.

¹²² Ibid, at 294.

cover government actions that should be subject to disciplines and exclude others that should not.¹²³

2.4.1.1 Financial Contribution

During the Uruguay Round negotiations, the US advocated a broad definition of subsidy. It proposed to define subsidy as ‘any government action or combination of actions which confers a benefit on the recipient firm(s)’.¹²⁴ According to the US, all government actions that confer benefits to the recipients should be challengeable.¹²⁵ However, the US view was rejected by other countries in the Negotiating Group on Subsidies and Countervailing Measures.¹²⁶ Among others, the EU advocated a narrow definition, seeking to limit the extensive use of countervailing duties by the US.¹²⁷ Canada argued that ‘while virtually any government action could be construed as having possible effects on production and trade, there need to be some outside limits on the scope of government activity that can be considered a subsidy and subject to countervail’.¹²⁸ Building upon existing subsidy rules, Canada proposed that a basic condition for a government measure to be legally challengeable should be that the government provided a financial contribution.¹²⁹

¹²³ Ibid.

¹²⁴ Committee on Subsidies and Countervailing Measures - Communication from the United States Concerning Subsidy Determinations on Certain Carbon Steel Products (SCM/36); Elements of the Framework for Negotiations - Submission by the United States (MTN.GNG/NG10/W/29).

¹²⁵ For instance, see the US DOC determination in the 1982 steel case, as referred to in Committee on Subsidies and Countervailing Measures - Communication from the United States Concerning Subsidy Determinations on Certain Carbon Steel Products (SCM/36).

¹²⁶ For example, the EU, Canada, Egypt, India and Japan were against the US stance. See Nigel Grimwade, *International Trade Policy: A Contemporary Analysis* (Routledge 2006), at 121.

¹²⁷ Panel Report, *US - Export Restraints*, WT/DS194/R, para. 8.63-8.69; Dominic Coppens (n 3), at 33.

¹²⁸ Uruguay Round - Group of Negotiations on Goods - Negotiating Group on Subsidies and Countervailing Measures - Statement Made by the Delegation of Canada (MTN.GNG/NG10/W/22).

¹²⁹ Uruguay Round - Group of Negotiations on Goods - Negotiating Group on Subsidies and Countervailing Measures - Framework for Negotiations - Communication from Canada (MTN.GNG/NG10/W/25).

In fact, the concept of financial contribution had been proposed by a GATT Group of Experts on the Calculation of the Amount of a Subsidy before the Uruguay Round.¹³⁰ According to the expert group, ‘there can be no subsidy in the absence of a financial contribution by government, or in other words that a subsidy presupposes such a contribution’.¹³¹

The SCM Agreement finally adopted this view. According to the SCM Agreement, a subsidy exists if there is a financial contribution by a government or any public body (or any form of income or price support in the sense of Article XVI of the GATT 1994), and a benefit is thereby conferred.¹³² The definition of subsidy consists of two distinctive elements, namely financial contribution and benefit.¹³³ As discussed above, the financial contribution element is aimed at ensuring that not all government assistance measures will be deemed as subsidies, and thus subject to regulation of the SCM Agreement.¹³⁴ Hence, this element is described as a ‘gateway’ to the SCM disciplines.¹³⁵

According to Article 1.1(a)(1) of the SCM Agreement, there are three different kinds of financial contribution:

(i) a government practice involves a direct transfer of funds (e.g. grants, loans, and

¹³⁰ This Group of Experts was established by the Committee on Subsidies and Countervailing Measures at its meeting of 8 May 1980.

¹³¹ The expert group summarised the types of financial contribution, including ‘practices which involve a direct transfer of funds (e.g. grants and loans); those involving potential direct transfers, or liabilities (e.g. loan guarantees); and those involving revenue foregone or not collected (fiscal incentives such as investment tax credits to specified industries)’. Uruguay Round - Group of Negotiations on Goods - Negotiating Group on Subsidies and Countervailing Measures - Note by the Secretariat (MTN.GNG/NG10/W/4).

¹³² Article 1.1 of the SCM Agreement.

¹³³ Appellate Body Report, *US - Softwood Lumber IV*, WT/DS257/AB/R, para. 51.

¹³⁴ Uruguay Round - Group of Negotiations on Goods - Negotiations Group on Subsidies and Countervailing Measures - Problems in the Area of Subsidies and Countervailing Measures - Note by the Secretariat (MTN.GNG/NG10/W/3); Uruguay Round - Group of Negotiations on Goods (GATT) - Negotiating Group on Subsidies and Countervailing Measures - Checklist of Issues for Negotiations - Note by the Secretariat (MTN.GNG/NG10/W/9), Section III.1.

¹³⁵ Panel Report, *US - Export Restraints*, WT/DS194/R, para. 8.38.

equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);

(ii) government revenue that is otherwise due is foregone or not collected (e.g. fiscal incentives such as tax credits);

(iii) a government provides goods or services other than general infrastructure, or purchases goods.

The foregoing list of financial contribution is exhaustive.¹³⁶ As demonstrated in these provisions, the SCM Agreement provides a variety of examples for each type of financial contribution, such as grants, loans, and equity infusion in terms of direct transfer of funds. These examples provide guidance for determining whether a financial contribution exists. As will be discussed in chapter four of this thesis, these types of financial contribution have been interpreted by WTO adjudicating bodies broadly.¹³⁷ In addition, according to Article 1.1(a)(1)(iv), the above financial contributions will arise if:

a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments.¹³⁸

This provision does not describe a type of financial contribution, but an indirect way

¹³⁶ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 613.

¹³⁷ Dominic Coppens (n 3), at 40.

¹³⁸ Article 1.1(a)(1)(iv) of the SCM Agreement.

in which the government provides a financial contribution.¹³⁹

2.4.1.2 Benefit

As mentioned above, ‘benefit’ is the other element of the subsidy definition in the SCM Agreement. Financial contribution and benefit are two separate legal elements, which ‘together determine whether a subsidy exists’.¹⁴⁰ In this regard, there has been controversy during the Uruguay Round negotiations about whether the subsidy definition should be based on costs to the subsidising government, or benefit to the subsidy recipient.¹⁴¹ On the one hand, the EU argued that a subsidy must incur a cost to the granting government, and subsidies should be evaluated based on ‘costs to government’.¹⁴² This approach could to some extent limit the reach of the US countervailing duty measures.¹⁴³ On the other hand, the US argued that a subsidy definition should be based on ‘benefits to recipients’. In other words, a subsidy would exist if a government measure was more preferential than those available under normal market conditions.¹⁴⁴ The SCM Agreement finally adopted the US view.¹⁴⁵ Financial contributions conferring no benefit are not subsidies within the meaning

¹³⁹ Dominic Coppens (n 3), at 39.

¹⁴⁰ Appellate Body Report, *Brazil - Aircraft*, WT/DS46/AB/R, para. 157. Some panels have misunderstood the two elements by blending them together. For instance, the panel in *Brazil - Aircraft* was pointed out to have a misunderstanding of the two elements, as it ‘blended together by importing the concept of benefit into the definition of financial contribution’. See Panel Report, *US - Export Restraints*, WT/DS194/R, para. 8.20.

¹⁴¹ The difference between the two approaches was obvious. As Professor Jackson illustrated, if a government makes loans to a particular sector at the interest rate of 8 percent, while the market interest rate is 10 percent and the government could borrow its own funds at 6 percent, there will be no subsidy pursuant to the government cost approach as no cost has incurred to the government. However, according to the benefit approach, a subsidy exists as the interest rate of the loan to the recipient was more preferential than that of the market. See Jackson (n 15), at 295.

¹⁴² Uruguay Round - Group of Negotiations on Goods (GATT) - Negotiating Group on Subsidies and Countervailing Measures - Note by the Secretariat (MTN.GNG/NG10/24). See also Dominic Coppens (n 3), at 62.

¹⁴³ Gary N Horlick, ‘A Personal History of the WTO Subsidies Agreement’ (2013) 47 *Journal of World Trade* 447, at 451.

¹⁴⁴ *Ibid.*, 451.

¹⁴⁵ Uruguay Round - Group of Negotiations on Goods (GATT) - Negotiating Group on Subsidies and Countervailing Measures - Note by the Secretariat (MTN.GNG/NG10/24). See also Jackson (n 15), at 295; Dominic Coppens (n 3), at 62.

of the SCM Agreement and thus not subject to its regulation. Therefore, the benefit element further confines the scope of the subsidy definition and, consequently, the SCM Agreement rules.

While the SCM Agreement does not provide many details on the benefit element, WTO dispute settlement panels and the Appellate Body have further elaborated on it. For instance, the panel in *Canada-Aircraft* explained that the ordinary meaning of ‘benefit’ clearly includes some form of advantage, and that the only logical basis for determining whether the recipient is in a more advantageous position due to the financial contribution is the market.¹⁴⁶ As the meaning of the term ‘benefit’ referred to ‘advantage’, ‘good’, ‘gift’, ‘profit’, or ‘a favourable or helpful factor or circumstance’ more generally, the Appellate Body considered that the meaning of ‘benefit’ implies some kind of comparison.¹⁴⁷ The key question in terms of the comparison is whether the financial contribution makes the recipient ‘better off’ than what it would have been without the contribution. The Appellate Body further confirmed that the market provides the appropriate basis for determining whether a benefit is conferred. A benefit arises if the recipient receives a financial contribution on terms more favourable than those available to the recipient in the market.¹⁴⁸

The elements of financial contribution and benefit define ‘subsidy’ within the meaning of the SCM Agreement from different perspectives. The financial contribution element focuses on government actions making the contributions, and the benefit element is concerned with the recipient.¹⁴⁹ For there to be a subsidy, the government actions at issue must be a financial contribution within the meaning of the SCM Agreement and must

¹⁴⁶ Panel Report, *Canada - Aircraft*, WT/DS70/R, para. 9.112.

¹⁴⁷ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 153, 157.

¹⁴⁸ Ibid, para. 158.

¹⁴⁹ Ibid, para. 156.

also confer a benefit. However, even if a government action is deemed to be a subsidy, it is not necessarily subject to regulation by the SCM Agreement. Subsidies will be subject to the disciplines of the SCM Agreement only if they are ‘specific’.

2.4.1.3 Specificity

Specificity is an important concept in terms of subsidy regulation. It was basically developed during the US administrative and statutory implementation of the countervailing duty law.¹⁵⁰ The SCM Agreement, for the first time, explicitly introduced the specificity concept in the GATT/WTO subsidy rules.¹⁵¹ Specificity can be understood as ‘the quality of being particular to one person or thing’.¹⁵² The rationales behind the specificity requirement include at least two aspects. First, if a subsidy is available across the board to all producing sectors in an economy, it may have no, or at most minimal, trade-distorting effects.¹⁵³ Secondly, as discussed above, some broadly based general government welfare programmes are intended to be excluded from the regulation of the SCM Agreement, as they are considered necessary to promote legitimate economic and social policy goals.¹⁵⁴ A proper specificity test can help distinguish general welfare programmes that are less trade-distorting, from those limited to certain enterprises that should be subject to regulation.

¹⁵⁰ The specificity concept was explicitly introduced into the US Countervailing Duty Statute of 1979 (implementing the Tokyo Round Subsidies Code), which defines subsidy in this way: ‘[t]he following domestic subsidies, if provided or required by government action to a specific enterprise or industry, or group of enterprises or industries...’. See Jackson (n 15), at 296.

¹⁵¹ There is no explicit specificity requirement in the Tokyo Round Subsidies Code. The Subsidies Code only provided that social and economic policies objectives of its signatories may be achieved by means of subsidies granted with the aim of giving an advantage to ‘certain enterprises’. Article 11.3 of the Tokyo Round Subsidies Code.

¹⁵² *Cambridge Academic Content Dictionary* (Cambridge University Press 2009).

¹⁵³ Jackson (n 15), at 297.

¹⁵⁴ *Ibid*, at 297.

According to the SCM Agreement, a subsidy is ‘subject to’ the provisions of Part II (regarding prohibited subsidies), or the provisions of Part III (regarding actionable subsidies) or Part V (regarding the imposition of countervailing duties) only if it is specific in accordance with Article 2.¹⁵⁵ Therefore, subsidies that are not specific cannot be challenged or countervailed under the SCM Agreement. The SCM Agreement further sets out some rules for determining the existence of specificity, which will be discussed in detail in chapter four of this thesis. In general, a subsidy will be specific if it is in law or in fact limited to ‘an enterprise or industry or group of enterprises or industries’ (referred to in the SCM Agreement as ‘certain enterprises’).¹⁵⁶ Prohibited subsidies (which will be discussed below) are irrefutably deemed to be specific under the SCM Agreement due to their general trade-distorting nature.¹⁵⁷ This is to call for their prohibition even where they do not meet the above substantive requirements of specificity.¹⁵⁸ According to the SCM Agreement, any determination of specificity should be clearly substantiated on the basis of positive evidence.¹⁵⁹

2.4.2 Disciplines on Subsidies under the SCM Agreement

The above explains that the definition of ‘subsidy’ and the rules of ‘specificity’ serve as a threshold for the application of the disciplines prescribed in the SCM Agreement.¹⁶⁰

¹⁵⁵ Article 1.2 of the SCM Agreement. For further discussion on this provision, see Appellate Body Report, *US - Softwood Lumber IV*, WT/DS257/AB/R (n 6), para. 72.

¹⁵⁶ Article 2 of the SCM Agreement.

¹⁵⁷ Article 2.3 of the SCM Agreement provides that any subsidy falling under the provisions of Article 3 should be deemed to be specific. See also Panel Report, *US - Upland Cotton*, WT/DS267/R, para. 7.1153; Simon Lester and Bryan Mercurio (n 2), at 429.

¹⁵⁸ Simon Lester and Bryan Mercurio (n 2), at 429.

¹⁵⁹ Article 2.4 of the SCM Agreement.

¹⁶⁰ Dominic Coppens (n 3), at 115.

Partly in order to target subsidies that are trade-distorting, the SCM Agreement classified subsidies into three categories, including prohibited subsidies, actionable subsidies and non-actionable subsidies.¹⁶¹ Different disciplines apply to each category of these subsidies. This overall classification of subsidies, also referred to as ‘traffic lights’ approach, was proposed first by the US during the Tokyo Round negotiations.¹⁶² This approach was instrumental for reaching a compromise between the harsh stance of the US and the looser stance of other countries on disciplining the use of subsidies.¹⁶³

2.4.2.1 Prohibited Subsidies

The first category under the ‘traffic lights’ approach is prohibited subsidies, often referred to as ‘red light’ subsidies, including export subsidies and import substitution subsidies (or local content subsidies).¹⁶⁴ These subsidies are banned in all cases due to their direct trade-distorting nature and effects.¹⁶⁵ According to Article 3.2 of the SCM Agreement, WTO members ‘shall neither grant nor maintain’ any prohibited subsidies. The SCM Agreement sets out two kinds of prohibited subsidies, namely export subsidies and import substitution subsidies.¹⁶⁶

In the economic literature, ‘export subsidies’ are those only paid on production that is

¹⁶¹ Part II and Part III of the SCM Agreement deal with prohibited subsidies and actionable subsidies respectively, and Part IV is concerned with non-actionable subsidies.

¹⁶² Dominic Coppens (n 3), at 115. See also Gary Clyde Hufbauer and Joanna R. Shelton, *Subsidies in International Trade* (Institute for International Economics 1984), at 22.

¹⁶³ Jackson (n 15), 290.

¹⁶⁴ Article 3.1(a) of the SCM Agreement.

¹⁶⁵ Peter van den Bossche, *The Law and Policy of the World Trade Organisation: Text, Cases and Materials* (2nd ed, Cambridge University Press 2008), at 116.

¹⁶⁶ Article 3.1 of the SCM Agreement.

exported, and are thus directly export-stimulating.¹⁶⁷ Therefore, a distinction can be drawn between export subsidies and ‘domestic subsidies’, which are granted on production regardless of whether it is exported or not.¹⁶⁸ Export subsidies have been a contentious issue in terms of international trade regulation, due to their trade-distorting effects which place burdens on other countries.¹⁶⁹

In the SCM Agreement, export subsidies are defined as subsidies ‘contingent, in law or in fact, whether solely or as one of several other conditions, upon export performance, including those illustrated in Annex I’.¹⁷⁰ The key question regarding the existence of export subsidies is the export ‘contingency’ of the subsidies at issue.¹⁷¹ The ‘contingency’ requires some degree of link or relationship between export and a subsidy.¹⁷² According to the Appellate Body, the term ‘contingent’ means ‘conditional’ or ‘dependent for its existence on something else’.¹⁷³ In this regard, footnote 4 of the SCM Agreement provides some guidance. It states that a *de facto* contingency exists when the granting of a subsidy is in fact ‘tied to’ actual or anticipated exportation or export earnings.¹⁷⁴ The Appellate Body has clarified that the ordinary meaning of ‘tied to’ confirms that a relationship of conditionality or dependence must be demonstrated.¹⁷⁵ Footnote 4 also makes it clear that ‘[t]he mere fact that a subsidy is granted to enterprises which export shall not for that reason alone be considered to be an export subsidy within the meaning of this provision’.¹⁷⁶

¹⁶⁷ Dominic Coppens (n 3), at 6.

¹⁶⁸ Ibid, at 6.

¹⁶⁹ Jackson (n 15), at 280.

¹⁷⁰ Article 3.1(a) of the SCM Agreement.

¹⁷¹ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 166; Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1518.

¹⁷² Simon Lester and Bryan Mercurio (n 2), at 431.

¹⁷³ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, footnote 86, para. 166; Appellate Body Report, *US - FSC (Article 21.5 - EC)*, WT/DS108/AB/RW, para. 111.

¹⁷⁴ Footnote 4 of the SCM Agreement.

¹⁷⁵ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 166-171.

¹⁷⁶ Footnote 4 of the SCM Agreement.

Export contingency ‘must be inferred from the total configuration of the facts constituting and surrounding the granting of the subsidies’, and ‘none of which on its own is likely to be decisive in any given case’.¹⁷⁷ As the legal standard is the same for *de facto* and *de jure* export contingency, a ‘tie’ between export performance and a subsidy also meets the standard for the *de jure* contingency.¹⁷⁸

It is worth mentioning that, a *de jure* contingency is ‘demonstrated on the basis of the words of relevant legislation, regulation or other legal instrument’,¹⁷⁹ and is usually easier to identify. As a result, *de facto* export subsidies are more likely to be used by government, as the identification of a *de facto* export contingency is beyond the words of the relevant laws or regulations and is thus more difficult.¹⁸⁰ The rules on *de facto* export contingency prevent governments from circumventing the prohibition on export subsidies by linking subsidies to export performance without prescribing it explicitly in their laws.¹⁸¹

In addition to the above rules for determining the existence of export subsidies, Annex I of the SCM Agreement provides an ‘illustrative list of export subsidies’, which is built on that of the Tokyo Round Subsidies Code and includes eleven types of export subsidies.¹⁸² A subsidy that falls within the scope of the illustrative list is deemed to be a prohibited export subsidy.¹⁸³ As this list is not exhaustive, subsidies falling outside the scope of the

¹⁷⁷ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 167; Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1518.

¹⁷⁸ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 167. For more discussion, see Simon Lester and Bryan Mercurio (n 2), at 431.

¹⁷⁹ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 167; Appellate Body Report, *Canada - Autos*, WT/DS139/AB/R, para. 100.

¹⁸⁰ Appellate Body Report, *Canada - Autos*, WT/DS139/AB/R, para. 100.

¹⁸¹ Dominic Coppens (n 3), at 119.

¹⁸² Annex I of the SCM Agreement.

¹⁸³ Panel Report, *Brail - Aircraft (Article 21.5 - Canada)*, WT/DS46/RW, para. 6.30-6.31. This was implicitly endorsed by the Appellate Body. See Appellate Body Report, *Brazil - Aircraft (Article 21.5 - Canada)*, WT/DS46/AB/RW, para. 61, as discussed by Dominic Coppens (n 3), at 117.

list can still be covered by the export subsidy rules in the SCM Agreement.¹⁸⁴

The second type of prohibited subsidies in the SCM Agreement is import substitution subsidies, also referred to as domestic content subsidies. According to the SCM Agreement, they are subsidies contingent on the use of domestic over imported goods.¹⁸⁵ The Appellate Body has confirmed that the legal contingency standard for import substitution subsidies is similar to the contingency of export subsidies, thus including both *de jure* and *de facto* contingency.¹⁸⁶ Import substitution subsidies are considered ‘as effective as any tariff in protecting domestic input supplying industries’, and would distort the flow of resources internationally.¹⁸⁷ Due to their trade-distorting nature, export subsidies and import substitution subsidies are singled out for more stringent disciplines under the SCM Agreement.¹⁸⁸ If a subsidy is found to be a prohibited subsidy, it must be withdrawn without delay.¹⁸⁹

2.4.2.2 Actionable Subsidies

The second category of subsidies under the SCM Agreement is actionable subsidies, also referred to as ‘yellow light’ subsidies.¹⁹⁰ The use of the term ‘actionable’ means that subsidies of this type are not prohibited outright, but may be challenged if they cause ‘adverse effects’ to the interests of other members.¹⁹¹ Article 5 of the SCM Agreement

¹⁸⁴ Dominic Coppens (n 3), at 117.

¹⁸⁵ Article 3.1(b) of the SCM Agreement.

¹⁸⁶ Appellate Body Report, *Canada - Autos*, WT/DS139/AB/R, paras. 135-143. See also Bossche (n 165), at 574.

¹⁸⁷ Elements of the Framework for Negotiations - Submission by the United States (MTN.GNG/NG10/W/29). See also Dominic Coppens (n 3), at 140.

¹⁸⁸ See Rubini (n 114), at 71; Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 376.

¹⁸⁹ Article 4.7 of the SCM Agreement.

¹⁹⁰ Jackson (n 15), at 292.

¹⁹¹ In theory, prohibited subsidies could still be challenged as actionable subsidies. See Panel Report, *Korea -*

provides that '[n]o Member should cause, through the use of any subsidy referred to in paragraphs 1 and 2 of Article 1, adverse effects to the interests of other Members'. The key issue regarding actionable subsidies is thus to establish whether such 'adverse effects' exist. Article 5 refers to three types of adverse effects, including: (i) injury to the domestic industry of another member; (ii) nullification or impairment of benefits accruing to another member under GATT 1994; and (iii) serious prejudice to the interests of another member.¹⁹²

First, according to footnote 45 to the SCM Agreement, the term 'injury' should be taken to mean material injury, threat of material injury, or material retardation of the establishment of such an industry.¹⁹³ The term 'injury to the domestic industry' is used in the same sense as in the rules over countervailing duties in Part V of the SCM Agreement.¹⁹⁴ The determination of injury should be based on positive evidence, and should involve an objective examination of: (i) the volume of the subsidised imports and their effects on prices of like products in the domestic market; and (ii) the consequent impact of the subsidised imports on the domestic producers of such products.¹⁹⁵

In terms of the volume of the subsidised imports, it must be considered whether there has been a significant increase of the subsidised imports, either in absolute terms or relative to production or consumption in the importing country.¹⁹⁶ As regards the effects of the subsidised imports on prices, it must be considered whether there has been a significant price undercutting, significant price depression or price suppression by the subsidised

Commercial Vessels, WT/DS273/R, para. 7.344, as discussed by Dominic Coppens (n 3), at 144.

¹⁹² Article 5 of the SCM Agreement.

¹⁹³ Footnote 45 of the SCM Agreement.

¹⁹⁴ Footnote 11 of the SCM Agreement.

¹⁹⁵ Article 15.1 of the SCM Agreement.

¹⁹⁶ Article 15.2 of the SCM Agreement.

imports.¹⁹⁷ Next, the examination of the impact of the subsidised imports on the domestic industry must include an evaluation of all relevant economic factors and indices having a bearing on the state of the industry.¹⁹⁸ In addition, there must be a causal relationship between the subsidised imports and the injury. Article 15.5 of the SCM Agreement provides that it must be demonstrated that the subsidised imports are, through the effects of subsidies, causing the injury.¹⁹⁹ The injury caused by other factors, such as changes in the patterns of consumption, developments in technology, etc., may not be attributed to the subsidised imports.²⁰⁰

The second type of adverse effects, namely nullification of impairment of benefits accruing to another member under the GATT 1994, is formulated in the same sense as it is used in the GATT 1994.²⁰¹ According to Article 5(b) of the SCM Agreement, this type of adverse effects is concerned in particular with the benefits from tariff concessions under Article II of the GATT 1994. WTO members have reasonable expectations that they can benefit from tariff concessions, but subsidisation may undercut the improved market access resulting from a tariff concession.²⁰² Therefore, nullification or impairment would arise when the effect of a tariff concession is systematically offset or counteracted by a subsidy programme.²⁰³

The last type of adverse effects is 'serious prejudice' to the interests of other WTO

¹⁹⁷ Article 15.2 of the SCM Agreement.

¹⁹⁸ These factors include, for example, actual and potential decline in output, sales, market share, profits, productivity, return on investments, or utilization of capacity; factors affecting domestic prices; actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital or investments. This list of factors in the SCM Agreement is not exhaustive, and no single factor, or combination of factors, necessarily gives decisive guidance. See Article 15.4 of the SCM Agreement.

¹⁹⁹ Article 15.5 of the SCM Agreement.

²⁰⁰ Bossche (n 165), at 582.

²⁰¹ Footnote 12 of the SCM Agreement.

²⁰² Bossche (n 165), at 583.

²⁰³ Panel Report, *US - Offset Act (Byrd Amendment)*, WT/DS234/R, para. 7.127.

members. According to the SCM Agreement, ‘serious prejudice’ is used in the same sense as it is used in GATT Article XVI.²⁰⁴ The concept of serious prejudice includes ‘threat of serious prejudice’, namely a situation in which the serious prejudice is imminent.²⁰⁵ The SCM Agreement sets out rather detailed rules concerning the determination of serious prejudice,²⁰⁶ which are considered to constitute important progress in terms of subsidy regulation.²⁰⁷ First, Article 6.1 of the SCM Agreement originally provided for several situations where ‘serious prejudice’ will be deemed to exist.²⁰⁸ However, this provision expired at the end of 1999 as no consensus was reached among WTO members in favour of continuing its existence.²⁰⁹ Article 6.3 of the SCM Agreement then explains that serious prejudice will be deemed to exist if any of the following effects has been found:

- (a) the effect of the subsidy is to displace or impede the imports of a like product of another Member into the market of the subsidising Member;
- (b) the effect of the subsidy is to displace or impede the exports of a like product of another Member from a third country market;
- (c) the effect of the subsidy is a significant price undercutting by the subsidised product as compared with the price of a like product of another Member in the same

²⁰⁴ Footnote 13 of the SCM Agreement.

²⁰⁵ Footnote 13 of the SCM Agreement. For more discussion on this, see Panel Report, *US - Upland Cotton (Article 21.5 - Brazil)*, WT/DS267/RW, para. 7.1494-7.1497. See also Dominic Coppens (n 3), at 149.

²⁰⁶ In the Tokyo Round Subsidies Code, there were only very brief provisions regarding serious prejudice. See Article 8 of the Tokyo Round Subsidies Code.

²⁰⁷ Collins-Williams and Salembier (n 4), at 9.

²⁰⁸ These situations include: (a) the total *ad valorem* subsidisation of a product exceeding 5 percent; (b) the subsidies cover operating losses sustained by an industry; (c) the subsidies cover operating losses sustained by an enterprise, other than one-time measures; or (d) direct forgiveness of debt. In accordance with this provision, the complaining member only had to demonstrate the existence of such a specific subsidy and then place the burden on the defending party to refute the claim that the subsidy caused serious prejudice in the meaning of Article 6.3. However, according to Article 6.2 of the SCM Agreement, notwithstanding the provisions of in Article 6.1, serious prejudice should not be found if it is demonstrated that the subsidy in question has not resulted in any of the effects enumerated in Article 6.3 of the SCM Agreement.

²⁰⁹ Article 31 of the SCM Agreement. See also Dominic Coppens (n 3), at 147.

market or significant price suppression, price depression or lost sales in the same market;

(d) the effect of the subsidy is an increase in the world market share of the subsidising Member in a particular subsidised primary product or commodity as compared to the average share it had during the previous period of three years and this increase follows a consistent trend over a period when subsidies have been granted.

As to the displacement or impedance of another member's exports to a third country market (Article 6.3(b)), Article 6.4 further explains that the displacement or impeding of exports should include any case in which there has been a change in relative market shares, to the disadvantage of the non-subsidised like product. This should be assessed 'over an appropriately representative period sufficient to demonstrate clear trends in the development of the market for the product concerned, which, in normal circumstances, shall be at least one year'.²¹⁰ The 'change in relative shares of the market' includes any of the following situations: (a) there is an increase in the market share of the subsidised product; (b) the market share of the subsidised product remains constant in circumstances in which, in the absence of the subsidy, it would have declined; (c) the market share of the subsidised product declines, but at a slower rate than would have been the case without the subsidy.²¹¹

According to Article 6.5, price undercutting should include any case in which such

²¹⁰ Article 6.4 of the SCM Agreement. According to Article 6.4 ('for the purpose of paragraph 3(b)'), such contextual support applies to displacement or impedance of trade to third country market (Article 6.3(b)), but not to the subsidising country market (Article 6.3(a)). However, the Appellate Body considered that the contextual support to show displacement of impedance in Article 6.4 refers to both situations (Article 6.3(a) and 6.3(b)). Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 1081, para. 1086. For more discussion, see Dominic Coppens (n 3), at 157.

²¹¹ Article 6.4 of the SCM Agreement.

price undercutting has been demonstrated through a comparison of prices of the subsidised product with prices of a non-subsidised like product supplied to the same market. The comparison should be made at the same level of trade and at comparable times, taking into account any other factor affecting price comparability.²¹² If such a direct comparison is not possible, the existence of price undercutting may be demonstrated on the basis of export unit values.²¹³ In addition to demonstrating the above scenarios, it must also be established that there is a causal link between the subsidy and the market phenomena.²¹⁴

The SCM Agreement provides that the existence of serious prejudice should be established on the basis of the information submitted to or obtained by the panel.²¹⁵ Specific procedures for developing information on serious prejudice are set out in Annex V of the SCM Agreement. If a member fails to cooperate in the information-gathering process, a dispute settlement panel may rely on the ‘best information available’, and draw adverse inferences from the lack of cooperation.²¹⁶

As mentioned above, actionable subsidies are not as trade-distorting as prohibited subsidies, so they are not prohibited *per se*. If a subsidy is found to cause adverse effects, the subsidising member must withdraw the subsidy, or take appropriate steps to remove the effects of the subsidy.²¹⁷ The requirement to demonstrate the adverse effects is a main difference between rules on actionable and those on prohibited subsidies, as the latter can be counteracted without proving their trade effects. Consequently, there is a higher hurdle

²¹² Article 6.5 of the SCM Agreement.

²¹³ Article 6.5 of the SCM Agreement.

²¹⁴ Dominic Coppens (n 3), at 148.

²¹⁵ Article 6.8 of the SCM Agreement.

²¹⁶ Annex V to the SCM Agreement, para. 6 and 7. See also Bossche (n 165), at 584.

²¹⁷ Article 7.8 of the SCM Agreement.

to formulate an actionable subsidy claim both in legal and financial terms.²¹⁸

2.4.2.3 Non-actionable Subsidies

The last category of subsidies in the SCM Agreement is non-actionable subsidies, also known as ‘green light’ subsidies. These subsidies were exempted from the actionable subsidy rules and also unilateral countervailing duty measures.²¹⁹ This was mainly because they were likely to have minimal trade-distorting effects and the policy goals they pursued were considered desirable.²²⁰

In addition to non-specific subsidies, there used to be three types of non-actionable subsidies in the SCM Agreement.²²¹ First, assistance for R&D was non-actionable when it was conducted by firms or by higher education or research establishments on a contract basis with firms.²²² Secondly, assistance to disadvantaged regions, pursuant to a general regional development framework, was non-actionable.²²³ Finally, the third type of non-actionable subsidies covered assistance to promote adaptation of existing facilities to new environmental requirements imposed by law or regulations.²²⁴ These non-actionable subsidies were subject to further strict conditions and limitations under the SCM Agreement.²²⁵ For example, the non-actionable R&D subsidies should not cover more than 75 percent of the costs of industrial research or 50 percent of the costs of

²¹⁸ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, footnote 2428. See also Dominic Coppens (n 3), at 148.

²¹⁹ Jackson (n 15), at 292.

²²⁰ Simon Lester and Bryan Mercurio (n 2), at 447.

²²¹ Besides these three types of non-actionable subsidies, non-specific subsidies within the meaning of Article 2 of the SCM Agreement are also non-actionable under the SCM Agreement. See Article 8.1(a) of the SCM Agreement.

²²² Article 8.2(a) of the SCM Agreement.

²²³ Article 8.2(b) of the SCM Agreement.

²²⁴ Article 8.2(c) of the SCM Agreement.

²²⁵ Article 8 of the SCM Agreement.

pre-competitive development activity and were also limited exclusively to certain types of costs.²²⁶

The creation of non-actionable subsidies was regarded as another important achievement of the SCM Agreement compared with the GATT subsidy rules.²²⁷ However, these provisions expired at the end of 1999, because no consensus was reached regarding the continuation of their application among WTO members.²²⁸ Since then, subsidies that used to be non-actionable can be challenged if they result in adverse effects or lead to injurious imports that can be countervailed.²²⁹

2.4.3 Dispute Settlement and Remedies

2.4.3.1 Multilateral Procedures

The SCM Agreement provides two remedies for dealing with illicit foreign subsidies, including the multilateral and unilateral remedies. First, for multilateral remedies, a WTO member can refer to the WTO dispute settlement mechanism if its interests are adversely

²²⁶ The R&D assistance is limited exclusively to: costs of personnel (researchers, technicians and other supporting staff employed exclusively in the research activity); costs of instruments, equipment, land and buildings used exclusively and permanently (except when disposed of on a commercial basis) for the research activity; costs of consultancy and equivalent services used exclusively for the research activity, including bought-in research, technical knowledge, patents, etc.; additional overhead costs incurred directly as a result of the research activity; other running costs (such as those of materials, supplies and the like), incurred directly as a result of the research activity. There were also additional requirements for the other two kinds of non-actionable subsidies in the SCM Agreement. See Article 8.2 of the SCM Agreement.

²²⁷ Collins-Williams and Salembier (n 4), at 9.

²²⁸ Article 31 of the SCM Agreement. The rules of non-actionable subsidies were viewed as an exchange for the above-mentioned stricter rules on the determination of serious prejudice in Article 6.1 which was proposed by the US. As a result, their future was bound together. Several developing countries, such as Brazil and India, were not in favour of its extension as they considered that the provisions overly reflected the interest of developed countries. In contrast, the EU and Canada favoured a continuation of the category of non-actionable subsidies, whereas the US had mixed views. See Anwarul Hoda and Rajeev Ahuja, 'Agreement on Subsidies and Countervailing Measures: Need for Clarification and Improvement' (2005) 39 *Journal of World Trade*, at 1061.

²²⁹ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 380.

affected by foreign subsidies. As mentioned above, the WTO contains an integrated legal system, including rules on dispute settlement established through the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU). The WTO dispute settlement mechanism is widely regarded as one of the most important achievements of the Uruguay Round negotiations.²³⁰ The role of the mechanism is critical in terms of dealing with the subsidy problem in the civil aircraft industry, as the disputes over aircraft subsidies have all been referred to the mechanism.²³¹ With respect to the multilateral remedies, the SCM Agreement stipulates some special and additional dispute settlement rules and procedures for dealing with foreign subsidies.²³² These rules and procedures are to a large extent similar to those of the DSU.²³³

Like in other kinds of disputes, if a member believes that prohibited subsidies are being granted or maintained, or subsidies granted or maintained by another member cause adverse effects to its interests, the first and mandatory step to obtain multilateral remedies is to request consultations with the subsidising member.²³⁴ The aim of these consultations is to reach a mutually acceptable solution to the subsidy dispute. If the consultation fails to reach such a solution, any party to such consultations can request the establishment of a dispute settlement panel so as to adjudicate on the case.²³⁵ If any party to the dispute

²³⁰ See, for instance, World Trade Organisation Secretariat, *From GATT to the WTO: The Multilateral Trading System in the New Millennium* (Kluwer Law International 2000), at 108; Thomas Cottier and Krista Nadakavukaren Schefer, 'Conflict Resolution on the World Trade Organisation', *The Challenge of WTO Law: Collected Essays* (Cameron May 2007), at 172.

²³¹ Ron Kendler, 'Delayed Fight: The World Trade Organisation Dispute Settlement Mechanism, Negotiation, and the Transatlantic Conflict over Commercial Aircraft' (2012) *Boston College International and Comparative Law Review* 253, at 270. The operation of the WTO dispute settlement mechanism in the context of disputes over the civil aircraft industry will be discussed in detail in the chapter five of this thesis.

²³² Article 4 and Article 7 of the SCM Agreement are concerned with dispute settlement procedures and rules for prohibited subsidies and actionable subsidies respectively.

²³³ According to Article 30 of the SCM Agreement, except as otherwise specifically provided in the SCM Agreement, the provisions of Articles XXII and XXIII of GATT 1994 as elaborated and applied by the DSU will apply to consultations and the disputes settlement under the SCM Agreement.

²³⁴ Article 4.1 and Article 7.1 of the SCM Agreement.

²³⁵ Article 4.4 and Article 7.4 of the SCM Agreement.

appeals the panel's rulings, the dispute will be referred to the Appellate Body for an appellate review.²³⁶ Generally speaking, the rules and procedures concerning prohibited subsidies, such as the timeframes, implementation standards and potential remedies, are more stringent than those concerning actionable subsidies.²³⁷

As mentioned above, if a subsidy is found to be a prohibited subsidy, the subsidising member must withdraw it without delay.²³⁸ The time period within which the subsidy measure must be withdrawn will be specified by the panel. In practice, panels have usually set this period as 90 days from the date of adoption of the panel or Appellate Body reports.²³⁹ If the recommendation of the panel or the Appellate Body to withdraw the subsidies is not followed, the complaining member can apply for the authorisation of the WTO Dispute Settlement Body (DSB) to take appropriate countermeasures.²⁴⁰ This appears to give WTO members greater leeway to retaliate than the DSU, which refers to the 'suspension of concessions or other obligations'.²⁴¹ As regards actionable subsidies, the subsidising member must take appropriate steps to withdraw the subsidy, or remove the adverse effects of the subsidy.²⁴² If there has been non-compliance with DSB recommendations and rulings, the SCM Agreement authorises countermeasures that are commensurate with the degree and the nature of the adverse effect.²⁴³

2.4.3.2 Unilateral Procedures

²³⁶ Article 4.9 and Article 7.7 of the SCM Agreement.

²³⁷ Dominic Coppens (n 3), at 198.

²³⁸ Article 4.7 of the SCM Agreement.

²³⁹ For instance, see Panel Report, *Korea - Commercial Vessels*, WT/DS273/R, para. 8.5. See also Simon Lester and Bryan Mercurio (n 2), at 448.

²⁴⁰ Article 4.10 and Article 7.9 of the SCM Agreement.

²⁴¹ Simon Lester and Bryan Mercurio (n 2), at 448.

²⁴² Article 7.8 of the SCM Agreement.

²⁴³ Article 7.9 of the SCM Agreement.

The second kind of remedies for illegal subsidies under the SCM Agreement is unilateral, namely to impose countervailing duties on subsidised imports that cause injury to the domestic industry. The SCM Agreement includes an injury test as the prerequisite for taking unilateral countervailing measures.²⁴⁴ A WTO member can opt for unilateral remedies to offset foreign subsidies only if it is experiencing injury to its domestic industry that is caused by subsidised imports.²⁴⁵ With respect to the injury resulting from a particular subsidy in the domestic market of the importing member, the member can only choose one kind of remedy, either multilateral or unilateral.²⁴⁶ However, the member can take unilateral remedies to deal with subsidised imports causing injury in its domestic market, and take multilateral remedies to counteract other adverse effects of the same subsidies in its export markets.²⁴⁷

The rules and procedures for imposing unilateral countervailing measures are set forth in Part IV of the SCM Agreement. When taking this unilateral approach, a member has to follow the procedural and substantive rules stipulated in the SCM Agreement. The rules on the imposition of countervailing duties are considered equally important to those on the use of subsidies, as the extensive imposition of countervailing duties by the US is a main concern for many WTO members.²⁴⁸ The aim of Part V of the SCM Agreement is to 'strike a balance between the right to impose countervailing duties to offset subsidisation that is causing injury, and the obligations that members must respect in order to do so'.²⁴⁹

In order to impose countervailing duties, a member must conduct an investigation

²⁴⁴ Bernard M Hoekman, *The World Trade Organisation: Law, Economics, and Politics* (Routledge 2007), at 40.

²⁴⁵ Bossche (n 165), at 585.

²⁴⁶ Footnote 35 of the SCM Agreement.

²⁴⁷ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 384.

²⁴⁸ Collins-Williams and Salembier (n 4), at 9.

²⁴⁹ Appellate Body Report, *US - Carbon Steel*, WT/DS213/AB/R, para. 74. See also Dominic Coppens (n 3), at 220.

following the rules in the SCM Agreement and reach a positive determination of the existence of three elements: (i) subsidised imports, that is, imports of products from producers who benefited from specific subsidies, (ii) injury to the domestic industry producing like product, and (iii) a causal link between the subsidised import and the injury to the domestic industry.²⁵⁰ As mentioned above, the term injury for countervailing measures is used in the same sense as it is used in rules concerning the adverse effects of actionable subsidies.²⁵¹ Therefore, the rules applicable to the existence of injury in a countervailing duties investigation are the same as those regarding the existence of injury in an actionable subsidies claim described above.²⁵²

The SCM Agreement stipulates a set of transparent rules for conducting countervailing duty investigations.²⁵³ The investigation should normally be initiated upon a written application ‘by or on behalf of the domestic industry’.²⁵⁴ To be considered ‘by or on behalf of the domestic industry’, an application must be supported by domestic producers whose collective output constitutes more than 50 percent of the total production of the like product produced by the portion of domestic industry that expressed its view.²⁵⁵ The application to initiate an investigation must include sufficient evidence of the existence of a subsidy, injury and cause link between the subsidised imports and the alleged injury.²⁵⁶ However, in certain special circumstances, the authorities may also

²⁵⁰ Bossche (n 165), at 586.

²⁵¹ Footnote 11 of the SCM Agreement.

²⁵² The rules concerning the determination of injury are set forth in Article 15 of the SCM Agreement.

²⁵³ Gary N Horlick and Peggy A Clarke, ‘The 1994 WTO Subsidies Agreement’ (1994) 17 World Competition 41, at 49.

²⁵⁴ Article 11.1 of the SCM Agreement.

²⁵⁵ However, the investigation should not be initiated if the production of the domestic producers supporting the application accounts for less than 25 percent of total production of the like product produced by the domestic industry. See Article 11.4 of the SCM Agreement.

²⁵⁶ The authorities will then review the accuracy and adequacy of the evidence to determine whether the evidence is sufficient to justify the initiation of the CVD investigation. Article 11.2, 11.3 of the SCM Agreement.

initiate an investigation by themselves without an application from a domestic industry.²⁵⁷

Similar to what happens with multilateral remedies, there is a consultation requirement in the unilateral countervailing procedures. The investigating member must hold consultations with the members whose products may be subject to the investigation, before the formal initiation of the investigation, in order to reach a mutually agreed solution.²⁵⁸

The foregoing outlines the two kinds of remedies for dealing with illegal foreign subsidies as well as relevant dispute settlement rules and procedures. The use of multilateral remedies is particularly encouraged by the WTO,²⁵⁹ as they are expected to decrease the use of unilateral countervailing measures by WTO members.²⁶⁰

Besides the primary rules regarding subsidies described above, the SCM Agreement also sets out a subsidy notification requirement. WTO members are required to notify their subsidy programmes to the WTO each year.²⁶¹ These notifications should include information about the type of subsidy, the amounts involved, the policy objective and intended duration, as well as the relevant statistics that can enable other WTO members to evaluate the trade effects and to understand the operation of the notified subsidy programmes.²⁶² Members are also required to report, without delay, all preliminary or final actions taken with respect to countervailing duties, and to submit semi-annual reports on any countervailing duty actions taken within the preceding six months.²⁶³ In addition, they should notify the WTO about their countervailing duties laws, such as which authorities are competent to initiate and conduct countervailing duty investigations, as well as its

²⁵⁷ Article 11.6 of the SCM Agreement.

²⁵⁸ Article 13.1 of the SCM Agreement.

²⁵⁹ Article 23 of the DSU.

²⁶⁰ Horlick and Clarke (n 253), at 49.

²⁶¹ Article 25.1 of the SCM Agreement.

²⁶² Article 25.3 of the SCM Agreement.

²⁶³ Article 25.11 of the SCM Agreement.

domestic procedures governing such investigations.²⁶⁴

2.4.4 Special Rules for Certain Members

The SCM Agreement recognises that subsidies may play an important role in the economic development programmes of developing country members.²⁶⁵ The Agreement thus provides certain special and differential treatments for these members.²⁶⁶ For instance, least-developed countries and developing countries are exempted from disciplines over prohibited subsidies.²⁶⁷ Moreover, certain normally actionable subsidies are not deemed as actionable when granted by developing country members in the context of their privatisation programmes.²⁶⁸ There is also some limitation on remedies for actionable subsidies granted by developing countries.²⁶⁹ Some of these special rules were set up to last only for a limited time and have since expired.²⁷⁰ In addition to these preferential treatments for developing countries, there are some special rules in the SCM Agreement for ‘members in the process of transformation from a centrally-planned into a market, free-enterprise economy’. These members ‘may apply programmes and measures necessary for such a transformation’.²⁷¹

²⁶⁴ Article 25.12 of the SCM Agreement.

²⁶⁵ Article 27.1 of the SCM Agreement.

²⁶⁶ Article 27.1 of the SCM Agreement.

²⁶⁷ For instance, least-developed countries and developing countries that have less than \$1,000 per capita GNP are exempted from disciplines on prohibited export subsidies, and have a time-bound exemption from other prohibited subsidies. For other developing countries, the export subsidy prohibition would take effect eight years after the entry into force of the agreement establishing the WTO, and they have a time-bound (though fewer years than for poorer developing countries) exemption from the other prohibited subsidies. See Article 27.2, 27.3 of the SCM Agreement.

²⁶⁸ This is the case, for example, for direct forgiveness of debts and subsidies to social costs. See Article 27.13 of the SCM Agreement. For more discussion, see Bossche (n 165), at 605.

²⁶⁹ Article 27.9 of the SCM Agreement.

²⁷⁰ For more discussion, see Simon Lester and Bryan Mercurio (n 2), at 450.

²⁷¹ However, aside from any special exemptions that were granted, these provisions have expired. See Article 29 of the SCM Agreement.

2.4.5 Different Arrangements for Aircraft Subsidies

In terms of the civil aircraft industry, the SCM Agreement made some different arrangements for subsidies in the industry. According to the SCM Agreement, a variety of rules in the Agreement are not applicable to aircraft subsidies. First, as regards the determination of serious prejudice, while the total *ad valorem* subsidies of a product exceeding 5 percent should be deemed to cause serious prejudice within the meaning of Article 6.1(a), the SCM Agreement provides:

[s]ince it is anticipated that civil aircraft will be subject to specific multilateral rules, the threshold in this subparagraph does not apply to civil aircraft.²⁷²

In addition, while Article 6.1(d) of the SCM Agreement provides that direct forgiveness of debt, such as forgiveness of government-held debt or grants to cover debt repayment, will be deemed to cause serious prejudice, footnote 16 of the SCM Agreement states that:

[m]embers recognise that where royalty-based financing for a civil aircraft programme is not being fully repaid due to the level of actual sales falling below the level of forecast sales, this does not in itself constitute serious prejudice for the purposes of this subparagraph.²⁷³

²⁷² Footnote 15 of the SCM Agreement.

²⁷³ Footnote 16 of the SCM Agreement.

In addition to the special arrangements regarding the presumption of serious prejudice, subsidies for civil aircraft are explicitly excluded from the scope of non-actionable provisions in Article 8.2(a) regarding R&D subsidies. The SCM Agreement provides:

[s]ince it is anticipated that civil aircraft will be subject to specific multilateral rules, the provisions of this subparagraph do not apply to that product.²⁷⁴

Consequently, R&D subsidies in the civil aircraft industry could not be deemed as non-actionable under the SCM Agreement. As will be discussed in chapter three of this thesis, R&D activities are of great importance for the development and success of the civil aircraft industry, and are usually subject to heavy government support. Subsidies granted for R&D have been a major source of contention in disputes over the aircraft sector.²⁷⁵ Although Article 6.1 and Article 8 have both expired, they clearly demonstrate the uniqueness of the civil aircraft industry in terms of subsidy regulation.²⁷⁶

Through the rules discussed above, the SCM Agreement establishes a rather comprehensive framework for subsidy regulation in the WTO. It is the most important agreement concerning subsidy rules under the WTO legal framework. At the time of the writing of this thesis, there have been 109 cases citing the SCM Agreement in the request for consultations under the WTO dispute settlement mechanism.²⁷⁷ This reflects to some

²⁷⁴ Footnote 24 of the SCM Agreement.

²⁷⁵ Oliver Stehmann, 'Export Subsidies in the Regional Aircraft Sector' (1999) 33 *Journal of World Trade* 97, at 102.

²⁷⁶ Article 31 of the SCM Agreement. The SCM Committee held a special meeting on 20 December 1999 to conclude the review under Article 31 of the SCM Agreement. However, at that meeting, no consensus was reached by the Subsidies and Countervailing Measures Committee to extend Articles 6.1, Article 8 and Article 9, either as drafted or in modified form. These articles have thus lapsed. See World Trade Organisation, *WTO Analytical Index: Guide to WTO Law and Practice* (3rd edn, Cambridge University Press 2012).

²⁷⁷ The SCM Agreement is one of the most cited agreements under the WTO disputes settlement mechanism, only after the GATT 1994 and the Agreement on Implementation of Article VI of the General Agreement on Tariffs and

extent the contentiousness of subsidy issues.

Apart from the multilateral rules contained in the SCM Agreement, there have also been other agreements that are concerned with rules on the use of subsidies in the aircraft sector. The Agreement on Trade in Civil Aircraft (the Civil Aircraft Agreement) provides specific rules for trade in civil aircraft.²⁷⁸ It is the sole effective industry-specific trade agreement under the WTO legal system. However, as one of the WTO plurilateral agreements, the Civil Aircraft Agreement is only legally binding on its signatories, rather than all WTO members. Previously, there was a bilateral agreement, signed in 1992, between the EU and the US on trade in large civil aircraft (the 1992 LCA Agreement).²⁷⁹ This famous 1992 LCA Agreement was aimed at regulating the use of subsidies in the LCA sector.²⁸⁰ The Civil Aircraft Agreement and the 1992 LCA Agreement, as well as their operation, will be discussed in the next chapter of this thesis.

2.5 Conclusion

As demonstrated above, the regulation of subsidies has long been an intractable problem in international trade regulation. On the one hand, subsidies are generally considered as protectionist and trade-distorting; on the other, they can also be a useful

Trade 1994 (Anti-dumping Agreement). The data can be found in the WTO online database, available at <https://www.wto.org/english/tratop_e/dispu_e/dispu_agreements_index_e.htm?id=A20> accessed 20 July 2015. For more discussion, see William J. Davey and John H. Jackson, *The Future of International Economic Law* (Oxford University Press 2008), at 234.

²⁷⁸ There used to be other sector-specific trade agreements under the WTO framework. However, the International Dairy Agreement and the International Bovine Meat Agreement were both terminated in 1997, and the Agreement on Textiles and Clothing was terminated in 2005. See The US International Trade Commission, *The Year in Trade: Operation of the Trade Agreements Program during 1997* (1998).

²⁷⁹ The full name of this agreement is Agreement between the Government of the United States of America and the European Economic Community Concerning the Application of the GATT Agreement on Trade in Civil Aircraft on Trade in Large Civil Aircraft.

²⁸⁰ Jeffrey D. Kienstra, 'Cleared For Landing: Airbus, Boeing, and the WTO Dispute over Subsidies to Large Civil Aircraft' (2012) 32 *Northwestern Journal of International Law & Business* 569, at 587.

government instrument for pursuing important and fully legitimate economic and social policy objectives. The crux of the problem is thus how to distinguish between ‘good’ and ‘bad’ subsidies, as well as to keep the balance between the need to use benign subsidies and the need to discipline protectionist and harmful subsidies.

The WTO subsidy rules have evolved continuously through difficult negotiations and compromises since the GATT period. The GATT 1947 set out some preliminary rules on both the use of subsidies and the imposition of countervailing duties. The Tokyo Round Subsidies Code was the first trade agreement specifically concerning subsidy regulation under the GATT/WTO framework.²⁸¹ It made some progress compared with the subsidy rules in the GATT 1947.²⁸² However, due to a variety of defects involved, their effectiveness in dealing with subsidy issues and resolving subsidy disputes was limited. Under the WTO legal framework, the SCM Agreement is the most important agreement concerning subsidy rules. It reflects to some extent the compromise among WTO members. Through the rules discussed in this chapter, the SCM Agreement establishes a rather comprehensive and effective subsidy regulatory framework.²⁸³ In terms of the civil aircraft industry, the SCM Agreement explicitly excludes civil aircraft from the scope of a variety of provisions, because it was expected that civil aircraft would be subject to specific multilateral rules. When involving the civil aircraft sector, subsidy issues will be more complex. The next chapter of this thesis is concerned with the regulation of subsidies in the civil aircraft industry.

²⁸¹ Jackson (n 15), at 288.

²⁸² Ibid, at 288.

²⁸³ Michael Trebilcock, Robert Howse and Antonia Eliason (n 12), at 275.

Chapter 3 - Regulation of Subsidies in the Civil Aircraft Industry

3.1 Introduction

Chapter two demonstrated that the regulation of subsidies is a complex issue. However, the question becomes more intractable when it involves the civil aircraft industry. As a result of the unique characteristics of the industry, subsidy regulation in the industry is not only a legal problem, but also has great economic and political implications. First, the industry is of great economic importance due to its roles in export revenue generation, technology promotion, jobs creation, etc. It is also regarded as a symbol of national strength with strategic importance due to its close connection with military sectors.¹ Secondly, the industry has a unique economic and competitive nature when compared with other industries. It is characterised by, for instance, very high market entry barriers resulting from large up-front development costs and capital requirements, great technological risk and large economies of scale.² The industry is thus one of the most highly concentrated industries in the world. As a consequence of the foregoing, government assistance is essential for achieving success in the industry, and governments are also inclined to support the industry. These render the industry being a sector with deep government involvement. The subsidy issue thus becomes more politically sensitive and intractable.

This chapter first provides an overview of the civil aircraft industry. It explores the

¹ Oliver Stehmann, 'Export Subsidies in the Regional Aircraft Sector' (1999) 33 *Journal of World Trade* 97, at 97.

² The characteristics of the civil aircraft industry will be discussed below in this chapter.

historical development of the global civil aircraft industry, with focus on those of the US and the EU. The chapter then explores the significance of the civil aircraft industry in economic, technological and political terms. Then it discusses the unique economic and competitive characteristics of the industry that render subsidy issues more intractable. Following that, this chapter investigates the disputes over aircraft subsidies and how they evolved since the GATT period. It also critically examines the regulation of subsidies in the industry. Finally, this chapter looks into the disputes over the use of aircraft subsidies that have been brought to the WTO.

3.2 Overview of the Civil Aircraft Industry

In a general sense, the civil aircraft industry involves a wide range of industrial activities, including aircraft research and development, manufacturing or assembling complete aircraft or their parts and components, aircraft overhaul and rebuilding, sales and after-sale service.³ In the Harmonised Commodity Description and Coding System (Harmonised System), civil aircraft are mainly covered under the Chapter of 'Aircraft, spacecraft, and parts thereof'.⁴ According to their size and passenger capacity, civil aircraft can be generally divided into large civil aircraft (LCA) and regional civil aircraft. Normally, civil aircraft weighing over 15,000 kilograms and with the capacity of 100 or more passengers are described as large civil aircraft.⁵ Regional aircraft are usually for

³ For instance, see the North American Industry Classification System. The System is the standard used by the US Federal statistical agencies in classifying business establishments for the purpose of collecting, analysing, and publishing statistical data related to the US business economy. See also Özgür Caliskan, 'An Analysis of the Airbus-Boeing Dispute from the Perspective of the WTO Process' (2010) 10 *Ege Academic Review* 1129, at 1130.

⁴ Chapter 88 of the Harmonised System Nomenclature.

⁵ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 2.1.

short-haul regional flight and with the capacity of less than 100 passengers. Large civil aircraft account for the great majority of the total turnover of the global civil aircraft industry.⁶ Thus, the large civil aircraft sector is usually considered more important in economic terms.

3.2.1 Development of the Civil Aircraft Industry

The development of the civil aircraft industry can be traced back to the early twentieth century. The well-known success of the US Wright brothers marked the start of the road to the emergence of the aircraft industry.⁷ At first, the industry did not develop smoothly partly because the public did not consider air passenger transport sufficiently safe.⁸ In the initial stage of the civil aircraft industry in the US, airmail transport service provided an important incentive for the growth of civil air transport, and thus of the civil aircraft industry.⁹ This was because the US aircraft manufacturers, which were also airmail transport operators, gained the chance to rebuild the postal fleet for the American Postal Service.¹⁰ Thus, the aircraft manufacturers earned federal subsidies from public mail

⁶ According to the Aerospace and Defence Industries Association of Europe, the turnover for large civil aircraft of the EU in 2008 took up to 87.3% of the whole turnover of the civil aircraft industry. Office of Aerospace and Automotive Industries, International Trade Administration, U.S. Department of Commerce, 'Apogee and Perigee: Analysis of the US Aerospace Industry' (2007). See also Ecorys, 'Competitiveness of the EU Aerospace Industry: With Focus on Aeronautics Industry' (2009), available at the European Commission website <http://ec.europa.eu/growth/sectors/aeronautics/market-data/index_en.htm> accessed 25 June 2015.

⁷ GR Simonson, 'The Demand for Aircraft and the Aircraft Industry, 1907-1958' (1960) 20 *The Journal of Economic History* 361, at 361.

⁸ During the World War I, there was a big growth for military aircraft production, but the civil aircraft industry suffered a decrease in demand, and such situation continued for some years after the war. See Sam Sedaei, 'Commercial Aircraft Industry', available at <<http://samsedaei.com>> accessed 28 May 2014, at 2.

⁹ *Ibid.*, at 2.

¹⁰ This would not be possible without the Air Mail Act of 1925, which is better known as the Kelly Act. The Act allowed private operators in the US to function as mail carriers. Alain J Pelletier, *Boeing: The Complete Story* (Haynes 2010), at 23.

transport.¹¹ The revenue that resulted from airmail contracts helped private carriers to expand their business to passenger air transport, thus again stimulating the development of the civil aircraft industry. The success of airmail service to some extent reflected the government's willingness to support the industry, and was considered a milestone in the history of the US aircraft industry.¹² Besides the stimulation from airmail service, military aircraft orders during the early stage also benefited the development of the industry.¹³ However, generally speaking, partly due to its technological immaturity and to limitations imposed by the overall economic situation, the civil aircraft industry was quite weak in the early days.¹⁴

During the Second World War, the US aircraft industry became the largest manufacturing industry in the world.¹⁵ The development of the civil aircraft industry benefited greatly from military and defence sectors as research supported by these sectors could apply to the industry due to technological synergies.¹⁶ With the improvement in aerospace technologies and the increase of military funding for aerospace industry, the civil aircraft industry in the US experienced rapid development in the 1950s.¹⁷ By 1970, around 80 percent of the global civil aircraft market was controlled by US aircraft manufacturing companies.¹⁸

¹¹ Dawna L. Rhoades, *Evolution of International Aviation: Phoenix Rising* (Ashgate Publishing 2014), at 21; T. A. Heppenheimer, 'The U.S. Aircraft Industry - An Overview', available at <<http://www.centennialofflight.net/essay/Aerosp ace/AeroOV1.htm>> accessed 16 May 2015.

¹² Barry Bluestone, Peter Jordan and Mark Sullivan, *Aircraft Industry Dynamics: An Analysis of Competition, Capital and Labour* (Auburn House Publishing Company 1981), at 20.

¹³ T. A. Heppenheimer (n 11).

¹⁴ Koen Frenken and Loet Leydesdorff, 'Scaling Trajectories in Civil Aircraft (1913-1997)' (2000) 29 *Research Policy* 331.

¹⁵ Simonson (n 7), at 377.

¹⁶ For instance, Boeing had built the B-17 and B-19 bombers for the US military force, Lockheed had built the P-38 fighter and Douglas had built the C-47 and C-54 military transports. T. A. Heppenheimer (n 11).

¹⁷ Roger D. Launius, 'The Wright Brothers, Government Support for Aeronautical Research, and the Evolution of Flight' in Roger D. Launius and Janet R. Daly Bednarek (eds), *Reconsidering a Century of Flight* (University of North Carolina Press 2003), 61-62; Sedaei (n 8), at 5.

¹⁸ Steven McGuire, *Airbus Industrie: Conflict and Cooperation in US-EC Trade Relations* (Macmillan in Association

Besides the US, the European countries also took an early lead in aircraft manufacturing during the initial stage of the industry.¹⁹ Some early major technological innovations in the industry, such as radar and jet engines, began in Europe.²⁰ However, Europe lost its leading position in the industry in the Second World War, and the industry experienced sharp decline after the war.

In the 1960s, European governments decided to revive the aircraft industry, with the hope of producing their own aircraft which could substitute the large volume of imports of US aircraft.²¹ For this purpose, European leaders considered that it was necessary to strengthen the technological and financial collaboration between European aircraft manufacturing countries through a multinational consortium.²² European governments then allowed their aircraft firms to consolidate into clear 'national champions', such as the British Aircraft Corporation and Rolls-Royce in the UK, Aérospatiale in France, Messerschmitt-Bölkow-Blohm (MBB) in Germany and CASA in Spain.²³ After that, European governments asked their national champions to form transnational consortia so as to build a specific type of European airliner.²⁴ According to a joint statement, these European governments agreed to 'take appropriate measures for the joint development and production of an Airbus', with the purpose of 'strengthening European cooperation in the field of aviation technology and thereby promoting economic and technological progress in

with St Antony's College, Oxford 1997), at 2.

¹⁹ This could be reflected by the output and variety of aircraft in the US and Europe. By the outbreak of the First World War, French firms had built more than 2,000 aircraft, German firms had built about 1,000 and Britain slightly fewer. However, the US firms had built only less than a hundred aircraft, most of which are of the same model. See Raymond Vernon, *Big Business and the State: Changing Relations in Western Europe* (Harvard University Press 1974), at 146; Glenn E. Bugos, 'The History of the Aerospace Industry' (2010), available at <<https://eh.net/encyclopedia/the-history-of-the-aerospace-industry>> accessed 12 September 2015.

²⁰ Raymond Vernon (n 19), at 146.

²¹ Bluestone, Jordan and Sullivan (n 12), at 45.

²² Ibid, at 46.

²³ Glenn E. Bugos (n 19).

²⁴ Ibid.

Europe'.²⁵ As a consequence of such cooperation, Airbus was established as an aircraft-manufacturing consortium in 1970.²⁶ European countries attempted to restore their position in the aircraft industry through the Airbus consortium, and to challenge US domination in the global civil aircraft market.²⁷

In its early years, Airbus was quite small compared with the US civil aircraft manufacturers, which took up about 94 percent of the global civil aircraft market when Airbus was established.²⁸ However, it achieved fast growth with the help of direct and generous support from European governments, and quickly became the symbol of the European civil aircraft industry. The restoration of the European civil aircraft industry changed the structure and competition pattern of the global civil aircraft market, by breaking sole American control in the market. The competition between Airbus and the US aircraft firms thus became the main theme of contention in the global civil aircraft industry. In the 1990s, Airbus finally drove two major US aircraft manufacturers, McDonnell-Douglas and Lockheed, out of the commercial aircraft business.²⁹ It then became one of the only two leading aircraft manufacturers in the world, with Boeing being the other one.³⁰ Since then, the LCA industry has been dominated by the US Boeing and the EU Airbus.

²⁵ Graham M. Simons, *The Airbus A380: A History* (Pen and Sword Aviation 2014), at 37. See also Airbus, 'Early Days (1967-1969)', available at <<http://www.airbus.com/company>> accessed 16 May 2015.

²⁶ Miroslav N. Jovanovic, *The Economics of European Integration: Limits and Prospects* (Edward Elgar Publishing 2005), at 428.

²⁷ Stephen Aris, *Close to the Sun: How Airbus Challenged America's Domination of the Skies* (Aurum 2002), at 223; Peter Nolan, Jin Zhang and Chunhang Liu, 'The Global Business Revolution, the Cascade Effect, and the Challenge for Firms from Developing Countries' (2008) 32 *Cambridge Journal of Economics* 29, at 34; McGuire (n 18), at 1; Michael E. Porter, *Competition in Global Industries* (Harvard Business School Press 1986), at 536.

²⁸ Hans-Joachim Braun, 'Innovation in Flight from the Perspective of Europe' in Roger D Launius and Janet R Daly Bednarek (eds), *Reconsidering a Century of Flight* (The University of North Carolina Press 2002), at 78-79.

²⁹ Lockheed left the market for civil aircraft, and McDonnell-Douglas merged with Boeing. See Christina L. Davis, *Why Adjudicate? Enforcing Trade Rules in the WTO* (Princeton University Press 2012), at 139; Charles H. Fine, *Clockspeed: Winning Industry Control in the Age of Temporary Advantage* (Perseus Books Group 2008).

³⁰ Christina L. Davis (n 29), at 139.

Although the US and the EU have dominated the global aircraft market, some other countries have also developed their own civil aircraft industries. For instance, Canada's Bombardier and Brazil's Embraer are two leading regional aircraft manufacturers in the world.³¹ Moreover, more countries have shown the interest in joining the market for large civil aircraft, and announced their own large civil aircraft projects that would directly compete with Boeing and Airbus.³² As will be discussed in chapter six, this may bring challenges to the leading position of Airbus and Boeing and possibly change the global aircraft market structure in the future. However, until now, there has been no new rival for Airbus and Boeing in the global LCA market.

3.2.2 Significance of the Civil Aircraft Industry

The civil aircraft industry is unique as a result of its significance in several aspects. First, it is of great significance in economic terms, due to its roles in generating revenue, promoting export trade, increasing job opportunity and so on. The industry is especially lucrative. The average annual sales of the global civil aircraft industry are more than \$100 billion.³³ The industry plays a central role in the overall structure of the US economy.³⁴ It

³¹ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce, 'Flight Plan 2010: Analysis of the US Aerospace Industry' (2010), at 8. In 2014, Bombardier's revenue from the aircraft sector reached \$10.5 billion, while the revenue of Embraer reached \$6.3 billion. See Bombardier, '2014 Financial Report' (2015), at 40; Juliet Van Wagenen, 'Embraer Sees Steady Revenues in 2014, Expects Similar 2015' *Aviation Today* (5 March 2015).

³² For example, Bombardier has developed the Bombardier CSeries aircraft family, which is a family of jetliners that could hold 100 to 145 passengers. Besides, China and Russia have also announced their new large civil aircraft projects. Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 31), at 7.

³³ Ron Kendler, 'Delayed Fight: The World Trade Organisation Dispute Settlement Mechanism, Negotiation, and the Transatlantic Conflict over Commercial Aircraft' (2012) *Boston College International and Comparative Law Review* 253, at 254.

³⁴ United States Government Accountability Office, *U.S. Aerospace Industry: Progress in Implementing Aerospace Commission Recommendations, and Remaining Challenges* (2006), at 5; Robert J. Carbaugh, 'Strategic Trade Policy and Commercial Jet Aircraft' (1993) 7 *The International Trade Journal* 393, at 394.

is one of the largest exporting industries in the US.³⁵ The trade surplus resulting from the civil aircraft industry is higher than that resulting from any other manufacturing industry.³⁶ Moreover, the economic significance of the industry can be demonstrated by the fact that it is still a fast growing industry with great commercial prospects. In this regard, Boeing predicted in 2015 that there is a need for 38,050 new airplanes for the world's aircraft fleet, with a value of approximately \$5.6 trillion over the next 20 years.³⁷ This is mainly driven by the growth of air transportation demand globally, as well as the need for more fuel-efficient aircraft in the future.³⁸

Secondly, the civil aircraft industry is of great importance in terms of job creation as a consequence of its large scale. For instance, the US aerospace industry employed 477,000 workers in 2010.³⁹ According to the US International Trade Administration, the export of US aerospace products supported more jobs than any other manufacturing or service industry in the US.⁴⁰

Finally, the civil aircraft industry is a high-tech industry that can generate beneficial spillovers to the rest of the economy.⁴¹ As a result of the high-tech and R&D-intensive characteristics of the industry, its development will benefit a wide range of relevant sectors,

³⁵ US Congress, Office of Technology Assessment, *Competing Economies : America, Europe, and the Pacific Rim* (US Government Printing Office 1991), at 341. In 2010, for instance, the US exported around \$78 billion worth of aerospace products, of which \$67 billion were civil aircraft products. The data is available at US International Trade Administration, 'Exports of Aerospace Vehicles and Equipment', available at <<http://trade.gov>> accessed 18 June 2015.

³⁶ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce, 'Flight Plan 2011: Analysis of the US Aerospace Industry' (2011).

³⁷ Boeing, *Current Market Outlook (2015-2034)*, available at <http://www.boeing.com/resources/boeingdotcom/commercial/about-our-market/assets/downloads/Boeing_Current_Market_Outlook_2015.pdf> accessed 20 June 2015. Boeing predicted in 2014 that the world's aircraft fleet will grow at an average of 3.6 percent annually over the next 20 years, driving a need for 36,700 new airplanes, with a value of approximately \$5.2 trillion. Boeing, *Current Market Outlook (2014-2033)*, available at <http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing_Current_Market_Outlook_2014.pdf> accessed 15 August 2014.

³⁸ Deloitte, '2013 Global Aerospace and Defense Industry Outlook: Expect Defense to Shrink While Commercial Aerospace Sets New Records' (2013), at 7.

³⁹ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 36).

⁴⁰ Ibid.

⁴¹ Ron Kendler (n 33), at 254.

such as communication equipment, electronic components, computer science and information technology.⁴² It has been realised by many countries that a leading position in the aircraft industry could give rise to the technological capabilities necessary for competing in the twenty-first century.⁴³ For these reasons, a successful civil aircraft industry is not only economically significant, but also regarded as a symbol of national pride and thus also politically significant.⁴⁴

3.2.3 Characteristics of Civil Aircraft Industry

3.2.3.1 Extremely High Entry Barrier

In addition to its significance, the civil aircraft industry differs from most other high-tech industries due to its unique economic and competitive nature.⁴⁵ First, the success of civil aircraft manufacturers demands large up-front R&D costs and capital investment.⁴⁶ From the outset, aircraft manufacturers have always faced high costs in joining the industry, including a large amount of spending on R&D, equipment and facilities, employment of highly skilled scientists and engineers, building of relevant infrastructure.⁴⁷ For instance, the development costs for the Boeing 747 project were about \$1.2 billion, exceeding three times of Boeing's total capital at that time.⁴⁸ The Airbus A380's total development costs

⁴² Robert J. Carbaugh (n 34), at 394.

⁴³ Ibid, at 394.

⁴⁴ Stehmann (n 1), at 97.

⁴⁵ Caliskan summarised the characteristics of the large civil aircraft industry. For further discussion, see Caliskan (n 3), at 1130.

⁴⁶ Derek A. Levine, *The Dragon Takes Flight: China's Aviation Policy, Achievements, and International Implications* (Brill 2015), at 2.

⁴⁷ Sedaci (n 8), at 4.

⁴⁸ Peder A. Andersen, *The Changing Structure of the Global Large Civil Aircraft Industry and Market Implications*

exceeded \$14 billion and those for the Airbus A350 may even be higher.⁴⁹ The launch and development costs for a new aircraft could represent more than 70 percent of Airbus' total annual revenue.⁵⁰ Moreover, aircraft firms have to spend most of the amount even before the first delivery of a new aircraft.⁵¹ The large up-front R&D capital requirements thus keep most private companies out of the civil aircraft industry.

Secondly, the civil aircraft industry is marked by larger economies of scale than most other industries.⁵² It is regarded as a paradigm industry of large economies of scale and learning economies.⁵³ Each doubling of production generally yields a reduction of approximately one-fifth in unit cost per aircraft.⁵⁴ Thus, a large number of aircraft have to be produced and sold to reduce production costs. It was estimated that 500-600 aircraft have to be sold before a new aircraft model starts to earn a profit, which would typically amount to about ten years of production.⁵⁵ This long investment cycle in the industry thus further increase the uncertainty of the success in the civil aircraft industry.⁵⁶

Finally, there is great technological risk associated with the civil aircraft industry. A firm wishing to develop a successful aircraft must integrate numerous technologies and systems originating in unrelated industries and fields. The technological sophistication

for the Competitiveness of the U.S. Industry (The United States International Trade Commission 1998), Investigation No. 332-384, Publication 3143.

⁴⁹ Bijan Vasigh, Reza Taleghani and Darryl Jenkins, *Aircraft Finance: Strategies for Managing Capital Costs in a Turbulent Industry* (J Ross Publishing 2012), at 187; Andreas Knorr, Jorg Bellmann and Rahel Schomaker, 'Subsidies in Civil Aircraft Manufacturing: The World Trade Organisation (WTO) and the Boeing-Airbus Dispute' (2012) 11 *European State Aid Law Quarterly* 585, at 591.

⁵⁰ The total revenue of Airbus in 2000 was \$17.2 billion. See Benjamin Esty and Pankaj Ghemawat, 'Airbus vs. Boeing in Superjumbos: A Case of Failed Preemption' (Social Science Research Network 2002) Harvard Business School Strategy Working Paper Series, at 1.

⁵¹ *Ibid.*, at 1.

⁵² US Congress, Office of Technology Assessment (n 35), at 341.

⁵³ Damien Neven and Alan Sykes, 'United States - Measures Affecting Trade in Large Civil Aircraft (Second Complaint): Some Comments' (2014) 13 *World Trade Review* 281, at 283.

⁵⁴ 'Boeing v Airbus: Nose to Nose' (2005) *The Economist*, available at <www.economist.com/node/4102185> accessed 30 July 2015.

⁵⁵ *Ibid.*

⁵⁶ Caliskan (n 3), at 1130.

leads to inherent high risk in the civil aircraft industry. Moreover, as mentioned above, aircraft development costs are usually quite large and up-front. This could then result in a fatal blow to the fate of aircraft firms if a new aircraft model fails. Many aircraft manufacturers did not survive from the ‘bet-the-company’ product development efforts, such as Glenn Martin, General Dynamics and Lockheed.⁵⁷ Even Boeing has encountered great danger due to the uncertainties regarding whether its new aircraft models could be successful.⁵⁸ This partly explains why there used to be much more aircraft firms at the beginning of the aircraft age, but only a very small number of them managed to survive.

3.2.3.2 Highly Concentrated and Duopolistic Market

As a consequence of the serious barrier to entry in the civil aircraft industry, it has become one of the most highly concentrated industries in the world. On the one hand, the industry is highly concentrated geographically, mainly in the US and the EU. As mentioned above, aircraft companies in the US and the EU have dominated the global civil aircraft market for many years. As the two largest civil aircraft suppliers, the US and the EU occupy a great majority of the global civil aircraft market.⁵⁹ On the other hand, Boeing in the US and Airbus in the EU are the only two leading civil aircraft manufacturers worldwide.⁶⁰ After Lockheed and McDonnell-Douglas left the civil aircraft market,

⁵⁷ Esty and Ghemawat (n 50), at 1.

⁵⁸ Pelletier (n 10), at 7.

⁵⁹ For instance, in 2007, the US and the EU holds 51 percent and 36 percent of the global civil aircraft market share respectively. European Commission, ‘Aeronautic Industries Trade’, available at <http://ec.europa.eu/growth/sectors/aeronautics/index_en.htm> accessed 25 June 2014.

⁶⁰ For instance, in 2009, Airbus accounted for 51 percent of the global large civil aircraft market share, measured by number of aircraft delivered; 66 percent measured by number of net aircraft orders; and 51 percent measured by large civil aircraft revenues, and Boeing was in a similar market position with Airbus. In the same year, the number of aircraft delivered of Airbus was 498, while Boeing’s was 481; the number of net aircraft orders of Airbus was 271, while

Boeing has been the only large civil aircraft manufacturer in the US.⁶¹ It controls nearly one hundred percent of the US civil aircraft manufacturing industry and is the largest exporting company in the US and also in the world.⁶² Airbus holds a similar economic and geopolitical position in Europe.⁶³

Due to the overwhelmingly dominating positions of Boeing and Airbus, the civil aircraft market is regarded by many commentators as imperfectly competitive based on national monopolies associated with monopoly profits.⁶⁴ The global civil aircraft market has a duopolistic structure with Airbus and Boeing being the only two leading manufacturers. It is thus very difficult for newcomers to join this market. This also prompted the argument that governments should intervene and support such industries so as to enable a nation to obtain a share of the monopoly profits.⁶⁵

3.2.3.3 Export Orientation

Another characteristic of the civil aircraft industry is that the industry is to a large extent export-oriented.⁶⁶ Export sales accounted for a major part of the turnover of civil

Boeing's was 142; the large civil aircraft revenues of Airbus was \$35.5 billion, while Boeing's was \$34.1 billion. Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 31), at 6. Following them, the Canada Bombardier controls 6.1 percent, and the Brazil Embraer controls 3.8 percent in terms of revenue. Other companies together control 3.3 percent. See IBISWorld Industry Report, 'Global Civil Aerospace Products Manufacturing' (2010), at 14.

⁶¹ Jeffrey D. Kienstra, 'Cleared For Landing: Airbus, Boeing, and the WTO Dispute over Subsidies to Large Civil Aircraft' (2012) 32 *Northwestern Journal of International Law & Business* 569, at 573; Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 31), at 5.

⁶² Nils Meier-Kaenig, 'WTO's Toughest Case: An Examination of the Effectiveness of the WTO Dispute Resolution Procedure in the Airbus-Boeing Dispute over Aircraft Subsidies' (2006) 71 *Journal of Air Law and Commerce* 191, at 195.

⁶³ Daniel I Fisher, 'Super Jumbo Problem: Boeing, Airbus, and the Battle for the Geopolitical Future' (2002) 35 *Vanderbilt Journal of Transnational Law* 865, at 867.

⁶⁴ Keith Hartley, *The Political Economy of Aerospace Industries: A Key Driver of Growth and International Competitiveness?* (Edward Elgar Publishing 2014), at 5.

⁶⁵ *Ibid.*, at 5.

⁶⁶ Gail F. Butler and Martin R. Keller, *Handbook of Airline Strategy: Public Policy, Regulatory Issues, Challenges, and Solutions* (McGraw-Hill Companies 2001), at 182.

aircraft manufacturers.⁶⁷ As mentioned above, the civil aircraft industry is the largest exporting industry in the US.⁶⁸ Civil aircraft manufacturers thus attached great importance to their export market and make great efforts to promote their export performance.⁶⁹

The export orientation of the civil aircraft industry has some effects on the regulation of subsidies in the industry. As export performance is of great importance to the industry, governments are always inclined to provide export incentives for aircraft manufacturers.⁷⁰ This thus may increase the use of export subsidies, which are prohibited under the SCM Agreement. Moreover, this will also affect the way in which countries deals with illegal foreign subsidies. For instance, the EU is an important export market for US civil aircraft manufacturers. The US was worried that unilateral trade sanction would incur retaliation from the EU, and thus affects the exports of US aircraft to the European market.⁷¹ Therefore, although it contended that Airbus was illegally subsidised by European governments, the US chose not to take countervailing measures when the disputes arose.⁷²

3.2.3.4 Close Connection with the Military Sector

The next characteristic of the civil aircraft industry is that it is usually connected with the military or national defence sector. Aircraft products are a central component of national defence.⁷³ In the early days of the aircraft industry, civil aircraft manufacturers

⁶⁷ For instance, in 2007, export sales accounted for 56% of the turnover of European aeronautical industry. See European Commission (n 59).

⁶⁸ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 36).

⁶⁹ Meier-Kaienburg (n 62), at 195.

⁷⁰ Sedaei (n 8), at 9.

⁷¹ Ibid, at 9.

⁷² McGuire (n 18), at 4.

⁷³ Keith Hartley (n 64), at 4.

were usually also military aircraft manufacturers. The connection between the military and civil aircraft sectors is still strong today. For instance, Boeing has spread its strength into military aircraft, weapons systems and missiles.⁷⁴ It is the largest manufacturer of commercial and military aircraft combined, and the second largest defence company in the world.⁷⁵ Partly in order to achieve synergies between military and civil aircraft sectors, military or defence departments entrust aerospace firms to conduct some aerospace R&D.⁷⁶ Thus, aircraft firms are able to obtain funding and technical knowledge through military contracts.⁷⁷ This then effectively benefits the firms' civil aircraft programmes. In the subsidy disputes between the US and EU, the US subsidies to civil aircraft manufacturers through the military sector are a main source of contention. Moreover, due to the close connection between the military and civil aircraft sectors, national security has been a consideration for government assistance for the aircraft industry.⁷⁸ This then makes subsidy issues in the industry even more complex.

3.2.3.5 Deep Government Intervention

Due to the above-mentioned economic characteristics of the civil aircraft industry and the market, the industry requires government subsidisation in order to exist and flourish.⁷⁹

Government assistance could reduce the market entry barriers, lower the risk and simulate

⁷⁴ Pelletier (n 10), at 7.

⁷⁵ Rosalie L. Tung, *Learning from World Class Companies* (Thomson Learning 2001), at 73; George E. Slagley, *A Century of Aviation: Worldwide Commercial and Military* (Strategic Book Publishing 2011), at 65.

⁷⁶ For example, Boeing participated in the B2 programme, which is a military aircraft programme. Boeing's work in this programme enabled it to develop the capability to manufacture large aero-structures made of polymer matrix composites. See Philip K Lawrence, *Aerospace Strategic Trade: How the U.S. Subsidizes the Large Commercial Aircraft Industry* (Ashgate 2001).

⁷⁷ Ron Kendler (n 33), at 263.

⁷⁸ Caliskan (n 3), at 1130.

⁷⁹ Ron Kendler (n 33), at 263.

exports of aircraft products. Moreover, given the significance of the civil aircraft industry, the civil aircraft industry provides a textbook example of an industry with deep government intervention.⁸⁰

Both the US and the EU civil aircraft manufacturers have received great government assistance, although through different ways.⁸¹ The US aircraft firms have mainly benefited from government support through R&D contracts with the National Aeronautics and Space Administration (NASA) and the Department of Defence (DOD).⁸² The benefits include government R&D funding and access to facilities and testing equipment of these government agencies.

European government subsidisation to civil aircraft manufacturers is more direct than the US subsidies.⁸³ This is in part the result of the different market philosophy and different attitude towards subsidies in the EU and the US.⁸⁴ Airbus has received various kinds of direct subsidies from multiple European governments since its founding. The government support helped Airbus to cover large aircraft development costs and overcome the high barriers to entry in the large civil aircraft industry.⁸⁵ Besides the US and the EU, civil aircraft manufacturing in other countries also benefited from government support. For instance, the governments in Canada and Brazil have provided considerable subsidies to

⁸⁰ Douglas A Irwin and Nina Pavcnik, *Airbus versus Boeing Revisited: International Competition in the Aircraft Market* (Centre for Economic Policy Research 2003), at 2.

⁸¹ The EU and the US subsidies to their respective aircraft manufacturers will be discussed in chapter four of this thesis.

⁸² John G. Francis and Alex F. Pevzner, 'Airbus and Boeing: Strengths and Limitations of Strong States' (2006) 121 *Political Science Quarterly* 629, at 635; Ron Kendler (n 33), at 263.

⁸³ Ron Kendler (n 33), at 263.

⁸⁴ Meier-Kaienburg (n 62), at 195-97. See also Michael J Levick, 'The Production of Civil Aircraft: A Compromise of Two World Giants' (1993) 21 *Transportation Law Journal* 433, at 438.

⁸⁵ Marc CS Mathis, 'Uncivil Aviation: How the Ongoing Trade Dispute Stalemate between Boeing and Airbus Has Undermined GATT and May Continue to Usher in an Era of International Agreement Obsolescence under the World Trade Organisation' (2005) 13 *Tulsa Journal of Comparative & International Law* 177, at 189.

their civil aircraft manufacturers respectively.⁸⁶

The involvement of government in the civil aircraft industry is reflected not only by financial support to aircraft manufacturers. There are also other ways in which governments could support the industry. For instance, government could utilise political pressure to direct or induce aircraft purchase. In this regard, European governments did not hide the interaction between government actions and aircraft sales.⁸⁷ Political pressure and state influence have been used as part of Airbus' marketing strategy for promoting aircraft exports.⁸⁸ In Canada, much of the civil aircraft industry was owned by the Canadian federal government. The government once required firms selling aircraft in Canada to make offset arrangements, so as to promote its indigenous civil aircraft industry.⁸⁹ The foregoing demonstrates that the civil aircraft industry is one with deep government intervention, and also explains why subsidy issues in the industry are more intractable.

3.3 Regulation of Subsidies in the Civil Aircraft Industry

As government subsidisation plays an essential role in the civil aircraft industry and has a great impact on the competition in the global civil aircraft market, it is not difficult to understand why conflicts over aircraft subsidies arise. In fact, the disputes concerning the civil aircraft industry in the GATT and WTO were all about the use of subsidies in the

⁸⁶ Andrea E Goldstein and Steven M McGuire, 'The Political Economy of Strategic Trade Policy and the Brazil-Canada Export Subsidies Saga' (2004) 27 *World Economy* 541. See also Juan He, 'WTO-plus Commitments and Emerging Implications for China's Large Civil Aircraft Manufacturing' (2014) 13 *World Trade Review* 517, at 533. According to the panel reports and Appellate Body reports in *Brazil - Aircraft* (DS46) and *Canada - Aircraft* (DS70), both Brazil and Canada have provided export subsidies to their aircraft manufacturers.

⁸⁷ Levick (n 84), at 454.

⁸⁸ *Ibid*, at 454.

⁸⁹ McGuire (n 18), at 79.

sector. Amongst others, the disputes between the US and the EU are the most prominent. The transatlantic aircraft conflicts are a quite long story dating back to the GATT period. Since then, the conflicts lingered as an issue of contention in terms of international subsidy regulation. Apart from the general subsidy rules under the GATT and WTO, specific agreements were reached for dealing with these conflicts. This section will look into the aircraft conflicts that developed since the GATT period and also examine the effectiveness of these agreements in dealing with aircraft subsidy disputes.

3.3.1 Agreement on Trade in Civil Aircraft

As mentioned above, Airbus was a result of European governments' resolution to restore the aircraft industry and challenge the US domination in the market. From its founding, Airbus received great support from European governments and achieved fast growth.⁹⁰ This sowed the seeds for the conflicts between the US and the EU.⁹¹ In fact, the conflicts corresponded to a certain extent to the growth of Airbus. As Airbus continued to grow, it presented an increasing threat to the US dominant position in the global aircraft market. The conflicts continued to deteriorate as the US became more concerned about the growth of Airbus. This was shown by the fact that each time when Airbus achieved a notable breakthrough in the sector or was about to launch a new aircraft model, the US raised the issue of aircraft subsidies.⁹² According to Caliskan, the long legal battle between

⁹⁰ Fisher (n 63), at 871.

⁹¹ Ryan E Lee, 'Dogfight: Criticizing the Agreement on Subsidies and Countervailing Measures Amidst the Largest Dispute in World Trade Organisation History' (2006) 32 North Carolina Journal of International Law and Commercial Regulation 115, at 119.

⁹² Aris (n 27), at 156.

the EU and the US over the use of aircraft subsidies could be generally divided into three stages, with the first two rounds marked by the 1979 Civil Aircraft Agreement and the 1992 LCA Agreement respectively.⁹³

The first round of the conflicts started when the US government raised concerns over Europe's subsidisation to Airbus in the mid-1970s.⁹⁴ As mentioned in chapter two of this thesis, governments increased their efforts to promote exports of domestic products throughout the 1970s partly due to the economic crisis.⁹⁵ Export promotion became an important public policy goal of many governments.⁹⁶ Against this background, the US government contended that foreign aircraft companies, in particular Airbus, received government subsidies and thereby caused unfair and abnormal competition in the global civil aircraft market.⁹⁷ There were growing concerns in the US about the competitive environment and government intervention in the aircraft market. The US considered that 'the appearance of foreign competitors and the increasing tendency for their governments to subsidise or otherwise support their national industries is an increasing incursion into the American market share'.⁹⁸ The problems that the US perceived serious mainly included: (1) the subsidisation of domestic aircraft industries; (2) the use of official export credits to gain competitive advantage in the civil aircraft market; and (3) the influencing of private purchasing decisions by formal and informal means.⁹⁹

⁹³ For more discussion on the division of these three rounds of conflicts, see Caliskan (n 3), at 1132-33.

⁹⁴ Ron Kendler (n 33), at 266.

⁹⁵ William H. Becker and William M. McClenahan, *The Market, the State, and the Export-Import Bank of the United States, 1934-2000* (Cambridge University Press 2003), at 172.

⁹⁶ Ibid, at 172; See also John E. Ray, *Managing Official Export Credits: The Quest for a Global Regime* (Peterson Institute 1995), at 169.

⁹⁷ McGuire (n 18), at 68.

⁹⁸ Statement of Alonzo McDonald, Deputy Special Representative for Trade Negotiations, Hearings before the Subcommittee on Trade, House Committee on Ways and Means, 96th Congress, 1st Session, Washington: USGPO (23 April 1979), at 503. See also ibid, at 74.

⁹⁹ William S. Piper, 'Unique Sectoral Agreement Establishes Free Trade Framework' (1980) 12 Law and Policy in International Business 221, at 223.

The catalyst for the first round of the conflicts was the purchase of Airbus A300s by an American airline Eastern Airlines in April 1978.¹⁰⁰ Boeing claimed that European governments arranged \$250 million of export credits to the cash-strapped airline.¹⁰¹ Moreover, the export credits had a variable interest rate based on the airline's profitability.¹⁰² Thus, the interest-bearing instruments were not tied to commercial rates but were effectively a levy on the revenue of Eastern Airlines.¹⁰³ In other words, the less profit Eastern Airlines made, the lower the interest rates would be. After the purchase, the US aircraft industry sent delegations to Europe in order to discuss a multilateral arrangement for civil aircraft trade.¹⁰⁴ The case was also brought to the US Congress by representatives of the US aircraft industry. The treasurer of Boeing criticised the inaction of the US government on this issue, and the laissez-faire attitude which he claimed existed within the government circles.¹⁰⁵ Responding to this, the US government raised the aircraft dispute in the Bonn G7 Summit in 1978 and proposed the idea of an agreement on trade in civil aircraft.¹⁰⁶ The government leaders in the summit then declared 'the objective of negotiating maximum freedom of world trade in commercial aircraft parts, and related equipment, including elimination of duties and to the fullest extent possible, the reduction or elimination of trade restricting or distorting effects of other measures'.¹⁰⁷ This initiated the process of controlling government intervention in the civil aircraft sector. From then on, the disputes over aircraft subsidies became also a government-to-government matter, rather

¹⁰⁰ McGuire (n 18), at 75.

¹⁰¹ Aris (n 27), at 154.

¹⁰² McGuire (n 18), at 75; Piper (n 99), at 225.

¹⁰³ McGuire (n 18), at 75.

¹⁰⁴ Ibid, at 76.

¹⁰⁵ Ibid, at 75.

¹⁰⁶ Ibid, at 68.

¹⁰⁷ GATT, Statement by Several Delegations on Current Status of Tokyo Round Negotiations, MTN/INF/33, at 5 (July 14, 1978). This 'framework of understanding' was formally endorsed by the heads of state meeting at the Bonn Economic Summit. See Piper (n 99), at 231.

than only a spat between aircraft firms.¹⁰⁸

As outlined in chapter two, the GATT Tokyo Round negotiations were ongoing in the 1970s. The G7 summit leaders considered the multilateral GATT Tokyo Round negotiations to be the best mechanism through which such freedom of aircraft trade could be achieved.¹⁰⁹ However, the US considered that the general trade codes that were being negotiated, including the Tokyo Round Subsidies Code, would not be able to provide enough protection for the US aircraft manufacturers. According to the US, the solution to the problem was a specific agreement for disciplining trade issues and thus rectifying the trend of unfair competition in the civil aircraft sector.¹¹⁰ This then led to the negotiation of the Agreement on Trade in Civil Aircraft (the Civil Aircraft Agreement) in the Tokyo Round.

The negotiation on the Civil Aircraft Agreement was open to all GATT contracting parties. The participants in the negotiation included both the US and the EU.¹¹¹ However, during the Tokyo Round negotiations, much attention was paid to what was thought to be a central compromise in the Tokyo Round Subsidies Code: European discipline on subsidies in exchange for the US bringing its countervailing duty laws into consistency with GATT rules.¹¹² As a result, the aircraft matter was kept a low-profile.¹¹³

In order to direct the negotiation of the agreement, the US presented an early working draft.¹¹⁴ This draft addressed both tariff and non-tariff issues concerning trade in civil

¹⁰⁸ Aris (n 27), at 154.

¹⁰⁹ Statement by Several Delegations on Current Status of Tokyo Round Negotiations (MTN/INF/33) (14 July 1978), at 5; Ron Kendler (n 33), at 266.

¹¹⁰ Piper (n 99), at 222.

¹¹¹ Ibid, at 232.

¹¹² McGuire (n 18), at 68.

¹¹³ Ibid, at 68.

¹¹⁴ Piper (n 99), at 231.

aircraft. On the one hand, for the tariff issue, the draft required the immediate elimination of custom duties on aircraft and aircraft parts.¹¹⁵ On the other hand, it provided disciplines on non-tariff barriers to civil aircraft trade. Among others, the following government actions were to be prohibited according to the draft: directing or inducing the purchase of aircraft; financing aircraft development, production or marketing, except on a commercial basis; providing official export credits except those consistent with the OECD Standstill Agreement on export credits for aircraft; and linking inducements or sanctions of any kind to the sale or purchase of aircraft from any particular source.¹¹⁶ The US emphasised the importance of a commercial basis for civil aircraft trade in this draft.¹¹⁷ It reflected the American stance in the negotiation, namely to maintain a free trade environment for civil aircraft without government intervention.

The attitudes of its trading partners, however, were quite different with the US. European countries were much more conservative in terms of changing the existing trade environment in the civil aircraft market, as they wanted to protect the gains that had been made by Airbus and insulate the various subsidy programmes that underpinned the success of Airbus.¹¹⁸ More importantly, European countries considered that it was appropriate for governments to support the aircraft industry due to its strategic importance and the extremely high risks and great costs incurred in the industry.¹¹⁹ They held the view that government should be allowed to provide subsidies, but only to the extent to enable aircraft firms to produce aircraft that are technically and economically competitive with US-built

¹¹⁵ Ibid, at 231.

¹¹⁶ Ibid, at 231.

¹¹⁷ McGuire (n 18), at 78.

¹¹⁸ Ibid, 69.

¹¹⁹ Piper (n 99), at 233.

aircraft.¹²⁰ As a consequence, they inclined to keep their ability to support the civil aircraft sector. These different attitudes towards subsidies in the aircraft sector mirrored the different stances on subsidies during the negotiations for the Tokyo Round Subsidies Code more generally.¹²¹

Besides, there were two additional reasons why the European position was essentially a defensive one. On the one hand, the European government subsidies to Airbus were more direct than the support to the American industry by the US.¹²² Compared with indirect subsidies to the US aircraft manufacturers through military contracts in the US, direct subsidies, such as equity infusions, grants or funds earmarked for a particular programme, were easier to trace and thereby to challenge.¹²³ On the other hand, European countries were worried about the possible 'lock in' effects of new legal arrangements in this area.¹²⁴ The US civil aircraft manufacturers had dominated the global civil aircraft market and were holding a quasi-monopoly in the market.¹²⁵ Therefore, trading partners of the US doubted that its proposal was only for maintaining the American dominance in the aircraft market.¹²⁶

Despite the foregoing divergences, the Civil Aircraft Agreement was finally agreed on. It was the only industry-specific agreement resulting from the Tokyo Round negotiations.¹²⁷ The US and the EU both signed it.¹²⁸ It covered a wide range of aircraft

¹²⁰ Ibid, at 233.

¹²¹ McGuire (n 18), at 69.

¹²² Ibid, 78.

¹²³ Joseph Rallo, 'The European Communities Industrial Policy Revisited: The Case of Aerospace' (1984) 22 *Journal of Common Market Studies* 245, at 259.

¹²⁴ McGuire (n 18), at 78.

¹²⁵ Harry Lawrence, *Aviation and the Role of Government* (Kendall Hunt Publishing 2004), at 321.

¹²⁶ McGuire (n 18), at 78.

¹²⁷ Besides the Civil Aircraft Agreement, there were another two sector-specific agreements reached in the Tokyo Round negotiations, including the International Dairy Agreement and the International Bovine Meat Agreement. However, the Civil Aircraft Agreement was the only sector-specific agreement covering a manufactured product. The International Dairy Agreement and the International Bovine Meat Agreement were both terminated in 1997 in the WTO. See Shane

products including completed aircraft of all sizes and their components.¹²⁹ The agreement recognised the aircraft sector as a ‘particularly important component of economic and industrial policy’.¹³⁰ One of the aims of the Agreement was to ‘achieve maximum freedom of world trade in civil aircraft, parts and related equipment, including elimination of duties, and to the fullest extent possible, the reduction or elimination of trade restricting or distorting effects’.¹³¹ The Civil Aircraft Agreement and the Tokyo Round Subsidies Code were two important treaties in terms of dealing with the subsidy disputes in the civil aircraft industry.¹³²

The Civil Aircraft Agreement was ambitious in many aspects in terms of regulating civil aircraft trade, such as eliminating import duties, prohibiting licensing requirements, and banning discriminatory government procurement.¹³³ It was provided that signatories agreed to eliminate ‘all customs duties and other charges of any kind levied on, or in connection with, the importation of products’.¹³⁴ As regards government procurement and inducement, it stipulated that signatories should not exert unreasonable pressure on airlines, aircraft manufacturers or other entities to procure aircraft from any particular source,

Spradlin, ‘Aircraft Subsidies Dispute in the GATT’s Uruguay Round’ (1995) 60 *Journal of Air Law and Commerce* 1191, at 1200; Debra P. Steger, *Redesigning the World Trade Organisation for the Twenty-First Century* (Wilfrid Laurier University Press 2010); Bernard M. Hoekman, *Trade Laws and Institutions: Good Practices and the World Trade Organisation* (World Bank Publications 1995), at 45.

¹²⁸ Spradlin (n 127), at 1200.

¹²⁹ The annex of the Civil Aircraft Agreement provided a detailed list of these products according to the Harmonized System. According to the Annex, the Agreement did not cover incomplete or unfinished products. The covered products were those that had the essential character of a complete or finished part, component, sub-assembly or item of equipment of a civil aircraft or ground flying trainer. This was to prevent products outside the aircraft sector coming into a country under cover of the Agreement. However, as McGuire pointed out, this clause attracted wide criticism as officials from other industry feared that products in their sector would be threatened by imports smuggled into the US disguised as aircraft parts. See McGuire (n 18), note 45.

¹³⁰ Preamble of the Civil Aircraft Agreement.

¹³¹ Preamble of the Civil Aircraft Agreement.

¹³² Richard O. Cunningham and Peter Lichtenbaum, ‘The Agreement on Trade in Civil Aircraft and Other Issues Relating to Civil Aircraft in the GATT/WTO System’ in Patrick F. J. Macrory, Arthur E. Appleton and Michael G. Plummer (eds), *The World Trade Organisation: Legal, Economic and Political Analysis* (Springer 2005), at 1167; Ron Kendler (n 33), at 267.

¹³³ Gilbert R Winham, *International Trade and the Tokyo Round Negotiation* (Princeton University Press 1986), at 239; Piper (n 99), at 234.

¹³⁴ Article 2 of the Civil Aircraft Agreement.

which would create discrimination against suppliers from any signatory.¹³⁵ Moreover, signatories should not attach inducements of any kind to the sale or purchase of civil aircraft from any particular source.¹³⁶ Therefore, it was said that the Civil Aircraft Agreement went beyond those broad Tokyo Round trade agreements in terms of the regulation on technical standards, government procurement and so on.¹³⁷

Although lauded, the Civil Aircraft Agreement was not regarded as effective in dealing with subsidy issues in the aircraft sector.¹³⁸ There were several reasons for that. First, the language of the agreement was considered as weak and ambiguous.¹³⁹ This was reflected first by the knotty preamble of the Agreement. For instance, it was provided in the preamble that signatories '[desired] that their civil aircraft activities operate on a commercially competitive basis'.¹⁴⁰ It seems that the agreement recognised commercial competition between civil aircraft firms as a principle for civil aircraft trade. However, the same clause provided that it was recognised that 'government-industry relationships differ widely among them'.¹⁴¹ As mentioned above, European countries considered it was appropriate for governments to subsidise the civil aircraft industry. Thus, this could be interpreted as supporting the European stance.

In addition, it was stated in the preamble that signatories '[desired] to provide fair and equal competitive opportunities for their civil aircraft activities and for their producers to

¹³⁵ Article 4.2 of the Civil Aircraft Agreement. In the enforcement of the Civil Aircraft Agreement afterwards, the Europeans thought it was appropriate to use 'reasonable pressure' in government procurement of civil aircraft, since there was no definition of 'unreasonable pressure' in the Agreement. Therefore, some thought the Civil Aircraft Agreement was not effective in constraining government procurement and inducement practices regarding civil aircraft trade. See McGuire (n 18), at 87-89.

¹³⁶ Article 4.4 of the Civil Aircraft Agreement.

¹³⁷ Piper (n 99), at 234.

¹³⁸ Ron Kendler (n 33), at 267.

¹³⁹ Spradlin (n 127), at 1200.

¹⁴⁰ Preamble of the Civil Aircraft Agreement.

¹⁴¹ Preamble of the Civil Aircraft Agreement.

participate in the expansion of the world civil aircraft market'.¹⁴² The US endorsed the idea of assuring equal competitive opportunity, and considered the wording 'fair and equal competitive opportunities' in the agreement to be supporting a trade environment free of government intervention.¹⁴³ In the US view, governments should not interfere with the competition of the civil aircraft market or try to influence its outcome or assure a competitive balance.¹⁴⁴ However, European governments considered the second half of this clause ('...for their producers to participate in the expansion of the world civil aircraft market') supportive for its stance, as the provision can be interpreted to allow civil aircraft manufacturers (other than the dominant American ones) to have more participation in the civil aircraft market. More importantly, the agreement further provided that 'governmental support, of itself, would not be deemed a distortion of trade'.¹⁴⁵ These clauses left leeway to interpret the provisions of the Civil Aircraft Agreement differently.

Besides the preamble, Article 6 of the Civil Aircraft Agreement, entitled 'Government Support, Export Credits, and Aircraft Marketing', was concerned with the use of subsidies in the sector. Article 6.1 provided that the provisions of the Tokyo Round Subsidies Code apply to trade in civil aircraft, and signatories to the Civil Aircraft Agreement should seek to avoid adverse effects on trade in civil aircraft in the sense of Article 8.3 and 8.4 of the Tokyo Round Subsidies Code in their participation in, or support of, civil aircraft programmes.¹⁴⁶ However, in order to compromise the different stances between the two

¹⁴² Preamble of the Civil Aircraft Agreement.

¹⁴³ Piper (n 99), at 233.

¹⁴⁴ Ibid, at 233.

¹⁴⁵ Preamble of the Civil Aircraft Agreement.

¹⁴⁶ Article 8.3 of the Tokyo Round Subsidies Code provided that '[s]ignatories further agree that they shall seek to avoid causing, through the use of any subsidy (a) injury to the domestic industry of another signatory, (b) nullification or impairment of the benefits accruing directly or indirectly to another signatory under the General Agreement, or (c) serious prejudice to the interests of another signatory'. Article 8.4 of the Tokyo Round Subsidies Code provided that '[t]he adverse effects to the interests of another signatory required to demonstrate nullification or impairment or serious

sides, it also provided that signatories should take into account the special factors which applied in the aircraft industry, especially the widespread governmental support in the industry, their international economic interests, and the desire of manufacturers of all signatories to participate in the expansion of the global civil aircraft market.¹⁴⁷

This above-mentioned connection to the more general Tokyo Round Subsidies Code was intended to strengthen the disciplines on the use of subsidies in the civil aircraft sector. However, as noted in chapter two, the language of the Tokyo Round Subsidies Code was also ambiguous in this regard.¹⁴⁸ On the one hand, it was provided that domestic subsidies may cause adverse effects on other signatories, and signatories should seek to avoid causing such effects through the use of domestic subsidies.¹⁴⁹ On the other, it provided that domestic subsidies were widely used as important instruments for the promotion of social and economic policy objectives, and thus the code did not intend to restrict the rights of signatories to use domestic subsidies for those policy objectives.¹⁵⁰

As a result of such ambiguity in the Tokyo Round Subsidies Code, it was difficult for the US to place an explicit ban on the use of subsidies in the civil aircraft sector. This also led to the disadvantage of the US during the negotiations over the Civil Aircraft Agreement.¹⁵¹ As a result, the ‘effect-oriented’ approach in the Tokyo Round Subsidies Code was also adopted in the Civil Aircraft Agreement, as an indirect way to control

prejudice may arise through (a) the effects of the subsidized imports in the domestic market of the importing signatory, (b) the effects of the subsidy in displacing or impeding the imports of like products into the market of the subsidizing country, or (c) the effects of the subsidized exports in displacing the exports of like products of another signatory from a third country market’.

¹⁴⁷ Article 6.1 of the Civil Aircraft Agreement.

¹⁴⁸ For more discussion, see chapter two of this thesis.

¹⁴⁹ Article 11.2 of the Tokyo Round Subsidies Code.

¹⁵⁰ Article 11.1 of the Tokyo Round Subsidies Code.

¹⁵¹ For further discussion, see Keith Hayward, *International Collaboration in Civil Aerospace* (Pinter 1986), at 170-197.

subsidy use in the industry.¹⁵²

The indirect way of dealing with the problem of subsidy use in the aircraft sector was also reflected by the 'pricing approach' in the Civil Aircraft Agreement.¹⁵³ According to Article 6.2, the pricing of civil aircraft should be based on a reasonable expectation of recoupment of all costs, including non-recurring programme costs, identifiable and pro-rated costs of military research and development on aircraft, components, and systems that are subsequently applied to the production of such civil aircraft, average production costs, and financial costs.¹⁵⁴ The idea was to control the effects of government subsidies in the aircraft market through regulating the pricing of civil aircraft. The US considered that this provision could stop Airbus selling civil aircraft at artificially low prices resulting from government subsidisation.¹⁵⁵

Compared with this circuitous way to regulate the use of subsidies, a direct way would have been to insert a clear prohibition on production subsidies in the sector.¹⁵⁶ However, this seemed unlikely as an explicit prohibition on domestic subsidies was considered to be intrusive interference in internal policies in Europe.¹⁵⁷ The US was told that 'any attempt at stringent regulation of domestic subsidies would...amount to intolerable interference in internal policy matters'.¹⁵⁸ Therefore, the US adopted such indirect approach so as to avoid to be considered as intruding on the domestic policy arrangements of other signatories. More importantly, the US was aware that strict

¹⁵² McGuire (n 18), 84. For more discussion on this, see chapter two of this thesis.

¹⁵³ Article 6.2 of the Civil Aircraft Agreement.

¹⁵⁴ Article 6.2 of the Civil Aircraft Agreement.

¹⁵⁵ McGuire (n 18), at 83.

¹⁵⁶ Ibid, at 83.

¹⁵⁷ Ibid, at 84.

¹⁵⁸ R. R. Rivers and J. D. Greenwald, 'The Negotiation of a Code on Subsidies and Countervailing Measures: Bridging Fundamental Policy Differences' (1979) 11 *Law and Policy in International Business* 1447, at 1471.

prohibition on domestic subsidies could also affect its support programmes concerning the civil aircraft sector, such as its R&D assistance to the US civil aircraft manufacturers.¹⁵⁹

The Civil Aircraft Agreement reflected international efforts to deal with the subsidy issue in the sector. The agreement established a variety of specific rules regarding trade in civil aircraft, such as eliminating tariffs, prohibiting licensing requirements, and banning discriminatory procurement. However, as mentioned above, the agreement was considered to be disappointing in terms of addressing the subsidy problem in the sector.¹⁶⁰ Due to its weak and ambiguous language mentioned above, the Civil Aircraft Agreement served more like a general declaration of trading principles rather than an enforceable trade agreement.¹⁶¹ Although the use of such language was necessary for the agreement to be accepted by both sides, it inevitably weakened the effectiveness of the agreement in dealing with the subsidy problem in the aircraft sector.¹⁶²

The ambiguities in the agreement allowed for different interpretation of the rules over subsidies in the civil aircraft industry. The US contended that it was established as a principle in the Civil Aircraft Agreement that governments should not subsidise the civil aircraft industry.¹⁶³ The reference to the Tokyo Round Subsidies Code in the Civil Aircraft Agreement further strengthened disciplines on the use of subsidies in the industry.¹⁶⁴ Therefore, the US considered the Civil Aircraft Agreement to be a good deal and the US aircraft industry could be better protected, even though it had to bring its countervailing duty laws into compliance with GATT rules in exchange.

¹⁵⁹ McGuire (n 18), at 84.

¹⁶⁰ See, for instance, Spradlin (n 127), at 1200; Ron Kendler (n 33), at 267.

¹⁶¹ Brian McDonald, *The World Trading System: The Uruguay Round and Beyond* (MacMillan Press 1998), at 148.

¹⁶² Robert J. Carbaugh (n 34), at 405.

¹⁶³ McGuire (n 18), at 87.

¹⁶⁴ *Ibid.*, at 87.

Nevertheless, the Europeans had a quite different understanding of the rules in the Civil Aircraft Agreement. They did not consider that the use of subsidies in the aircraft sector was strictly restrained by the agreement.¹⁶⁵ From the European perspective, several provisions in the Civil Aircraft Agreement allowed signatories to subsidise the civil aircraft industry. With respect to the connection to the Tokyo Round Subsidies Code, the EU held the same attitude as it did in the subsidies code. It resolutely rejected an aggressive interpretation of the subsidy rules in the Tokyo Round Subsidies Code as completely banning the use of subsidies.¹⁶⁶ Therefore, the EU interpreted the Civil Aircraft Agreement in a way that did not affect its ability to subsidise the civil aircraft industry. In fact, the Europeans also considered the Civil Aircraft Agreement to be a good deal, although they were aware that the compromise with the US may not last long, and the US would probably attempt to reopen negotiations.¹⁶⁷

Unsurprisingly, the Civil Aircraft Agreement did not end the conflicts over subsidies in the civil aircraft industry, although it appeared that the US and the EU both achieved what they wanted in the agreement.¹⁶⁸ After the Civil Aircraft Agreement was signed, Airbus continued to receive subsidies from European governments. The European subsidy practices that had given Airbus an advantage were not addressed substantively after the Tokyo Round Subsidies Code and the Civil Aircraft Agreement were reached.¹⁶⁹ Therefore, the problem was still there: the US claimed that aircraft trade should be based on commercial competition without government intervention, while the EU continued to

¹⁶⁵ Ibid, at 88.

¹⁶⁶ Joseph Grieco, *Cooperation Among Nations: Europe, America and Nontariff Barriers to Trade* (Cornell University Press 1990), at 177.

¹⁶⁷ McGuire (n 18), at 88.

¹⁶⁸ Aris (n 27), at 155.

¹⁶⁹ Meier-Kaenig (n 62), at 198.

subsidise Airbus.¹⁷⁰

It is worth mentioning that when the Civil Aircraft Agreement was signed, the US was still dominating the global aircraft market.¹⁷¹ Thus, although the US recognised the problem of European subsidies to Airbus, it did not consider the problem to be fatal. The performance of Airbus at that time was not strong enough to cause very serious concern and figure prominently in American debates about international aircraft trade.¹⁷² The dominance of American firms in the aircraft market also weakened the negotiating position of the US, as the EU contended that Airbus was not capable of adversely affecting American dominance.¹⁷³ This also in part explained why the US accepted the aforesaid indirect legal arrangement in the sector. In addition, as more attention was paid to regulating export finance in the 1970s, the US ignored to some extent the problem of how Airbus built its aircraft, namely domestic subsidies provided to Airbus, as distinct from their sales.¹⁷⁴

3.3.2 US-EU Bilateral Agreement on Trade in Large Civil Aircraft

The conflicts over civil aircraft did not cease after the Tokyo Round and continued to intensify in the 1980s. Airbus was still receiving government funding for the development of its new aircraft models. Just two years after the conclusion of the Civil Aircraft

¹⁷⁰ Winham (n 133), at 239.

¹⁷¹ In the 1970s, the US controlled at least 80 percent of the global aircraft market. McGuire (n 18), at 89.

¹⁷² Ibid, at 73.

¹⁷³ Ibid, at 88-89.

¹⁷⁴ For instance, the US Aerospace Industries Association representatives regarded an international agreement on export finance more important even than a sector agreement on aircraft. Ibid, at 90.

Agreement, Airbus was planning to launch a new aircraft model A320.¹⁷⁵ The US realised that the Civil Aircraft Agreement and the Tokyo Round Subsidies Code did not provide enough protection for the US aircraft manufacturers. However, although the US was angered by the continuing European subsidies to Airbus, it did not take serious action until it filed the Deutsche Airbus case before the GATT dispute settlement system at the end of 1980s.¹⁷⁶ There were several reasons why the US stayed rather silent.¹⁷⁷

First, as noted above, although Airbus achieved fast growth during that period, it was still not regarded as a threat serious enough for dramatic action.¹⁷⁸ The US only called for strict enforcement of the GATT trade agreements at first. Moreover, the US also had other trade problems with Europe, such as trade frictions regarding steel and agricultural products.¹⁷⁹ Thus, the problem of aircraft trade was only considered a part of the broader question, that is, the declining competitiveness of the US high-tech industries in the world.¹⁸⁰

Secondly, the fear of retaliation prevented the US from taking any aggressive actions upon the EU subsidisation to Airbus. The US tried to curb the government assisted development of the new Airbus A320. However, the EU insisted that they were allowed to use subsidies under GATT rules.¹⁸¹ European governments also justified the subsidies covering aircraft launching costs of Airbus on the ground that Airbus was still an 'infant industry', and the US aircraft firms were monopolising the global commercial aircraft

¹⁷⁵ Ibid, at 91.

¹⁷⁶ Jennifer A Manner, 'How to Avoid AIRBUS II: A Primer for Domestic Industry' (1992) 23 California Western International Law Journal 139, at 144.

¹⁷⁷ For a detailed discussion, see McGuire (n 18), at 92-112.

¹⁷⁸ Ibid, at 111.

¹⁷⁹ Ibid, at 105.

¹⁸⁰ Ibid, at 112.

¹⁸¹ Ibid, at 92.

industry.¹⁸² The US government and aircraft manufacturers were worried that they may lose the European market if drastic actions against Airbus were taken.

Finally, there was not a totally consistent attitude in the US upon whether to take serious actions against EU subsidisation for Airbus. In particular, some US aircraft engine makers were reluctant to anger the Europeans.¹⁸³ Two major aircraft engine firms, General Electric and Pratt & Whitney, had both provided engines for Airbus, and were hoping to get their engines installed on the new Airbus A320.¹⁸⁴ Therefore, they did not want to see fierce government actions against Airbus. The US policy makers were thus very cautious about taking such actions.

By the mid-1980s, the US began to address the conflict through the GATT as well as bilaterally, with the aim to limit and eventually eliminate European subsidies to Airbus.¹⁸⁵ The US started bilateral negotiations with the European governments outside the GATT framework as it considered that its interests may be best served in bilateral negotiations with the EU, partly for the reason that the GATT negotiations might be unsuccessful.¹⁸⁶

The US presented four concerns during the negotiations with the European governments: 1) government sales inducements; 2) government subsidies to Airbus; 3) government-ordered purchase of Airbus aircraft by state-owned European airlines; 4) Government-directed procurement of European-made aircraft parts.¹⁸⁷ The US grounded these concerns on the Civil Aircraft Agreement, in particular the rules concerning aircraft

¹⁸² Sedaei (n 8), at 8.

¹⁸³ McGuire (n 18), at 93.

¹⁸⁴ For instance, early versions of Airbus A300 and A310 were powered by General Electric CF-6 engine and some of the later versions of Airbus A310 were equipped with Pratt & Whitney engine. See J. Stan Metcalfe and Uwe Cantner, *Change, Transformation and Development* (Springer-Verlag Berlin Heidelberg GmbH 2012), at 269; Kenny Kemp, *Flight Of The Titans: Boeing, Airbus and the Battle for the Future of Air Travel* (Virgin Books 2006), at 23.

¹⁸⁵ Ian McIntyre, *Dogfight: The Transatlantic Battle over Airbus* (Praeger 1992), at 242-44; Manner (n 176), at 144.

¹⁸⁶ Spradlin (n 127), at 1206.

¹⁸⁷ McGuire (n 18), at 122.

pricing.¹⁸⁸ However, the European governments insisted that the subsidies to Airbus were allowed under the Civil Aircraft Agreement. The negotiating process lasted for the rest of the decade. During that time, Airbus continued to grow with government support.¹⁸⁹ Its growing share in the global aircraft market caused increasing economic and political pressure for the US government to limit European subsidies and protect American manufacturers in the sector.¹⁹⁰

The second round of the conflicts over subsidies in the aircraft sector intensified when the survival of McDonnell-Douglas, a major aircraft manufacturer in the US, was directly threatened as Airbus decided to launch the A330/340 in mid-1980s.¹⁹¹ Before the Airbus A330/340 entered the long-haul aircraft market, US aircraft firms occupied nearly the whole market. The US considered the market too limited to accommodate Airbus' participation. Therefore, the US was hostile to the project of Airbus A330/340 from the beginning. The US complaints against government funding to the Airbus A330/340 programmes intensified before Airbus was about to conclude funding arrangements with government.¹⁹²

At that time, the US was eager to reach a new agreement with the Europeans regarding government subsidisation in the civil aircraft industry, considering that 'any agreement was better than none'.¹⁹³ Bilateral negotiations yielded an initial success as the US moved from advocating no government subsidies for aircraft development to a limit of twenty-five percent, while the EU moved from a seventy-five percent limit to a forty to

¹⁸⁸ Ibid, at 122.

¹⁸⁹ Spradlin (n 127), at 1206.

¹⁹⁰ For further discussion, see Levick (n 84), at 451.

¹⁹¹ McDonnell-Douglas was not only civil aircraft manufacturer, but also one of the largest defence contractors of the US. To protect its defence business was a important task of the US policy makers. See McGuire (n 18), at 112, 118.

¹⁹² Ibid, at 125.

¹⁹³ Keith Hayward, *The World Aerospace Industry: Collaboration and Competition* (Duckworth & RUSI 1994), at 62.

forty-five percent range.¹⁹⁴ However, the negotiations reached an impasse after that. The impasse did not break until the US discovered an explicit German export subsidy to Airbus and filed a case to the GATT.¹⁹⁵

In the 1980s, Deutsche Airbus was in serious financial situation and the German government was considering rescuing it. The plan was to sell MBB, the parent company of Deutsche Airbus, to a private firm Daimler-Benz (Daimler).¹⁹⁶ Daimler owned a German aerospace company Deutsche Aerospace. However, Daimler was concerned about the problem of exchange rate losses incurred on Airbus business, for Deutsche Aerospace would be earning in dollars but its costs were in deutschmarks.¹⁹⁷ Accordingly, it was not willing to make this deal without support from government. To incentivise this deal, the German government absolved Daimler of past MBB debt and took a twenty percent share in Deutsche Airbus.¹⁹⁸ Moreover, the German government offered an exchange rate guarantee scheme as a condition of the deal.¹⁹⁹ According to the scheme, the German government guaranteed against any accounting shortfall in Deutschmark earnings incurred by Deutsche Airbus resulting from US dollar exchange rate losses, 'above a threshold of DM 1.60 to the US dollar'.²⁰⁰ For the A300, A310 and A320, the arrangement would be triggered if the dollar exchange rate fell below DM 2.00; for the A330 and A340 programmes, the standard was DM 1.80.²⁰¹ The scheme was approved by the EU as part of

¹⁹⁴ United States Congressional Research Service, Library of Congress, *Airbus Industrie: An Economic and Trade Perspective* (US Government Printing Office 1992), at 41.

¹⁹⁵ Lee (n 91), at 124.

¹⁹⁶ Daimler at that time had gained control of other aerospace manufacturers in Germany, including aircraft engine maker MTU and commuter aircraft manufacturer Dornier, and had grouped them under Deutsche Aerospace. See McGuire (n 18), at 141.

¹⁹⁷ Ibid, at 143.

¹⁹⁸ Ian McIntyre (n 185), at 136-37; Ron Kendler (n 33), at 269.

¹⁹⁹ McGuire (n 18), at 143, 149.

²⁰⁰ GATT Panel Report, *German Exchange Rate Scheme for Deutsche Airbus*, SCM/142.

²⁰¹ Ibid, at 3.

the MBB sale in March 1989.²⁰²

The US quickly filed a case to the GATT against this German export subsidy programme, with the aim to gain a bargaining counter for the negotiation with the EU.²⁰³ On 20 March 1989, the US requested consultation with the EU under the GATT dispute settlement system.²⁰⁴ As the consultation and the subsequent conciliation by the GATT Subsidies Committee did not result in a mutually acceptable solution to the matter, the US then requested the establishment of a GATT dispute settlement panel to adjudicate the dispute. In 1992, the panel ruled that the German exchange rate guarantee programme violated the Tokyo Round Subsidies Code.²⁰⁵ It concluded that 'the German exchange rate guarantee scheme resulted in a subsidy granted on exports and that the scheme was prohibited in terms of Article 9 [of the Tokyo Round Subsidies Code], as an export subsidy covered by Item (j) of the Illustrative List [of export subsidies]'.²⁰⁶ The panel then recommended that the exchange rate guarantee scheme be brought into conformity with Article 9 of the Tokyo Round Subsidies Code.²⁰⁷

This panel report was never adopted by the GATT, as the EU finally blocked its adoption, precluding the implementation of remedial measures by the US.²⁰⁸ Nevertheless, this case already made it clear that subsidies to Airbus were in violation of the GATT subsidy rules.²⁰⁹ Moreover, European governments were worried that the US would be emboldened to bring a broader case against Airbus subsidies to the GATT. The EU had

²⁰² McGuire (n 18), at 149.

²⁰³ Michael Harrison, 'GATT Rules Against Europe in Airbus Subsidy Row' *Independent* (16 January 1992).

²⁰⁴ GATT Panel Report, *German Exchange Rate Scheme for Deutsche Airbus*, SCM/142, para. 1.1.

²⁰⁵ *Ibid.*, para. 6.1.

²⁰⁶ *Ibid.*, para. 6.1.

²⁰⁷ *Ibid.*, para. 6.2.

²⁰⁸ Manner (n 176), at 148.

²⁰⁹ Spradlin (n 127), at 1208.

insisted that any Airbus subsidy issue should be confined to the GATT Civil Aircraft Committee rather than go to the general GATT dispute settlement proceedings.²¹⁰

These worries became true as the US brought much broader complaints to the GATT against all Airbus subsidies in 1991.²¹¹ As the former Deutsche Airbus case was concerned with export subsidies, in this case the US took a legal action against domestic subsidies to Airbus.²¹² According to the US, Airbus had received more than \$13.5 billion domestic subsidies from European governments between 1968 and 1989.²¹³ It further claimed that these subsidies in fact amounted to as much as \$26 billion due to their preferential repayment terms.²¹⁴ Although no GATT dispute settlement panel was finally established in this case, it increased the pressure on the EU to compromise in the negotiations concerning the regulation of subsidies in the aircraft sector. The EU realised that subsidies granted to Airbus would put it in the untenable position of having to block future US actions in the GATT.²¹⁵ As a result, the EU eventually agreed to lower the direct subsidy cap to the range of thirty to thirty-nine percent.²¹⁶ It also insisted that there should be limits on indirect subsidies to the US civil aircraft industry, including those granted through US military and NASA R&D programmes. In the EU view, the subsidisation through these R&D programmes to the US civil aircraft manufacturers was equivalent in nature to Airbus subsidies.²¹⁷ The EU attempted to establish a mechanism which could measure and curb indirect subsidies to the US aircraft firms. It proposed three to five percent of the turnover

²¹⁰ McGuire (n 18), at 150.

²¹¹ Richard O. Cunningham and Peter Lichtenbaum (n 132), at 1171; 'Deadlines Approach for Two GATT Airbus Complaints, Boeing Official Tells ABA' *International Trade Daily* (8 November 1991).

²¹² Manner (n 176), at 145.

²¹³ *Ibid.*, at 150.

²¹⁴ Harrison (n 203), at 24.

²¹⁵ Spradlin (n 127), at 1208.

²¹⁶ *Ibid.*, at 1208.

²¹⁷ McGuire (n 18), at 88.

of the industry as the cap of indirect subsidies to the civil aircraft industry, through calculating the NASA budget in 1991 as a percentage of the turnover of the US industry.²¹⁸

At that time, the attitude of the EU and the US towards government subsidisation in the civil aircraft industry was to some extent changed.²¹⁹ On the one hand, as a result of the commercial success of Airbus, the Europeans felt less anxious about the US dominance in the civil aircraft market, and thus they could think more about controlling the use of direct aircraft subsidies. On the other, the US realised that that the best opportunity to remove Airbus as a competitive threat had passed and Airbus had already become a powerful competitor to US aircraft firms. It began to change to a more practical attitude, namely to reduce rather than exclude government subsidies in the industry.²²⁰ More importantly, the US became more open to discussing its own problem, namely the use of indirect subsidies through military and NASA research programmes.²²¹ With such changes on both sides, it was then more likely that the US and the EU would reach a new bilateral agreement on domestic subsidies in the sector.

In 1992, the US and the EU signed the Agreement on Trade in Large Civil Aircraft (1992 LCA Agreement).²²² The bilateral agreement was only applicable to trade in large civil aircraft, which was defined as civil aircraft designed for passenger or cargo transportation with 100 or more passenger seats or the equivalent in cargo configuration.²²³

²¹⁸ US General Accounting Office, *International Trade: Long-Term Viability of the US-European Union Aircraft Agreement Uncertain* (USGPO 1994), at 24-25.

²¹⁹ For a detailed discussion, see McGuire (n 18), at 145-56.

²²⁰ Laura D'Andrea Tyson, *Who's Bashing Whom? Trade Conflicts in High-Technology Industries* (Institute for International Economics 1992), at 205.

²²¹ *Air Transport World* 25(5), May 1988, at 8. Before that, the US would not even acknowledge that its civil aircraft manufacturers had benefited from government funding. Therefore, to start negotiation on this matter was considered to be an important turning point of the US position. See McGuire (n 18), at 147.

²²² US International Trade Commission, *The Impact of Trade Agreements: Effect of the Tokyo Round, US - Israel FTA, US - Canada FTA, NAFTA, and the Uruguay Round on the US Economy* (2003), at 233.

²²³ The definition of large civil aircraft in the 1992 LCA Agreement was based on the definition of civil aircraft in the Civil Aircraft Agreement. According to the paragraph 1, Annex II of the 1992 LCA Agreement, large civil aircraft are

The 1992 LCA Agreement provided a new chance to deal with the subsidy problem in the aircraft sector. The agreement explicitly built on the provisions of the Civil Aircraft Agreement, but it included more stringent limits on the use of subsidies.²²⁴ Although it was a bilateral agreement between the US and the EU, the underlying purpose of the Agreement was to impose the bilateral compromise onto a multinational playing field.²²⁵ According to the preamble, the goal of the 1992 LCA Agreement was to prevent trade distortions resulting from direct or indirect government support for the development and production of large civil aircraft, introduce greater disciplines on such support, and encourage the adoption of such disciplines multilaterally within the GATT.²²⁶ It also stated that ‘the disciplines in the GATT Agreement on Trade in Civil Aircraft should be strengthened with a view to progressively reducing the role of government support’.²²⁷ Several provisions of the 1992 LCA Agreement clearly referred to GATT agreements. For instance, Article 12 of the Agreement provided that both parties should ‘make their utmost efforts to ensure that these or similar disciplines are incorporated into the [Civil] Aircraft Agreement or adopted by [its] key signatories at the earliest possible date’, and ‘expand the coverage of the disciplines provided by this [1992 LCA] Agreement to all of the products covered in the [Civil] Aircraft Agreement’.²²⁸ These all demonstrated that a driving purpose of the 1992 LCA Agreement was to create a bilateral accord for multilateral adoption.²²⁹ The Agreement established the following substantive rules on government

aircraft defined in Article 1 of the GATT Agreement on Trade in Civil Aircraft, except engines as defined in Article 1.1(b) thereof, that are designed for passenger or cargo transportation and have 100 or more passenger seats or its equivalent in cargo configuration. See Annex II of the 1992 LCA Agreement.

²²⁴ Ron Kendler (n 33), at 269.

²²⁵ Levick (n 84), at 458.

²²⁶ Preamble of the 1992 LCA Agreement.

²²⁷ Preamble of the 1992 LCA Agreement.

²²⁸ Article 12.2 of the 1992 LCA Agreement.

²²⁹ Levick (n 84), at 459.

subsidies in the large civil aircraft sector.

First, the 1992 LCA Agreement set out rules on direct government support in the large civil aircraft sector. 'Direct government support' was defined as any financial support provided for specific large civil aircraft programmes, or any financial support to specific companies to the extent that large civil aircraft programmes directly benefited.²³⁰ In this regard, it first banned all direct government support for aircraft production.²³¹ 'Production' included all manufacturing, marketing and sales activities and was distinguished from development activities in the Agreement.²³² It was provided that the parties should not grant direct government support for the production of large civil aircraft other than those had been firmly committed.²³³

Besides the above rules regarding aircraft production, the 1992 LCA Agreement also established rules on direct government support for the development of new large civil aircraft programmes. Development of civil aircraft included activities prior to the date of certification of civil aircraft, such as preliminary design, engineering design, wind-tunnel, structural and system test.²³⁴ Pursuant to Article 4 of the Agreement, direct government support for the development of a new large civil aircraft programme, such as low-interest loans and R&D grants, was limited to thirty-three percent of its total development cost.²³⁵ In addition to the quantitative limit, there was a general prerequisite for such direct government support. That was, government should provide development support only

²³⁰ Paragraph 6, Annex II of the 1992 LCA Agreement.

²³¹ The rules in the 1992 LCA Agreement were not retroactive. According to Article 2 of the agreement, government support to aircraft programmes committed prior to the agreement was not subject to it except provided otherwise.

²³² Paragraph 4, Annex II of the 1992 LCA Agreement. According to Annex II, official export credit financing consistent with the Large Aircraft Sector Understanding of the OECD Understanding on Official Export Financing was excluded from the prohibition on production support.

²³³ Article 3 of the 1992 LCA Agreement.

²³⁴ Paragraph 3, Annex II of the 1992 LCA Agreement.

²³⁵ Article 4.2 of the 1992 LCA Agreement.

where a critical project appraisal had established that there was a reasonable expectation of recoupment, within 17 years from the date of first disbursement of such support, of all costs for aircraft production, including repayment of government support.²³⁶ The rules on direct government support in the aircraft sector were mainly for dealing with European subsidies to Airbus, which were more direct than US subsidies.²³⁷

Secondly, the 1992 LCA Agreement also set out rules on indirect government support in the large civil aircraft sector. 'Indirect government support' referred to government financial support for aeronautical applications, including research and development, demonstration projects and development of military aircraft, which provided identifiable benefit to the development or production of specific large civil aircraft programmes.²³⁸ Parties to the agreement should ensure that indirect government support neither conferred unfair advantage on large civil aircraft manufacturers, nor led to distortions in international trade in large civil aircraft.²³⁹ According to Article 5.2, identifiable benefits resulting from indirect government support to the development or production of large civil aircraft were limited to three percent of the annual industry turnover or four percent of a company's annual turnover.²⁴⁰ Such identifiable benefits were deemed to arise when government-funded research and development in the aeronautical area result in an identifiable reduction in costs of large civil aircraft.²⁴¹ If the results of research and development were made available on a non-discriminatory basis to large civil aircraft

²³⁶ Article 4.1 of the 1992 LCA Agreement.

²³⁷ Spradlin (n 127), at 1209.

²³⁸ Paragraph 5, Annex II of the 1992 LCA Agreement.

²³⁹ Article 5.1 of the 1992 LCA Agreement.

²⁴⁰ Article 5.2 of the 1992 LCA Agreement.

²⁴¹ Benefits from indirect support resulting from the technology obtained through government-funded research and development or through other government programmes should normally be calculated in terms of the reduction in the cost of research and development and in the reduction in the cost of the production equipment or production process technology. See Article 5.3 of the 1992 LCA Agreement.

manufacturers of the parties, benefits deriving from such technologies should be excluded from the calculation in Article 5.2. However, identifiable benefits may arise when aircraft manufacturers were responsible for, or have early access to, the conduct or results of such research.²⁴² As noted above, the rules on indirect subsidies were a major European concern, as the US aircraft manufacturers traditionally benefited from military and NASA research programmes.²⁴³ The Europeans regarded the limit on indirect subsidies as an exchange for the limit on direct subsidies to Airbus. This was the first time that indirect subsidies were recognised as a potentially harmful form of protectionism.²⁴⁴ Therefore, the 1992 agreement was considered to be a major breakthrough for the European side.

Apart from the above rules on direct and indirect government subsidies to the large civil aircraft sector, the 1992 LCA Agreement also contained rules on marketing of aircraft, rules of transparency and rules regarding dispute settlement over aircraft subsidies. In terms of rules on selling and marketing of large civil aircraft, the 1992 LCA Agreement reinforced the Civil Aircraft Agreement's efforts.²⁴⁵ For instance, it defined what constituted 'unreasonable government pressure' in aircraft marketing.²⁴⁶ In addition, the Agreement prohibited the use of offset concession as a prerequisite for selling large civil aircraft, which was a significant change from the Civil Aircraft Agreement that allowed such arrangements.²⁴⁷ As to the rules of transparency, the 1992 LCA Agreement provided for greater transparency in domestic subsidy programmes in the industry. It contained

²⁴² Article 5.3 of the 1992 LCA Agreement.

²⁴³ Levick (n 84), at 457.

²⁴⁴ Knorr, Bellmann and Schomaker (n 49), at 595.

²⁴⁵ Levick (n 84), at 454.

²⁴⁶ According to the Agreement, unreasonable government pressure relating to the selection of suppliers by airlines, aircraft manufacturers or other entities engaged in the purchase of civil aircraft was prohibited. 'Unreasonable pressure' included any action favouring products or suppliers or which influenced procurement decisions in a manner which created discrimination against suppliers from any other signatory. Annex I of the 1992 LCA Agreement.

²⁴⁷ Levick (n 84), at 455.

specific and mandatory notification and reporting requirements over the amount of government support, total development costs, annual commercial turnover of the civil aircraft industry and so on, at a regular and systematic basis.²⁴⁸ This had been a concern for the US as it was not able to determine the exact amount of subsidisation granted to Airbus by the European governments, due to the highly confidential nature of such information and the different accounting structure of Airbus.²⁴⁹

With respect to the settlement of possible aircraft trade disputes, it was stated first that parties should seek to avoid any trade conflict over government support in the civil aircraft industry.²⁵⁰ The Agreement encouraged parties to conduct consultation in order to resolve their dispute over aircraft subsidies. If domestic petitioners requested to take any legal action against government support of the other party under national laws, the party concerned was required to immediately inform the other party and offer to conduct consultation.²⁵¹ Moreover, parties should not self-initiate actions under their national trade laws against government support that was consistent with the 1992 LCA Agreement, as long as the agreement was in force.²⁵² However, any party was allowed to unilaterally abrogate this agreement on the ground of non-compliance by the other party.²⁵³ This indeed happened when the US unilaterally terminated the agreement before it brought WTO proceedings in 2004. Generally speaking, with consultation as the main dispute settlement device, the 1992 LCA Agreement did not improve much on the general dispute

²⁴⁸ Article 8 of the 1992 LCA Agreement.

²⁴⁹ Levick (n 84), at 456.

²⁵⁰ Article 10.1 of the 1992 LCA Agreement.

²⁵¹ Article 10.3 of the 1992 LCA Agreement.

²⁵² Article 10.2 of the 1992 LCA Agreement.

²⁵³ Article 10.2 of the 1992 LCA Agreement.

settlement system of the GATT.²⁵⁴

Due to the clear ban on production subsidies and the explicit limit on development subsidies in the aircraft sector, the 1992 LCA Agreement was more stringent and forthright compared with the Civil Aircraft Agreement. As a result of the limitation on aircraft subsidies, the price of Boeing and Airbus civil aircraft increased by about 3.7 percent after the agreement was signed.²⁵⁵ However, despite these more stringent rules in the SCM Agreement, the conflicts over subsidies in the aircraft sector still continued. There were several reasons for that. First, the 1992 LCA Agreement was a result of the European concession to prevent the US from pursuing the GATT case, rather than a comprehensive scheme addressing the problem of aircraft subsidies.²⁵⁶ Although the US succeeded in imposing a cap on domestic subsidies in the sector, there was still an enormous amount of permissible subsidisation.²⁵⁷ Secondly, there were problems over the application and interpretation of the 1992 LCA Agreement. For instance, the transparency requirement in the 1992 LCA Agreement was not fully fulfilled by the EU due to the alleged inability to disentangle Airbus interests.²⁵⁸ The calculation of indirect government support was also problematic.²⁵⁹

3.4 Disputes over Aircraft Subsidies in the WTO

As discussed in chapter two, when the 1992 LCA Agreement was negotiated, the

²⁵⁴ Levick (n 84), at 457.

²⁵⁵ Irwin and Pavcnik (n 80), at 3.

²⁵⁶ Jeffrey D. Kienstra (n 61), at 580.

²⁵⁷ Spradlin (n 127), at 1210.

²⁵⁸ Levick (n 84), at 457.

²⁵⁹ Gary C. Hufbauer, 'Boeing vs Airbus: Fighting the Last War' *Handelsblatt* (19 June 2007).

GATT Uruguay Round negotiations that led to the formation of the WTO were ongoing. The US and the EU disagreed on the relationship between the 1992 LCA Agreement and the upcoming SCM Agreement.²⁶⁰ The US wanted to keep the 1992 LCA Agreement intact and impose more limits on subsidy use in the aircraft sector, while the EU preferred a subsidy agreement that abrogated the 1992 LCA Agreement and made it more difficult to win relief under the new WTO legal system.²⁶¹ The Uruguay Round negotiations resulted in two important institutional developments that were critical for dealing with disputes in the aircraft industry, namely the SCM Agreement and the new dispute settlement mechanism established by the Dispute Settlement Understanding (DSU).²⁶² The 1992 LCA Agreement remained intact after the Uruguay Round negotiations.²⁶³ The Civil Aircraft Agreement was incorporated into the WTO legal system as one of the plurilateral trade agreements. As noted in chapter two, the SCM Agreement became the most important international trade agreement concerning the regulation of subsidies. The rules of the SCM Agreement rules are applicable to trade in civil aircraft, although there are a few different arrangements.²⁶⁴

In the 1990s, subsidy issues became increasingly noticeable due to the fierce competition in the global civil aircraft market.²⁶⁵ The market share of Airbus continued to grow after the 1992 LCA Agreement was signed. In the 1990s, Airbus outlasted two main

²⁶⁰ Patrick J McDonough, 'Subsidies and Countervailing Measures' in Terence P Stewart (ed), *The GATT Uruguay Round: A Negotiating History (1986-1992)* (Kluwer Law and Taxation Publishers 1993), at 956.

²⁶¹ Spradlin (n 127), at 1210.

²⁶² Andrew L. Stoler, 'The Evolution of Subsidies Disciplines in GATT and the WTO' (2010) 44 *Journal of World Trade* 797, at 805; Ron Kendler (n 33), at 270.

²⁶³ Raj Bhala and Kevin Kennedy, *World Trade Law: The GATT-WTO System, Regional Arrangements, and US Law* (Lexis Law Publishing 1998), at 1131.

²⁶⁴ These exceptions were concerned with rules on the determination of serious prejudice and identification of non-actionable subsidies. See footnote 15, footnote 16 and footnote 24 of the SCM Agreement. For more discussion on this, see chapter two of this thesis.

²⁶⁵ Aris (n 27), at 151.

US aircraft manufacturers, McDonnell-Douglas and Lockheed.²⁶⁶ In 1999, Airbus captured over fifty percent of net orders in the global market, defeating Boeing for the first time.²⁶⁷ In 2003, it delivered more aircraft than Boeing for the first time.²⁶⁸ Moreover, Airbus initiated the development programme of its largest aircraft model the A380, which would compete directly against Boeing's flagship aircraft, the Boeing 747.²⁶⁹ In 2004, Airbus announced the development plan for the A350 XWB, which would compete directly against Boeing's revolutionary aircraft the Boeing 787. European government subsidisation to Airbus continued even after it became a formidable competitor of the US aircraft firms.²⁷⁰ According to the US, one third of the development costs for the A380 were covered by European governments, which amounted to around \$6.5 billion.²⁷¹ Moreover, the EU was considering granting development subsidies to the A350 programme.²⁷² Airbus's fast growth in the global aircraft market stimulated the US into reconsidering the viability of the 1992 LCA Agreement.

The third round of the conflicts over subsidies in the civil aircraft sector started when they were finally brought to the WTO for adjudication. In the fall of 2004, the US engaged in negotiations with the EU in order to modify the 1992 LCA Agreement.²⁷³ However, such negotiations failed to reach a mutually acceptable solution. On 6 October 2004, the

²⁶⁶ Lockheed quitted commercial aircraft market in the early 1980s; Boeing bought out McDonnell Douglas in 1996. For further discussion, see *ibid.*, at 152.

²⁶⁷ As Aris pointed out, measuring market share is an extremely contentious issue. Boeing and Airbus have been quarrelling for many years about what should be the suitable standard to measure market share. There are three standards in total, including delivery, gross order and net order. The first is the number of aircraft delivered actually, the second is the number of orders that airlines have made, and the third one means gross order minus cancellations. See *ibid.*, at 217. This question was addressed by the WTO dispute settlement panels in the disputes concerning subsidies to the Airbus and Boeing. For further discussion, see chapter four of this thesis.

²⁶⁸ Office of Aerospace and Automotive Industries, International Trade Administration, U.S. Department of Commerce (n 6).

²⁶⁹ Jeffrey D. Kienstra (n 61), at 577.

²⁷⁰ Sedaei (n 8), at 8.

²⁷¹ Jeffrey D. Kienstra (n 61), at 588.

²⁷² *Ibid.*, at 578, 590.

²⁷³ Caliskan (n 3), at 1132.

US unilaterally terminated the 1992 LCA Agreement, claiming violations by the EU.²⁷⁴ On the same day, it filed a complaint against EU subsidies to Airbus under the WTO dispute settlement mechanism.²⁷⁵ The EU responded quickly by filing a counter-case against the US also on the very same day, alleging that subsidies to Boeing were inconsistent with the SCM Agreement.²⁷⁶

The WTO cases concerning subsidies to Airbus and Boeing (Airbus-Boeing cases) are critical in terms of dealing with the subsidy problem in the civil aircraft industry. First, it was the first time that the decades-long conflicts over aircraft subsidies were brought to the WTO for adjudication. The US and the EU both made very broad allegations against each other in the WTO proceedings. For instance, the US challenged more than 300 separate instances of subsidy measures against the EU, which covered a great majority of European subsidies to Airbus from its formation. Similarly, the European complaints also covered most of the main government support to the US aircraft industry. It seemed that the US and the EU intended to get a definitive solution to the problems over aircraft subsidies that lingered since the GATT period.

Secondly, the Airbus-Boeing conflicts involved many complex legal issues surrounding the WTO subsidy rules. These perplexing legal issues of aircraft subsidies

²⁷⁴ Jeffrey D. Kienstra (n 61), at 587.

²⁷⁵ Request for Consultations by the US, *EC and certain member States - Measures Affecting Trade in Large Civil Aircraft (EC - Aircraft)*, WT/DS316/1. On 31 January 2006, the US submitted a second complaint on the same issue (*EC and Certain Member States - Measures Affecting Trade in Large Civil Aircraft - Second Complaint*, WT/DS347). However, the US requested the panel to suspend its work on 6 October 2006, in accordance with Article 12:12 of the DSU. The authority of the panel then lapsed as of 7 October 2007. Note by the Secretariat - Lapse of Authority for the Establishment of the Panel, WT/DS347/7.

²⁷⁶ Request for Consultations by the EC, *United States - Measures Affecting Trade in Large Civil Aircraft*, WT/DS317/1. In order to address various procedural issues arising in this case, and because of the refusal by the US to provide certain information pertaining to a number of subsidy measures benefiting Boeing, the EU also filed a second complaint against the US subsidies for Boeing in the WTO (*United States - Measures Affecting Trade in Large Civil Aircraft - Second Complaint (US - Aircraft)*, WT/DS353). The timetable in DS317 was then set aside and the panel in that case was inactive after that. See Communication from the Chairman of the Panel, *United States - Measures Affecting Trade in Large Civil Aircraft*, WT/DS317/6.

were to be adjudicated on, for the first time, pursuant to the SCM Agreement. The rulings in the Airbus-Boeing cases may have a great impact on the future development of the civil aircraft industry, as they could affect the way in which governments support the civil aircraft industry. In addition, this was also the first time that the Airbus-Boeing disputes were dealt with under the WTO dispute settlement mechanism, which was considered one of the most important achievements of the WTO trading system. Most of the aircraft manufacturing countries, such as China, Brazil, Canada and Japan, reserved their rights to participate in the proceedings as third parties in the Airbus-Boeing cases.²⁷⁷ This to some extent reflected the importance of the cases.

Thirdly, the Airbus-Boeing disputes were concerned with the large civil aircraft sector. As discussed above, this sector is significant in both economic and political terms. Because of the great amount of subsidisation involved, the Airbus-Boeing cases were considered to be the most commercially significant and high-profile cases in the history of the GATT and WTO.²⁷⁸ As a result, the cases were not only a test for the effectiveness of the WTO subsidy rules, but also a tough one for the WTO as a credible forum for international trade regulation more generally.

Finally, it is worth mentioning that the Airbus-Boeing disputes were not the first case regarding the civil aircraft industry that has been brought to the WTO. There had been disputes between Brazil and Canada concerning export subsidies provided for their respective aircraft manufacturers Embraer and Bombardier.²⁷⁹ While the disputes between

²⁷⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 1.6; Panel Report, *US - Aircraft*, WT/DS353/R, para. 1.6.

²⁷⁸ Simon Lester, 'The Problem of Subsidies as a Means of Protectionism: Lessons from the WTO EC - Aircraft Case' (2011) 12 *Melbourne Journal of International Law* 345, at 345.

²⁷⁹ *Brazil - Export Financing Programme for Aircraft (Brazil - Aircraft)*, WT/DS46; *Canada - Measures Affecting the Export of Civilian Aircraft (Canada - Aircraft)*, WT/DS70; *Canada - Export Credits and Loan Guarantees for Regional Aircraft (Canada - Aircraft Credits and Guarantees)*, WT/DS222.

the US and the EU were concerned with the large civil aircraft sector, those between Canada and Brazil were regarding the regional aircraft sector. Therefore, the amount of subsidisation, complexity of legal issues and significance of the rulings of the adjudicating bodies in the Airbus-Boeing cases were all beyond the previous WTO cases between Brazil and Canada.

3.5 Conclusion

The civil aircraft industry is of great significance for its roles in national economies in terms of generating revenue, promoting export trade, boosting technological advancement and creating jobs. Moreover, the industry has a unique economic and competitive nature that renders government support essential for achieving success in the industry. As a result, governments are inclined to subsidise the civil aircraft industry, rendering it a clear example of industry with significant government intervention. The regulation of subsidies in the aircraft sector is thus more politically sensitive and complex. As will be demonstrated in the next chapter, the characteristics of the civil aircraft industry also have an impact on the application of WTO subsidy rules in the sector.

The conflicts over subsidies in the civil aircraft industry lingered as an issue of contention since the GATT period. Efforts were made to deal with the subsidy problem in the sector. In this regard, the Civil Aircraft Agreement and the 1992 LCA Agreement were concerned with the regulation of subsidies in the civil aircraft industry. However, due to the defects in these agreements, they failed to end the aircraft subsidy conflicts. The conflicts

still continued and even intensified after these agreements were reached. This clearly demonstrated the complexity of the subsidy problem in the civil aircraft industry. After lingering in the GATT for several decades, the conflicts were finally brought to the WTO for adjudication. The next chapter will discuss how the panels and the Appellate Body adjudicated on the key legal issues surrounding the use of subsidies in the sector, namely how the WTO subsidy rules were applied in the civil aircraft sector.

Chapter 4 - Legal Issues surrounding the Use of Subsidies in the Civil Aircraft Industry

4.1 Introduction

As demonstrated in chapter three, the disputes over subsidies in the civil aircraft industry were not successfully dealt with in the GATT period. In 2004, the disputes were finally brought before the WTO dispute settlement mechanism. The EU and the US accused each other of illegally subsidising their respective civil aircraft manufacturers, Airbus and Boeing. The Airbus-Boeing disputes involve many complex legal issues concerning the use of aircraft subsidies, including the definition of subsidy, specificity, adverse effects, and export contingency of subsidies in the civil aircraft industry. These issues determine whether an aircraft subsidy measure is lawful under the WTO subsidy rules. In the Airbus-Boeing cases, these issues have been extensively argued by the US and the EU, and the WTO dispute settlement panels and the Appellate Body have adjudicated on them.¹ The findings of the adjudicating bodies are critical in terms of dealing with the subsidy problem concerning the civil aircraft industry, and would have an impact on the regulation of subsidies in the sector.²

This chapter first introduces briefly the EU and the US subsidy measures at issue, namely how the US and the EU subsidised their respective civil aircraft industries. After

¹ The panel report and the Appellate Body report in *US - Aircraft* were circulated on 31 March 2011 and 12 March 2012 respectively, and were adopted by the Dispute Settlement Body (DSB) on 23 March 2012. The panel report and the Appellate Body report in *EC - Aircraft* were circulated on 30 June 2010 and 18 May 2011 respectively, and were adopted on 1 June 2011.

² Simon Lester, 'The Problem of Subsidies as a Means of Protectionism: Lessons from the WTO EC - Aircraft Case' (2011) 12 *Melbourne Journal of International Law* 345, at 347.

that, it discusses the above-mentioned legal issues concerning the use of subsidies in the civil aircraft industry. Through examining the findings of the panels and the Appellate Body on these issues, this chapter tries to assess how the WTO subsidy rules are applied in the civil aircraft industry.

4.2 EU and US Subsidies to the Civil Aircraft Industry

4.2.1 EU Subsidies to the Civil Aircraft Industry

As discussed in chapter three, government subsidies have played a significant role in the success of Airbus, as Airbus was almost entirely and directly government-funded from the outset.³ The EU aircraft subsidies came from both the EU level and certain EU member states participating in Airbus, including Germany, France, the UK and Spain. In *EC - Aircraft*, the main EU subsidy measures challenged by the US were the Launch Aid measures, the research and technological development funding (R&TD) measures, the European Investment Bank (EIB) loans, and certain equity infusions and infrastructure-related measures.

4.2.1.1 Launch Aid

‘Launch Aid’ was a distinctive form of government funding that specified the

³ Matthew Lynn, *Birds of Prey: Boeing vs. Airbus: A Battle for the Skies* (2nd edn, Basic Books 1998), at 92-94.

recipient's repayment obligation as a levy on sales of the concerned product.⁴ Launch Aid or similar support schemes were utilised by several aerospace manufacturing countries to promote specific aircraft development projects.⁵ Launch Aid funding was also a major form of EU subsidisation for Airbus,⁶ which usually consisted of long-term preferential loan or loan guarantees.⁷ The funding was provided through Launch Aid agreements or contracts.⁸ First, general agreements were reached among the EU member states involved concerning the aircraft development projects of Airbus. For example, there were inter-governmental Launch Aid agreements among certain EU member states regarding Airbus' first LCA models, including the A300, A310, A320 and A330/340.⁹ These agreements usually contained the commitment to fund particular Airbus LCA projects and the key terms and conditions for the funding, such as the amount of funding and the terms of repayment. These general inter-governmental agreements were then implemented through more detailed Launch Aid contracts between Airbus and the EU member states, which would specify the terms of the inter-governmental agreements.¹⁰

Although the terms of the Launch Aid contracts may vary, the Launch Aid funding for Airbus under such contracts had several common features.¹¹ First, the funding was

⁴ Kim Kaivanto, 'Premise and Practice of UK Launch Aid' (2006) 40 *Journal of World Trade* 495, at 495.

⁵ This kind of government funding has been available in the UK since the 1940s, and has generally been known as Launch Aid since the 1960s. *Ibid.*, at 495.

⁶ The EU used the term 'Member State Financing' (MSF) instead of 'Launch Aid'. The EU considered that the term 'Launch Aid' was 'suggestive and oversimplifying' and should be replaced with 'Member State Financing', which it considered to be a more neutral term. The panel in *EC - Aircraft* explained that the terminology should not be taken to have any significance for its consideration of the substance of the dispute. The panel and the Appellate Body generally used the term LA/MSF, to describe such kind of funding measure. *Panel Report, EC - Aircraft, WT/DS316/R*.

⁷ *Ibid.*, para. 7.290.

⁸ *Ibid.*, para. 7.372.

⁹ The A300, A310, A320, A330/340 projects were launched in 1969, 1978, 1984 and 1987 respectively. The intergovernmental agreements for the A320 and A330/340 were less prescriptive, for they did not specify precise repayment terms, leaving these to be determined through the individual national level contracts. See *ibid.*, para. 7.370.

¹⁰ *Ibid.*, para. 7.372. For some large civil aircraft projects, there were no inter-governmental Launch Aid agreements but only Launch Aid contracts between the concerned EU member states and Airbus. For instance, the financing for the A380 was conducted through Launch Aid contract between Germany and Airbus Deutschland.

¹¹ The panel in *EC - Aircraft* summarised the features of the Launch Aid funding. *Ibid.*, para. 7.373-7.375.

similar in terms of disbursement. A significant part of the funding was transferred to Airbus before actual development costs were incurred. This was based on projected expenditures, although actual costs might be reviewed and the amount of funding could be adjusted at a later stage.¹² Secondly, the Launch Aid funding had similar repayment terms.¹³ Repayment of the funding was linked to the delivery of Airbus aircraft.¹⁴ Airbus only needed to repay the funding after certain number of deliveries of the funded LCA models.¹⁵ Moreover, repayment of the Launch Aid funding was ‘back-loaded’. During the initial period, the required payments were lower.¹⁶ This allowed Airbus to repay less for early LCA deliveries. Airbus was even entirely exempted from levies during the initial period of deliveries for certain LCA models.¹⁷ Through such back-loaded repayment terms, the financial burden on Airbus was largely minimised, as initial financial requirement and costs for a new LCA project were usually much higher and revenues from first deliveries were relatively low.¹⁸ According to the US, this could ‘delay repayment to a moment in the LCA business cycle that best suits Airbus’ competitive need’.¹⁹ Finally, the full repayment of the Launch Aid funding was success-dependant. Airbus did not have to fully repay the funding if it failed to make the required number of deliveries.²⁰ In other words, the full repayment of the Launch Aid depended on the success of the concerned Airbus LCA project.²¹

¹² Ibid, para. 7.373.

¹³ Gian Franco Chianale, ‘The WTO Airbus Dispute: Findings of the Panel and of the Appellate Body’ (2013) 12 *European State Aid Law Quarterly* 290, at 296. Chianale summarised the findings of the panel and the Appellate Body in *EC - Aircraft*.

¹⁴ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.374.

¹⁵ Ibid, para. 7.374.

¹⁶ Chianale (n 13), at 296.

¹⁷ Panel Report, *EC - Aircraft*, WT/DS316/R (n 6), para. 7.331.

¹⁸ Ibid, para. 7.331.

¹⁹ Ibid, para. 7.331.

²⁰ Ibid, para. 7.330.

²¹ The US claimed that the repayment of Launch Aid was success-dependent and unsecured. According to the US,

The foregoing repayment terms were the essential feature of the Launch Aid funding and were strongly challenged by the US. As a major kind of subsidy for Airbus, the Launch Aid funding provided substantial financial support for Airbus. The funding covered a major part of the development costs for many Airbus LCA models.²² According to the US, nearly all Airbus aircraft models have benefited from the Launch Aid funding provided by European governments, including the A300, A310, A320, A330/340, A330-200, A340-500/600, A380, and A350.²³

4.2.1.2 Research and Technological Development Funding

Research and technological development funding (R&TD funding) was another major kind of EU subsidies for Airbus.²⁴ As mentioned in chapter three, the civil aircraft industry is R&D-intensive and involves great technological risk. This was why government subsidisation in the industry was usually relevant to aircraft research and development. The R&TD funding was mainly in the form of grants or loans.²⁵ The funding was mainly provided through the EU Framework Programmes, which were initially an effort by the EU to promote European industrial competitiveness in a number of sectors by strengthening transnational R&TD collaboration and coordination.²⁶ Partly as a result of the progress towards closer union in Europe and the changes in terms of global competition, the

even Airbus may make voluntary repayments regardless of the number of deliveries under certain circumstances, this did not change the fact that the repayment of Launch Aid was success-dependent and unsecured.

²² Chianale (n 13), at 296.

²³ According to the US, the value of the Launch Aid funding for the A380 amounted to about \$4 billion. See Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.290.

²⁴ Ibid, para. 7.1415.

²⁵ Ibid, para. 7.1415.

²⁶ Thomas Roediger-Schluga and Michael J. Barber, 'R&D Collaboration Networks in the European Framework Programmes: Data Processing, Network Construction and Selected Results' (2007) UNU-MERIT Working Papers, at 5.

Framework Programme became more industry-orientated and a useful instrument for funding and coordinating scientific research across Europe.²⁷ Under each of the Framework Programmes, there were a variety of LCA-related research projects. As a main participating entity for these Framework Programmes, Airbus benefited through undertaking the research projects either alone or with other aerospace firms.²⁸ Besides the EU Framework Programmes, Airbus also benefited from other LCA-related R&TD projects of certain EU member states. For instance, Airbus received grants from the French, the UK, the German government, and loans from the Spanish government for conducting LCA-related R&TD projects.²⁹

4.2.1.3 European Investment Bank Loans

The EU also provided support for the civil aircraft industry through preferential loans from the European Investment Bank (EIB). EIB loans were provided for the development of specific Airbus LCA models, usually as a supplement to the Launch Aid funding.³⁰ For instance, EIB loans were provided for the design and development of the Airbus A330/A340 in 1991. According to the US, these loans were granted at an interest rate

²⁷ Erik Arnold, Bea Mahieu and James Stroyan, 'Understanding the Long Term Impact of the Framework Programme' (2011) Final Report to the European Commission DG Research, at 1.

²⁸ For instance, according to the US, Airbus was involved in 15 out of 28 projects under the second Framework Programme, receiving grants of around EUR 18.75 million. The amount of grants was estimated by the US through apportioning 15/28 of the total amount of funding made available to all entities under the Framework Programme to Airbus, reflecting its alleged participation in 15 of the 28 funded projects. In the fifth and sixth Framework Programme, Airbus received grants of EUR 509 million and EUR 450 million respectively. This amount was calculated by the US based on publicly available information. Information of the amount of grants that Airbus received in the third and fourth Framework Programmes was classified as business confidential information and therefore not available. Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1427, 7.1433, 7.1445, 7.1451.

²⁹ *Ibid*, para. 7.1415.

³⁰ *Ibid*, para. 2.5, para. 4.205.

lower than that available in the market.³¹ The US challenged twelve EIB loans to Airbus from 1998 to 2002.³²

4.2.1.4 Equity Infusions

Equity infusion was another way through which the EU member states supported the civil aircraft industry. The measures at issue mainly involved equity investment and company ownership share transfer in relation to Airbus companies. For instance, in 1989, the German government made an equity infusion into Deutsche Airbus by purchasing twenty percent share of the company for DM 505 million through the government development bank Kreditanstalt für Wiederaufbau (KfW).³³ In 1992, it transferred the share to Deutsche Airbus' parent company Messerschmitt-Bölkow-Blohm (MBB) without compensation.³⁴ The US claimed that this share transfer was in fact a grant to Airbus.³⁵ In addition, the US claimed that, during the restructuring of Deutsche Airbus, the German government accepted a payment of DM 1.75 billion from Deutsche Airbus in 1998, to settle the latter's outstanding debt owed to the government.³⁶ According to the US, the debt of Deutsche Airbus amounting to DM 7.7 billion was forgiven by the German government.³⁷

Besides the German government, the French government also made use of equity

³¹ Ibid, para. 7.885.

³² Ibid, para. 7.717.

³³ Deutsche Airbus was a wholly owned subsidiary of MBB, which was the largest aerospace company in Germany. As Deutsche Airbus was insufficiently capitalised by MBB, it relied largely on financial aid from the German government. The German government then implemented a plan to restructure Deutsche Airbus, with the aim to gradually shift the risks associated with the participation in Airbus consortium to the private sector. Ibid, para. 7.1246-7.1248.

³⁴ Ibid, para. 2.5.

³⁵ Ibid, para. 4.323.

³⁶ Ibid, para. 7.1304 - 7.1308.

³⁷ Ibid, para. 7.1309.

infusions to support the development of Airbus. According to the US, the French government made four equity infusions into the French Airbus company Aérospatiale from 1987 to 1994.³⁸ The French government also supported Airbus through equity share transfer. For instance, the French government in 1978 acquired a 45.76 percent equity interest in Dassault Aviation, a privately held aircraft manufacturing company,³⁹ and then transferred the equity share to Aérospatiale in 1998 in exchange for its new shares to be issued at a later date.⁴⁰ According to the US, the share transfer of about FF 5.28 billion was inconsistent with the usual investment practice of a private investor in France at that time.⁴¹

4.2.1.5 Infrastructure-related Measures

Good infrastructure is of great importance for the development of the civil aircraft industry. Civil aircraft manufactures pay much attention to local infrastructure when choosing the location of their assembly line or production site. The EU subsidisation for Airbus involved some infrastructure-related measures, including the provision of infrastructure and relevant facilities on the one hand, and infrastructure-related grants on the other hand.⁴² For instance, the government of Hamburg provided great support for Airbus through the development of the Mühlenberger Loch industrial site in Germany. When Airbus launched the A380 project, it decided to establish an assembly line and

³⁸ In 1987 and 1988, the French government made equity infusions of FF 1.25 billion into Aérospatiale each year respectively. In 1992, the French government further injected FF 1.4 billion into Aérospatiale through a state-controlled bank and FF 2 billion again in 1994. Ibid, para. 4.333 - 4.340.

³⁹ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 631.

⁴⁰ Chianale (n 13), at 313.

⁴¹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 2.5.

⁴² Ibid, para. 7.1010.

extend its existing facilities in the Mühlenberger Loch industrial site. However, as the site was surrounded by wetlands, there was no real potential for such expansion at first. The government of Hamburg then initiated a project to turn these wetlands into usable land. After the project was finished, the government transferred the ownership of the land and facilities to a government-owned entity, which then entered into a series of lease agreements with Airbus Germany for the land and facilities.

The government of Bremen in Germany also supported Airbus through extending the main runway at the Bremen airport from 1988 to 1989.⁴³ The runway was extended by 600 meters, and relevant facilities were also put in place.⁴⁴ Regular use of the runway was only permitted for the purpose of transporting Airbus wings.⁴⁵ This benefited Airbus in terms of its manufacture and transport of aircraft in that region. According to the US, the Bremen government spent DM 40 million in extending the runway and a further DM 10 million on relevant facilities.⁴⁶

The French government also took infrastructure measures to promote the civil aircraft industry. For instance, in 1999, the French government decided to develop the Aéroconstellation site which was dedicated to aeronautical activities.⁴⁷ The site was designated as a 'zone d'aménagement concertée' (ZAC) under French law, namely a zone in which 'a public authority buys, improves, and sells land for economic development'.⁴⁸ After the Aéroconstellation site was prepared, a government-established company sold nearly all the ZAC land to different companies involved in the aeronautic industry,

⁴³ Ibid, para. 7.1098.

⁴⁴ Ibid, para. 7.1100.

⁴⁵ Ibid, para. 7.1100.

⁴⁶ Ibid, para. 7.1101.

⁴⁷ Ibid, para. 7.1137.

⁴⁸ Ibid, para. 7.1137. ZACs of different sorts, for instance, for industrial, housing, and various tertiary services, exist throughout France, created under the same general legal provisions.

including Airbus France.⁴⁹ In addition to the provision of infrastructure and relevant facilities, European governments also provided infrastructure-related grants to Airbus. For instance, in 2000, the Welsh government provided two grants of GBP 4.9 million and GBP 14.6 million respectively to Airbus UK for its site in Broughton.⁵⁰ These grants were mainly used for building aircraft manufacturing and assembly facilities.

4.2.2 US Subsidies to the Civil Aircraft Industry

Unlike Airbus, aircraft manufacturers in the US did not grow up with direct government support. However, this did not mean that the US did not subsidise its aircraft manufacturers. In fact, aircraft manufacturers in the US benefited from subsidies provided by certain federal government agencies on the one hand, and those from certain US states and local authorities on the other. Among them, the R&D subsidies from the National Aeronautics and Space Administration (NASA) and the Department of Defence (DOD) were a primary form of US subsidisation to the civil aircraft industry.⁵¹ Other important aircraft subsidies in the US included tax incentives provided by certain US states and the Foreign Sales Corporations (FSC)/Extraterritorial Income Exclusion (ETI) Act subsidies.

4.2.2.1 NASA R&D Subsidies

⁴⁹ Ibid, para. 7.1139.

⁵⁰ Ibid, para. 7.1206-7.1212.

⁵¹ George Johnston, 'Subsidies to Airbus and Boeing: WTO Compatibility and the Way Forward' (2005) 6 Business Law International 293, at 309; See also Stephan Wittig, 'The WTO Panel Report on Boeing Subsidies: A Critical Assessment' (2011) 46 Intereconomics 148, at 148.

The National Aeronautics and Space Administration (NASA) is an independent organisation of the US government, in charge of aeronautics and aerospace research programmes.⁵² Various R&D programmes of NASA benefited the US aircraft companies in different ways. For instance, NASA conducted research in-house and then transferred the results of such research to US aircraft companies. It also contracted with aircraft companies and entrusted them with specific research tasks, usually in cooperation with in-house NASA researchers.⁵³ In addition, NASA also provided free consulting service for aircraft companies that encountered technical difficulties.⁵⁴ This largely benefited the development of new LCA models by the US civil aircraft manufacturers.

In *US - Aircraft*, the EU challenged eight NASA aeronautics R&D programmes, through which ‘payments’ and ‘free access to NASA facilities, equipment and employees’ were provided to Boeing.⁵⁵ The payment and free access were provided through two kinds of R&D contracts and agreements between NASA and Boeing. The first one was ‘procurement contracts’, under which NASA procured Boeing to conduct certain aeronautic R&D.⁵⁶ The other consisted of ‘Space Act agreements’, which were instruments available to NASA pursuant to its authority under the US National Aeronautics and Space Act of 1958 (Space Act).⁵⁷ It was estimated that the amount of NASA subsidies, in the form of payments and access to NASA facilities, equipment and employees, amounted to \$2.6 billion between 1989 and 2006.⁵⁸

⁵² NASA was created by the National Aeronautics and Space Act of 1958.

⁵³ Johnston (n 51), at 309.

⁵⁴ Congressional Office of Technology Assessment, *Competing Economies: America, Europe, and the Pacific Rim* (Diane Publishing 1991), at 73.

⁵⁵ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.944.

⁵⁶ According to relevant US laws, procurement contracts may only be used where the ‘principal purpose’ of the activity is the ‘acquisition of goods or services’ for the ‘direct benefit or use’ of the US Government. Ibid, para. 7.945.

⁵⁷ National Aeronautics and Space Act of 1958, 72 Stat. 426, Pub. L. No. 85-568, as amended. Ibid, para. 7.945.

⁵⁸ Ibid, para. 7.1109.

4.2.2.2 Department of Defence R&D Subsidies

Another major kind of US subsidies for the civil aircraft industry was the R&D subsidies from the Department of Defence (DOD). As discussed in chapter three, in order to achieve technological synergies between the military and civil aircraft sectors, the two sectors are usually to some extent connected.⁵⁹ The DOD arranged Boeing to participate in various DOD-funded dual-use aeronautics research programmes of the US Air Force, Navy, Army and the Defence Advanced Research Projects Agency. The results of such research programmes can be applied for both military and civil purposes.⁶⁰ The DOD then made payments to Boeing for such research programmes, or allowed Boeing to exploit the results of such research by granting Boeing exclusive or early access to government facilities.⁶¹

Similarly to NASA, the DOD entered into two kinds of contracts with Boeing for these R&D programmes.⁶² The first one was 'procurement contracts', of which the purpose was to acquire goods or services for the 'direct benefit or use' of the US government.⁶³ The second one was R&D 'assistance instruments' (including cooperative agreements, technology investment agreements and certain other transactions), of which the stated purpose was 'to transfer a thing of value to the recipient ... instead of acquiring property or services for the direct benefit or use of the United States government'.⁶⁴ The estimated financial benefit transferred through the DOD R&D programmes amounted to

⁵⁹ Eugene Rodgers, *Flying High: The Story of Boeing and the Rise of the Jetliner Industry* (Atlantic Monthly Press 1996).

⁶⁰ Johnston (n 51), at 313.

⁶¹ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1113.

⁶² Ibid, para. 7.1115; Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 603.

⁶³ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1115.

⁶⁴ Ibid, para. 7.1115.

around \$560 million per year.⁶⁵

4.2.2.3 State and Local Tax Incentives

Apart from the NASA and DOD subsidies, a number of US states and local authorities also subsidised the civil aircraft industry, mainly through tax measures benefiting civil aircraft manufacturers. For instance, the States of Washington, Kansas and Illinois, as well as some municipalities in these states, offered a variety of tax incentives to Boeing.⁶⁶ The Washington State tax incentives to Boeing were provided mainly in accordance with House Bill 2294 (HB 2294), entitled ‘An Act Related to Retaining and Attracting the Aerospace Industry to Washington State’, which was passed by the Washington State Legislature in 2003.⁶⁷ The Bill would only take effect if the governor and a commercial airplane manufacturer signed a memorandum of agreement regarding an affirmative final decision to site a significant commercial airplane final assembly facility in Washington State.⁶⁸ In other words, the HB 2294 tax incentives were contingent on Boeing locating the Boeing 787 final assembly facility in Washington.

The Bill took effect in 2003 when Boeing entered such a memorandum of agreement

⁶⁵ Philip K Lawrence, *Aerospace Strategic Trade: How the U.S. Subsidizes the Large Commercial Aircraft Industry* (Ashgate 2001), at 113.

⁶⁶ Johnston (n 51), at 315.

⁶⁷ House Bill 2294, 58th Washington Legislature, 2nd Special Session, 2003, available at <<http://app.leg.wa.gov/billinfo/summary.aspx?year=2003&bill=2294>> accessed 17 April 2015. See also Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.41.

⁶⁸ A ‘significant commercial airplane final assembly facility’ was defined in HB 2294 as ‘a location with the capacity to produce at least thirty-six super-efficient airplanes a year’. Further, a ‘superefficient airplane’ was defined at section 17 of HB 2294 as a ‘twin aisle airplane that carries between two hundred and three hundred fifty passengers, with a range of more than seven thousand two hundred nautical miles, a cruising speed of approximately mach .85, and that uses fifteen to twenty percent less fuel than other similar airplanes on the market’. Ibid, para. 7.43, para.7.44. Both the US and the EU agreed that the Boeing787 met the definition of ‘superefficient airplane’. Ibid, para. 7.1470.

with Washington State.⁶⁹ The Washington tax incentives under the HB 2294 contained several kinds of LCA-related tax breaks. The first one was the Business and Occupation tax (B&O tax) rate reduction. B&O tax was a tax on the gross receipts of all businesses operating in Washington State, such as manufacturing, wholesaling, retailing or provision of service, and was the main business tax in the State of Washington. The HB 2294 lowered the B&O tax rate for commercial aircraft manufacturing and wholesaling from 0.484 percent (or 0.471 percent in the case of retail sales) to 0.2904 percent until 2024.⁷⁰ In addition, the Washington tax incentives also provided various B&O tax credits for Boeing in terms of its expenditures on aeronautics-related research, design and engineering activities.⁷¹

Besides the B&O tax incentives, Washington State also provided other kinds of tax incentives, including: retail sales and use tax exemption for computer hardware, software and peripherals purchased or used for the development of commercial airplanes; sales tax exemption for construction services and equipment for the construction of new buildings used exclusively for the manufacturing of superefficient airplanes;⁷² and leasehold excise tax exemption and property tax exemption for superefficient airplane manufacturers if they lease newly built port district facilities exclusively for the production of superefficient airplanes.⁷³ Due to the economic magnitude of the industry, aircraft manufacturers were subject to a large amount of tax. Therefore, the tax measures largely benefited the development of the US civil aircraft industry. It was estimated that the value of the

⁶⁹ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.43.

⁷⁰ *Ibid.*, para. 7.48.

⁷¹ Section 7, Section 8 of the HB 2294. *Ibid.*, para. 7.50-7.53.

⁷² Section 9 and Section 10 of the HB 2294. *Ibid.*, para. 7.61, 7.62.

⁷³ Section 13, Section 14 of the HB 2294. *Ibid.*, para. 7.64, 7.67.

Washington State B&O tax incentives for Boeing amounted to around \$3.2 billion over a twenty-year period.⁷⁴

4.2.2.4 FSC/ETI and Successor Act Subsidies

Foreign Sales Corporations (FSC)/Extraterritorial Income Exclusion (ETI) subsidies were federal corporate tax breaks under the FSC/ETI and successor acts. Foreign Sales Corporations were foreign subsidiaries of US companies in charge of the sale or lease of goods produced in the US for export outside the US.⁷⁵ Under the US Internal Revenue Code, a part of export-related foreign-source income of FSC was exempted from US income tax,⁷⁶ as such income was deemed to be not effectively connected with a trade or business in the US.⁷⁷ In addition to the foreign trade income tax exemption, parent companies of FSC were allowed to defer paying taxes on certain foreign trade income that would normally be subject to immediate taxation. They were also exempted from taxes on dividends resulting from the foreign trade income of FSC.⁷⁸ Boeing was one of the main beneficiaries of tax exemptions under the FSC regime.⁷⁹

Before the Airbus-Boeing cases, the EU had challenged these FSC tax exemptions in the WTO. In *US - Tax Treatment for 'Foreign Sales Corporations' (US - FSC)*, the panel and the Appellate Body found that these subsidies were contingent on export performance

⁷⁴ David Pritchard and Alan MacPherson, 'Industrial Subsidies and the Politics of World Trade: The Case of the Boeing 787' (2004) 1 *Industrial Geographer* 57, at 66.

⁷⁵ Johnston (n 51), at 317.

⁷⁶ Internal Revenue Code of 1986, 26 U.S.C. §§ 921- 927, 941-943. See also *ibid*, at 317.

⁷⁷ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1379.

⁷⁸ *Ibid*, para. 3.1379.

⁷⁹ Johnston (n 51), at 318.

and thus constituted prohibited export subsidies under the SCM Agreement.⁸⁰ For the purpose of implementing the DSB recommendations, the US enacted the ETI Act to repeal the FSC legislation and bring the FSC measures into conformity with the SCM Agreement.⁸¹ However, the ETI Act set forth certain transition and grandfather provisions, according to which transactions before 30 September 2000 were not subject to the ETI Act.⁸² Moreover, the ETI Act introduced the exclusion of 'extraterritorial income' from US income tax. 'Extraterritorial income' was defined as the gross income attributable to gross receipts generated from certain qualifying transactions involving the sale or lease of qualifying foreign trade property for use outside the US.⁸³ As a result, the ETI Act was also found inconsistent with the SCM Agreement.⁸⁴ The US then enacted the American Jobs Creation Act of 2004 (AJCA), which repealed the FSC/ETI subsidies as of 1 January 2015.⁸⁵ However, the AJCA again contained some transitional rules, which kept FSC/ETI subsidies available for a transitional period until the end of 2006.⁸⁶ In addition, the AJCA also indefinitely grandfathered the ETI scheme for certain transactions.⁸⁷ The panel and the Appellate Body in *US - FSC (Article 21.5 - EC II)* again found that the AJCA failed to bring the measures at issue to conformity with the SCM Agreement.⁸⁸ After that, the US enacted another new act entitled the Tax Increase Prevention and Reconciliation Act of

⁸⁰ Panel Report, *US - FSC*, WT/DS108/R, para. 8.1(a); Appellate Body Report, *US - FSC*, WT/DS108/AB/R, paras. 177(a) and 178.

⁸¹ FSC Repeal and Extraterritorial Income Exclusion Act of 2000, 114 Stat. 2423, Pub. L. No. 106-519, 15 November 2000. The implementation and compliance process in *US - FSC* was partly summarised by Johnston (n 51), at 317-318.

⁸² Panel Report, *US - FSC*, WT/DS108/R, para. 8.1(a); Appellate Body Report, *US - FSC*, paras. 177(a), 178.

⁸³ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1382.

⁸⁴ The US also acted inconsistently with the Agreement on Agriculture and the GATT 1994. Panel Report, *US - FSC (Article 21.5 - EC)*, WT/DS108/RW, paras. 9.1(a), 9.1(b), 9.1(e); Appellate Body Report, *US - FSC (Article 21.5 - EC)*, WT/DS108/AB/RW, paras. 256(b), 256(f), 257.

⁸⁵ American Jobs Creation Act of 2004, 118 Stat. 1418, Pub. L. No. 108-357, 22 October 2004. See also Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1384.

⁸⁶ Johnston (n 51), at 318.

⁸⁷ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1384.

⁸⁸ Panel Report, *US - FSC (Article 21.5 - EC II)*, WT/DS108/RW2, para. 8.1; Appellate Body Report, *US - FSC (Article 21.5 - EC II)*, WT/DS108/AB/RW2, para. 100(b).

2005 (TIPRA) in 2006, in order to implement the DSB rulings and recommendations.⁸⁹

The TIPRA repealed the grandfather provisions in the ETI Act and the AJCA that allowed for the continuation of certain tax benefits, and did not contain any transitional or grandfather provisions.⁹⁰ In this way, the US and the EU agreed a mutually acceptable solution in terms of the implementation of the DSB rulings in this case. In *US - Aircraft*, the EU claimed that the FSC/ETI subsidies continued to be available to Boeing.⁹¹ According to the EU, as one of the main recipients, Boeing received FSC/ETI subsidies amounting to about \$2.199 billion from 1989 to 2006 through the FSC/ETI measures.⁹²

4.2.3 Comparison of the EU and US Aircraft Subsidies

In view of the foregoing, it is obvious that both the EU and the US made great efforts to support their own civil aircraft industries. Significant amount of government funding and other resources have been invested in promoting the industry in both sides. Moreover, aircraft subsidies were granted from the union or federal level, on the one hand; and also the local level, on the other hand, on both the European and American sides.

Although the EU and the US both subsidised the civil aircraft industry, there were some differences in the subsidisation between the two sides. First, the EU subsidies were more direct compared with those of the US.⁹³ Most subsidies to Airbus were in direct

⁸⁹ Tax Increase Prevention and Reconciliation Act of 2005, 120 Stat. 346, Pub. L. No. 109-222, 17 May 2006. See also Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1385.

⁹⁰ *Ibid.*, para. 7.1385.

⁹¹ *Ibid.*, para. 7.1441.

⁹² *Ibid.*, para. 7.1418.

⁹³ Michael J Levick, 'The Production of Civil Aircraft: A Compromise of Two World Giants' (1993) 21 *Transportation Law Journal* 433, at 438.

forms, such as grants, preferential loans and R&D funding.⁹⁴ This was in part due to the different market philosophies of the EU and the US, as well as their different traditional attitudes towards government subsidies.⁹⁵

On the one hand, European countries have traditionally considered government subsidies as a key instrument for their industrial policies.⁹⁶ This European attitude towards subsidies and government involvement was partly a result of Europe's recovery from the Second World War, when massive government support was required to rebuild Europe's torn economy.⁹⁷ Limits on domestic subsidies were considered as interference with the responsibilities and rights of national governments.⁹⁸ In the mid-1980s, the total EU government aid for industries amounted to 4 percent of its whole industrial output.⁹⁹ As the primary recipients of such subsidies, manufacturing sectors received around 41 percent of government subsidisation, which was about eight times of the amount of US subsidisation to manufacturing sectors.¹⁰⁰

On the other hand, there was a quite different market philosophy in the US, where government interference in the market was traditionally regarded as suspicious.¹⁰¹ Government subsidisation was considered an intrusion on free market principles. The US policy was guided by a general market philosophy presuming that subsidies distort resource allocations, influence international trade flows and flout the law of comparative

⁹⁴ Ibid, at 438.

⁹⁵ Ibid, at 438.

⁹⁶ Shane Spradlin, 'Aircraft Subsidies Dispute in the GATT's Uruguay Round' (1995) 60 *Journal of Air Law and Commerce* 1191, at 1197.

⁹⁷ Ibid, at 1197. See also Nils Meier-Kaienburg, 'WTO's Toughest Case: An Examination of the Effectiveness of the WTO Dispute Resolution Procedure in the Airbus-Boeing Dispute over Aircraft Subsidies' (2006) 71 *Journal of Air Law and Commerce* 191, at 196.

⁹⁸ Meier-Kaienburg (n 97), at 196.

⁹⁹ Levick (n 93), at 438.

¹⁰⁰ Ibid, at 438.

¹⁰¹ Meier-Kaienburg (n 97).

advantage.¹⁰² Thus, unlike the way in which the EU subsidised Airbus, the US government did not subsidise Boeing directly.¹⁰³ Boeing was a privately established and financed company from the outset,¹⁰⁴ and was once nearly bankrupted as a result of the large costs and risks for developing the Boeing 747.¹⁰⁵

The foregoing difference between the market philosophies of the EU and the US increased the complexity of the subsidy problem in the civil aircraft industry.¹⁰⁶ While realising such difference, it should be noted that the US and the EU both subsidised their own civil aircraft industries greatly. The recognition of a free market philosophy did not mean that the US aircraft manufacturers were free from government subsidisation. As revealed above, the US also subsidised the industry, although mainly through indirect ways.

4.3 Financial Contribution of Subsidies in the Civil Aircraft Industry

Having introduced the main subsidy measures of the EU and the US, this chapter will then discuss the main legal issues surrounding the use of subsidies in the civil aircraft industry, including the definition of subsidy, specificity, adverse effects, and the determination of export subsidies.

In *EC - Aircraft*, the panel first addressed an important preliminary issue, namely the temporal scope of the SCM Agreement. In this regard, the EU argued that, in accordance

¹⁰² Spradlin (n 96), at 1197; Meier-Kaienburg (n 97), at 196.

¹⁰³ Daniel I Fisher, 'Super Jumbo Problem: Boeing, Airbus, and the Battle for the Geopolitical Future' (2002) 35 *Vanderbilt Journal of Transnational Law* 865, at 872.

¹⁰⁴ Rodgers (n 59).

¹⁰⁵ Matthew Brelis, 'Airbus Stakes Its Future on a 555-Seat Jumbo Jet' *The Boston Globe* (20 December 2000).

¹⁰⁶ Spradlin (n 96), at 1199; Meier-Kaienburg (n 97), at 196.

with the general principle set out in Article 28 of the Vienna Convention on the Law of Treaties (VCLT) that treaty provisions do not apply retroactively, Article 5 of the SCM Agreement, which are concerned with the identification of adverse effects of subsidies, only applied to subsidies granted after 1 January 1995 - the effective date of the SCM Agreement.¹⁰⁷ Therefore, the EU subsidies granted before this date fell outside the temporal scope of the SCM Agreement. According to the EU, the Tokyo Round Subsidies Code was still applicable to the WTO Airbus-Boeing disputes.¹⁰⁸ Subsidies granted before 1995 should be assessed in the light of the Tokyo Round Subsidies Code, rather than the SCM Agreement.¹⁰⁹

However, the panel did not agree with the EU. It explained that the obligation under Article 5 of the SCM Agreement was an obligation not to cause adverse effects through the use of subsidies, rather than an obligation not to engage in certain conduct. According to the panel, the non-retroactivity principle in Article 28 of the VCLT distinguished between discrete 'acts' and 'facts' on the one hand, and 'situations' on the other hand. The ordinary meaning of 'situation' was 'a set of circumstances; a state of affairs',¹¹⁰ which suggested 'something that subsists and continues over time'.¹¹¹ For the purpose of applying the non-retroactivity principle, the panel characterised Article 5 of the SCM Agreement as addressing a 'situation', namely 'causing adverse effects through the use of subsidies', rather than an 'act'.¹¹² Therefore, Article 5 of the SCM Agreement was applicable to any

¹⁰⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.19. Article 28 of the Vienna Convention on the Law of Treaties provides that '[u]nless a different intention appears from the treaty or is otherwise established, its provisions do not bind a party in relation to any act or fact which took place or any situation which ceased to exist before the date of the entry into force of the treaty with respect to that party'.

¹⁰⁸ Ibid, para. 4.5.

¹⁰⁹ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 687.

¹¹⁰ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.45.

¹¹¹ Appellate Body Report, *Canada - Patent Term*, WT/DS170/AB/R, para. 72.

¹¹² Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.52.

such ‘situation’ which existed as of 1 January 1995, even if the situation arose as a result of the granting of a subsidy prior to that date.¹¹³ The panel hence rejected the argument of the EU and concluded that the subsidies granted before 1995 also fell within the temporal scope of the SCM Agreement.¹¹⁴

The Appellate Body agreed with the panel and emphasised that it was ‘the causing through the use of any subsidy of adverse effects to the interests of other members’ that was the subject of Article 5 of the SCM Agreement.¹¹⁵ The relevant question for determining the temporal scope of this Article was whether the causing of adverse effects had ‘ceased to exist’ or continued as a ‘situation’.¹¹⁶ Although the act of granting a subsidy may have been completed before 1995, the situation of causing adverse effects may continue. Therefore, assessing the ‘causing through the use of any subsidy of adverse effects’ did not result in a retroactive application of Article 5. The Appellate Body thus concluded that not all subsidies granted before 1995 were precluded from the temporal scope of the proceedings under the terms of the SCM Agreement.¹¹⁷ It also rejected the EU agreement that subsidies granted before 1995 should be assessed in the light of the Tokyo Round Subsidies Code.¹¹⁸

4.3.1 (Potential) Direct Transfer of Funds

¹¹³ Ibid, para. 7.64.

¹¹⁴ As the US made no export subsidies claims under Article 3 with regard to subsidies granted prior to 1 January 1995, so the question of temporal scope was mainly concerned with Article 5 of the SCM Agreement regarding actionable subsidies. Ibid, para. 4.35, para. 7.16-7.18.

¹¹⁵ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 686.

¹¹⁶ Ibid, para. 686.

¹¹⁷ Ibid, para. 686.

¹¹⁸ Ibid, para. 689.

The first substantive legal issue in the Airbus-Boeing subsidy disputes was whether the government measures at issue constituted subsidies within the meaning of the SCM Agreement. As discussed in chapter two of this thesis, only government actions falling within the subsidy definition of the SCM Agreement are subject to its regulation. Therefore, how the adjudicating bodies in the Airbus-Boeing disputes identified subsidies was a key issue for the regulation of subsidies in the civil aircraft industry.

To be a subsidy under the SCM Agreement, a government support measure has to make a 'financial contribution'. The first type of financial contribution refers to direct and potential direct transfer of funds. The examples of direct transfer of funds listed in the SCM Agreement include grants, loans and equity infusion. If a government promises to transfer funds when certain conditions are met, the transfer is considered 'potential', which also constitutes a financial contribution.¹¹⁹ The example of potential direct transfers of funds or liabilities listed in the SCM Agreement is loan guarantees.

In WTO case-law, the scope of this type of financial contribution has been interpreted broadly. The Appellate Body has explained that the term 'funds' refers not only to 'money', but also financial resources and other financial claims more generally.¹²⁰ A 'direct transfer of funds' captures all 'conduct on the part of the government by which money, financial resources, and/or financial claims are made available to a recipient'.¹²¹ Therefore, transactions similar to the listed examples mentioned above are equally covered.¹²² For instance, debt forgiveness, extensions of a loan maturity, interest rate reductions,

¹¹⁹ Simon Lester and Bryan Mercurio, *WTO Trade Law: Text, Materials and Commentary* (Hart Publishing 2008), at 424.

¹²⁰ Appellate Body Report, *Japan - DRAMs (Korea)*, WT/DS336/AB/R, para. 250.

¹²¹ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 614.

¹²² Appellate Body Report, *Japan - DRAMs (Korea)*, WT/DS336/AB/R, para. 251-252.

debt-to-equity swaps are also accepted as direct transfer of funds.¹²³

In the Airbus-Boeing disputes, many government measures were concerned with this type of financial contribution, such as the US NASA and DOD R&D funding, the EU Launch Aid measures, the EIB loans, equity infusions and most of the R&TD funding. In *EC - Aircraft*, the panel confirmed that the term ‘funds’ encompasses not only ‘money’ but also financial resources and other financial claims. When considering whether the above-mentioned transfer by the German government of its shares in Deutsche Airbus to MBB was a financial contribution, the panel considered shares in a company as financial claims to a stream of income (in the form of dividends paid out of a company’s profits), and to a share in the capital of the company on its liquidation. The panel thus concluded that shares in a company fell within the meaning of the term ‘funds’, and a share transfer constituted a ‘direct transfer of funds’ under Article 1.1(a)(1)(i).¹²⁴ The transfer by the German government of its equity interest in Deutsche Airbus to MBB was thus a financial contribution under the SCM Agreement.¹²⁵

As regards the above-mentioned debt settlement between the German government and Deutsche Airbus, the panel considered a debt owed to a government as an asset held by the government, consisting of certain financial claims (namely rights to payment of money or equivalents) that the government had against a debtor. A settlement of government-held debt essentially involved the transfer of these financial claims to the debtor. This would then result in the cancellation of the debt. Therefore, the panel concluded that a relinquishment of a government-held debt constituted a direct transfer of funds by a

¹²³ Dominic Coppens, *WTO Disciplines on Subsidies and Countervailing Measures: Balancing Policy Space and Legal Constraints* (Cambridge University Press 2014), at 41.

¹²⁴ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1291.

¹²⁵ *Ibid.*, para. 7.1291.

government, thus constituting financial contribution under the SCM Agreement.¹²⁶

In terms of potential direct transfer of funds, it was disputed whether the R&TD funding under the German LuFo III programme could be characterised as a financial contribution in this form. The EU argued that the R&TD funding at issue could not constitute financial contribution, as the funding had only been committed and had not been disbursed.¹²⁷ However, the panel disagreed. It explained that the difference between ‘direct transfer of funds’ and ‘potential direct transfer of funds’ was the word ‘potential’. ‘Potential’ literally means ‘possible as opposed to actual, capable of coming into being or action; latent’.¹²⁸ The example of ‘potential direct transfer of funds or liabilities’ in the SCM Agreement, namely ‘loan guarantees’, was instructive for understanding the meaning of ‘potential direct transfer of funds or liabilities’.¹²⁹ According to the panel, a loan guarantee meant that there was a legally binding promise for the guarantor to repay the outstanding balance of a loan when the loan recipient defaulted on its repayments.¹³⁰ This was a possibility ‘due to uncertainty about whether the triggering event will occur’ (for example, non-repayment because of a covered risk), rather than ‘uncertainty about whether the transfer of funds will follow once the predefined event has transpired’.¹³¹ It was the promise to repay an outstanding loan in the event of default that was the financial contribution (potential direct transfer of funds), not the funds that may be transferred in the future in the event of default.¹³² Therefore, a financial contribution existed regardless of whether these funds had to be paid in the end, or whether the potential transfer effectively

¹²⁶ Ibid, para. 7.1318.

¹²⁷ Ibid, para. 7.1495.

¹²⁸ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.164.

¹²⁹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.733.

¹³⁰ Ibid, para. 7.733.

¹³¹ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.164. See also Dominic Coppens (n 123), at 42.

¹³² Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.302.

materialised.¹³³ A commitment to disburse the funds could thus be properly characterised as a potential direct transfer of funds within the meaning of the SCM Agreement.¹³⁴ The panel thus concluded that the R&TD funding which were committed but had not been disbursed constituted financial contribution in the form of potential direct transfer of funds.¹³⁵

4.3.2 Foregoing of Government Revenue which is Otherwise Due

The second type of financial contribution is the foregoing of government revenue that is otherwise due, for which the example listed in the SCM Agreement is ‘fiscal incentives such as tax credits’.¹³⁶ The term ‘forego’ suggests that a government has given up an entitlement to raise revenue that it would otherwise have raised.¹³⁷ Compared with other kinds of financial contribution through positive actions (direct transfer of funds or government provision of goods or services), foregoing of government revenue otherwise due is more of a negative action.¹³⁸ It was added in the SCM Agreement because tax regimes may produce outcomes equivalent to positive payments by governments.¹³⁹ However, financial contribution in this form would not arise merely because a government does not raise revenue that it could have raised.¹⁴⁰ As explained by the Appellate Body in *US - FSC*:

¹³³ Panel Report, *EC - Countervailing Measures on DRAM Chips*, WT/DS299/R para. 7.87. See also Dominic Coppens (n 123). 41.

¹³⁴ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1495.

¹³⁵ *Ibid*, para. 7.1495.

¹³⁶ Article 1.1(a)(1)(ii) of the SCM Agreement.

¹³⁷ Dominic Coppens (n 123), at 46.

¹³⁸ *Ibid*, at 45.

¹³⁹ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 811.

¹⁴⁰ Appellate Body Report, *US - FSC (Article 21.5 - EC)*, WT/DS108/AB/RW, para. 88.

[a] Member, in principle, has the sovereign authority to tax any particular categories of revenue it wishes. It is also free not to tax any particular categories of revenues. But, in both instances, the Member must respect its WTO obligations. What is 'otherwise due', therefore, depends on the rules of taxation that each member, by its own choice, establishes for itself.¹⁴¹

In *US - Aircraft*, the HB 2294 tax measures of Washington State were concerned with this type of financial contribution. The panel applied a 'but for' test to determine whether there would have been a higher tax liability for Boeing in the absence of the tax measures at issue. The panel first recalled the Appellate Body's explanation in previous cases that, if a measure at issue was an 'exception' to the 'general rule of taxation', it may be possible to apply a 'but for' test in determining whether there was foregoing of government revenue that was otherwise due.¹⁴² The panel then found that there was a general B&O tax rate for manufacturing, wholesaling and retail sales in Washington State. The tax reduction provided for aircraft manufacturing activities constituted an exception or preferential rate to the general B&O taxation rule.¹⁴³ The panel concluded that, but for the challenged tax measures, a higher B&O tax rate would otherwise apply to commercial aircraft manufacturing and wholesaling in Washington State. Therefore, the Washington State B&O tax incentives constituted foregoing of revenue otherwise due, thus financial contribution

¹⁴¹ Appellate Body Report, *US - FSC*, WT/DS108/AB/R, para. 90.

¹⁴² Ibid, para. 91.

¹⁴³ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.121, para. 7.132.

within the meaning of the SCM Agreement.¹⁴⁴

The Appellate Body elaborated on its own method of determining whether WTO members forego revenue otherwise due. It first pointed out that, as a panel was not always required to identify the ‘general’ rule of taxation of a member, the ‘but for’ test adopted by the panel might not always be appropriate and could be under-inclusive. In addition, this method may result in the problem of circumvention, as it would ‘not be difficult to circumvent such a test by designing a tax regime under which there would be no general rule that applied formally to the revenues in question, absent the contested measure’.¹⁴⁵ Hence, the Appellate Body had ‘abiding reservations’ in terms of applying the ‘but for’ standard.¹⁴⁶

According to the Appellate Body, the determination of foregoing revenue otherwise due ‘requires a comparison between the tax treatment that applies to the alleged subsidy recipients and the tax treatment of comparable income of comparably situated taxpayers’.¹⁴⁷ Specifically, this involved a three-step analysis.¹⁴⁸ The first step was to identify the tax treatment applying to the income of the alleged recipients. A panel should take into account the ‘objective reasons’ behind that treatment, and assess the reasons of any change of a member’s taxation rules if the treatment involves such a change.¹⁴⁹ Secondly, a benchmark tax treatment, namely the tax treatment of ‘comparable income of comparably situated taxpayers’, should be identified for the comparison. According to the

¹⁴⁴ Ibid, para. 7.133.

¹⁴⁵ Appellate Body Report, *US - FSC*, WT/DS108/AB/R, para. 91.

¹⁴⁶ Ibid, para. 91. See also Dominic Coppens (n 123), at 48.

¹⁴⁷ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 812.

¹⁴⁸ Ibid, para. 812-815.

¹⁴⁹ Ibid, para. 812.

Appellate Body, there must be ‘some defined, normative benchmark’ for the comparison.¹⁵⁰

The structure of the domestic tax regime of a member and its organising principles should be examined.¹⁵¹ This benchmark must be found in ‘rules of taxation that each Member, by its own choice, establishes for itself’.¹⁵² In the final step, the reasons for the challenged tax treatment are compared with the identified benchmark tax treatment.¹⁵³ This comparison would eventually enable the panel to determine whether a government forewent revenue otherwise due in relation to the income of the alleged recipients.¹⁵⁴

Although the Appellate Body preferred the approach described above, it considered that the panel’s ‘but for’ test was appropriate in this case. According to the Appellate Body, the panel properly selected the general B&O tax rate for manufacturing (0.484%), wholesaling (0.484%), and retailing (0.471%) in Washington State as the benchmark.¹⁵⁵ The panel also properly concluded that a comparison of these general tax rates to the tax rate of 0.2904% applying to commercial aircraft manufacturing indicated the foregoing of government revenue that was otherwise due.¹⁵⁶ Therefore, the Appellate Body upheld the panel’s findings that the HB 2294 B&O tax incentives to commercial aircraft manufacturers in Washington State constituted financial contribution within the meaning of the SCM Agreement.¹⁵⁷

4.3.3 Government Provision of Goods or Services other than General Infrastructure or

¹⁵⁰ Appellate Body Report, *US - FSC*, WT/DS108/AB/R, para. 90.

¹⁵¹ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 813.

¹⁵² Appellate Body Report, *US - FSC*, WT/DS108/AB/R, para. 90; Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 813.

¹⁵³ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 814.

¹⁵⁴ *Ibid.*, para. 814.

¹⁵⁵ *Ibid.*, para. 825.

¹⁵⁶ *Ibid.*, para. 825.

¹⁵⁷ *Ibid.*, para. 831.

Purchase of Goods

The third type of financial contribution (Article 1.1(a)(1)(iii) of the SCM Agreement) refers to government provision of goods or services (other than general infrastructure), and government purchase of goods. This means that financial contribution can be provided not only through money-transferring measures, but also by measures involving in-kind goods or services.¹⁵⁸ Provision of goods or services by government could artificially lower the production costs of the concerned enterprises through inputs with financial value; while purchase of goods by government could artificially increase the revenue resulting from selling the goods by the concerned enterprises.¹⁵⁹ However, government provision of ‘general infrastructure’ is explicitly excluded from this type of financial contribution.¹⁶⁰

The terms ‘goods’ and ‘provisions’ have been interpreted rather broadly in WTO case-law. The Appellate Body has explained that, ‘goods’ include ‘property or possessions’, and also immovable property.¹⁶¹ Goods or services are deemed to be ‘provided’ by government not only when they are directly supplied or given. It is also the case if an intangible right having the effect of making these goods or services available to the recipient is offered by government.¹⁶²

In the disputes over the civil aircraft industry, government infrastructure measures were usually concerned with this type of financial contribution. As government provision of ‘general infrastructure’ was not deemed as a financial contribution, a contentious issue

¹⁵⁸ Panel Report, *US - Softwood Lumber III*, WT/DS236, para. 7.24.

¹⁵⁹ Panel Report, *US - Softwood Lumber IV*, WT/DS257/R, para. 53.

¹⁶⁰ Article 1.1(a)(1)(iii) of the SCM Agreement.

¹⁶¹ Appellate Body Report, *US - Softwood Lumber IV*, WT/DS257/AB/R, para. 58-67.

¹⁶² *Ibid.*, para. 68-75.

in the Airbus-Boeing disputes was whether the infrastructure measures at issue could be characterised as ‘general infrastructure’. In *EC - Aircraft*, the EU asserted that the reclamation of land in the Mühlenberger Loch industrial site was a typical public task. The reclaimed land in that industrial site was an asset for the city, whether used by Airbus or other companies. Upon the expiry or termination of the lease agreement between Airbus and Hamburg, the land would be open for public use or rent to another industrial investor.¹⁶³ Therefore, the EU claimed that the measure at issue constituted a provision of general infrastructure, and thus was not a financial contribution within the meaning of the SCM Agreement.¹⁶⁴

According to the panel, the ordinary meaning of ‘infrastructure’ referred to ‘installations and services (power stations, sewers, roads, housing and so on) regarded as the economic foundation of a country’; while ‘general infrastructure’ referred to infrastructure that was not provided to or for the advantage of only one or limited number of certain entities.¹⁶⁵ Infrastructure was only excluded from the scope of financial contribution if it was ‘general’ in nature, and thus ‘available to all or nearly all entities’.¹⁶⁶ The panel further explained that no infrastructure was inherently general, and it was necessary to analyse this question on a case-by-case basis. The analysis must determine the existence of *de jure* or *de facto* limitations on access to or use of the infrastructure. Other factors that could ‘demonstrate the infrastructure was or was not provided to or for the use of only a single entity or a limited group of entities’ were also relevant.¹⁶⁷ These factors

¹⁶³ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1061.

¹⁶⁴ *Ibid.*, para. 7.1061.

¹⁶⁵ *Ibid.*, para. 7.1036.

¹⁶⁶ *Ibid.*, para. 7.1036.

¹⁶⁷ *Ibid.*, para. 7.1073.

included, for instance, purpose of creating the infrastructure, nature and type of the infrastructure, and the legal regime applicable to the infrastructure.¹⁶⁸ However, the question of whether the infrastructure served a public objective was not relevant in this regard.¹⁶⁹

On the basis of the foregoing, the panel found that the reclamation of land in the Mühlenberger Loch industrial site was specifically undertaken to enable Airbus to expand its existing facilities. The expansion would not have been possible without the reclamation. There was no evidence suggesting that any of the reclamation projects would have been undertaken, if it was not for accommodating the assembly facilities of the Airbus A380 at this site.¹⁷⁰ As a result, the panel found that the measure at issue was not a provision of ‘general infrastructure’. The measure constituted a financial contribution in the form of provision of goods or services under the SCM Agreement.¹⁷¹

As regards the runway extension at the Bremen airport, the panel also rejected the EU argument that the measure was for public interest and thus constituted provision of ‘general infrastructure’.¹⁷² According to the panel, public authorities could always have public policy reasons when expending public funds. The question of whether the infrastructure served a public objective was not particularly relevant for the determination of ‘general infrastructure’.¹⁷³ A public interest or a public purpose of a measure was not sufficient to justify the measure as general infrastructure.¹⁷⁴ Based on the evidence

¹⁶⁸ Ibid, para. 7.1073.

¹⁶⁹ Ibid, para. 7.1038, 7.1081, 7.1117.

¹⁷⁰ Ibid, para. 7.1080.

¹⁷¹ Ibid, para. 7.1084.

¹⁷² According to the EU, the runway extension could ensure the operations of Airbus’ Bremen facility and secure the associated 500 jobs. Ibid, para. 7.1117.

¹⁷³ Ibid, para. 7.1117.

¹⁷⁴ Ibid, para. 7.1117.

showing that the runway extension was specifically undertaken to meet the needs of Airbus, and the use of the extended runway was in fact limited to Airbus, the panel concluded that the measure was not general, and constituted financial contribution under the SCM Agreement. Similarly, the panel found that the infrastructure measures concerning the ZAC Aéroconstellation site were not provision of general infrastructure, and constituted financial contribution.¹⁷⁵ The Appellate Body generally agreed with the reasoning of the panel, although it clarified that what constituted the financial contribution was what the government provided, rather than what the government created.¹⁷⁶

In *US - Aircraft*, the NASA and DOD R&D support measures were also relevant to this type of financial contribution. The contentious point concerning these measures was whether they should be characterised as ‘purchase of services’ by government.¹⁷⁷ As mentioned above, ‘purchase of goods’ was explicitly listed in this Article as a kind of financial contribution. However, the text of Article 1.1(a)(1)(iii) did not refer to ‘purchase of services’.¹⁷⁸ The US thus contended that ‘purchase of services’ was not a financial contribution in the SCM Agreement. After characterising the NASA and DOD R&D programmes as ‘purchase of services’, the US claimed that these measures did not constitute financial contribution.¹⁷⁹

¹⁷⁵ Ibid, para. 7.1177.

¹⁷⁶ The Appellate Body thus modified the panel’s characterisation of the infrastructure measures that constituted financial contribution. According to the Appellate Body, the financial contribution at issue was the lease of land and facilities at the Mühlenberger Loch industrial site to Airbus, the right to the exclusive use of the extended Bremen airport runway to Airbus, the sale of land and the lease of facilities at the ZAC Aéroconstellation site to Airbus, rather than the creation of these infrastructure or facilities by government. However, the circumstances of the creation of the infrastructure or facilities may be relevant to a proper characterisation of what was provided. Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 965, 967. See also Chianale (n 13), at 310.

¹⁷⁷ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.977.

¹⁷⁸ Damien Neven and Alan Sykes, ‘United States - Measures Affecting Trade in Large Civil Aircraft (Second Complaint): Some Comments’ (2014) 13 World Trade Review 281, at 284. ‘Purchase of services’ was not included in this article was probably because the SCM Agreement drafters (incorrectly) considered that purchase of services would only affect trade in services and thus should be disciplined under the GATS. See Dominic Coppens (n 123), at 44.

¹⁷⁹ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.975.

The panel in *US - Aircraft* took a two-step approach in dealing with this issue. It first analysed whether ‘purchase of services’ was excluded from the scope of financial contribution under Article 1.1(a)(1). This was the first time that a dispute settlement panel was confronted with this question.¹⁸⁰ Through examining the ordinary meaning of the term, the context, the objective and purpose of the SCM Agreement and its drafting history, the panel concluded that any measure properly characterised as ‘purchase of services’ was excluded from the scope of Article 1.1(a)(1).¹⁸¹

In the second step, the panel proceeded to determine whether the NASA and DOD R&D contracts can be categorised as purchases of services by government. According to the panel, the answer to this question depended on whether the R&D work that Boeing conducted was principally for its own benefit and use, or for the benefit and use of the US government (or third parties).¹⁸² The transactions would be characterised as purchases of services if they were for the benefit and use of the government. If they were for Boeing’s own benefit and use, they would not be purchases of services.¹⁸³ Through examining relevant legislation, the allocation of intellectual property rights and other relevant factors, the panel decided that the R&D work that Boeing conducted under the NASA and DOD R&D programmes was principally for its own benefit.¹⁸⁴ Hence, the transactions under these programmes could not be characterised as ‘purchases of services’, even though these transactions took the form of government procuring services.¹⁸⁵ As these transactions were

¹⁸⁰ Ibid, para. 7.953.

¹⁸¹ Ibid, para. 7.970. See also Dominic Coppens (n 123), at 44.

¹⁸² Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.978.

¹⁸³ Ibid, para. 7.1027.

¹⁸⁴ The panel found that the R&D work Boeing conducted under its aeronautics R&D ‘procurement contracts’ with DOD was principally for the benefit and use of DOD, and therefore could be properly characterized as a ‘purchase of services’. The panel then found that the payments and access to facilities provided to Boeing under these DOD contracts were not financial contributions within the meaning of the SCM Agreement. Ibid, para. 7.1027, para. 7.1171.

¹⁸⁵ Ibid, para. 7.1027, para. 7.1171.

not ‘purchases of services’ and thus were not excluded from the scope of Article 1.1(a)(1), the panel went on to find that the payments to Boeing under the NASA and DOD R&D programmes constituted direct transfer of funds, and the access to the facilities and equipment constituted provision of goods or services.¹⁸⁶

In the appellate review, however, the Appellate Body bypassed the question whether ‘purchases of services’ were within the scope of the SCM Agreement. According to the Appellate Body, this interpretative issue was not relevant for purposes of determining whether the NASA and DOD measures constituted financial contributions within the meaning of the SCM Agreement.¹⁸⁷

In its own analysis, the Appellate Body explained that the inclusion of specific examples of financial contribution in Article 1 of the SCM Agreement provided an indication of the types of transactions intended to be financial contributions. If government measures at issue did not match the examples listed in Article 1, it was necessary to compare the measures with them.¹⁸⁸ It first found that the R&D arrangements between Boeing and NASA, and those between Boeing and DOD, were ‘akin to a species of joint ventures’.¹⁸⁹ The Appellate Body then found that the joint venture arrangements between the government agencies and Boeing were analogous to equity infusion, which was an example of direct transfer of funds.¹⁹⁰ There were several reasons for this analogy. First, NASA and DOD provided funding with the expectation of some return, namely aeronautics R&D results in this case. Moreover, NASA and DOD were not sure whether

¹⁸⁶ Ibid, para. 7.1027, para. 7.1171.

¹⁸⁷ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 620.

¹⁸⁸ Ibid, para. 615.

¹⁸⁹ Ibid, para. 597.

¹⁹⁰ Ibid, para. 623.

the R&D would be successful when they committed the funding, and their risk was limited to the amount of funding they contributed.¹⁹¹ As a result, the Appellate Body concluded that the infusion of resources under the NASA and DOD R&D programmes was direct transfer of funds in Article 1.1(a)(1)(i) of the SCM Agreement.¹⁹² It thus declared the panel's finding that 'purchase of services' was excluded from the scope of the SCM Agreement to be 'moot and of no legal effect'.¹⁹³

The forgoing demonstrates that the scope of financial contribution under the SCM Agreement has been interpreted broadly. It covered most types of government support measures concerning the civil aircraft industry. In the Airbus-Boeing cases, most of the government measures at issue were found to constitute financial contributions within the meaning of the SCM Agreement.¹⁹⁴

4.4 Benefit of Subsidies in the Civil Aircraft Industry

As outlined in chapter two, the existence of a financial contribution is not sufficient for there to be a subsidy within the meaning of the SCM Agreement. The identified financial contribution must confer a benefit on the recipient. As mentioned in chapter two, a benefit analysis is not concerned with costs to government resulting from subsidies.¹⁹⁵ The analysis should focus on the recipient of a financial contribution, rather than the

¹⁹¹ Ibid, para. 624.

¹⁹² Ibid, para. 624. This caused some confusion, as Coppens pointed out, as to whether a joint venture should be deemed to be a financial contribution generally, or the relevant measures of the joint venture should be analysed separately. See Dominic Coppens (n 123), at 44.

¹⁹³ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 620.

¹⁹⁴ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 8.1; Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1414; Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1431; Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 1350.

¹⁹⁵ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 154-156.

granting authority.¹⁹⁶ Moreover, it has been ‘well established’ that the market is the proper standard for determining whether a benefit is conferred.¹⁹⁷ A benefit arises if the recipient receives a financial contribution on terms more favourable than those available to the recipient in the market.¹⁹⁸ Article 14 of the SCM Agreement provides some guidance for determining the existence of benefit.¹⁹⁹ According to this Article, the listed examples of financial contribution, including equity capital, government loan, loan guarantee, government provision of goods or services or purchase of goods, will confer a benefit only if they are provided on terms more favourable than those available in the market.²⁰⁰

To determine whether a benefit was conferred by a government measure was a contentious issue in the subsidy disputes concerning the civil aircraft industry. In the Airbus-Boeing cases, the parties did not contest the existence of financial contributions in several instances, but denied that benefits had been conferred by the financial contributions. In *EC - Aircraft*, for instance, the EU did not contest that the Launch Aid measures constituted financial contributions under the SCM Agreement, but argued that these measures did not confer a benefit on Airbus.²⁰¹

Based on the characteristics of the EU Launch Aid measures discussed above, namely their back-loaded and success-dependent repayment terms, the US asserted that it was the government, not Airbus, who assumed the risk of insufficient sales of Airbus aircraft. In other words, a substantial part of aircraft R&D risk was transferred from Airbus to the government. The US presented a simulation to quantify the effects of the back-loaded and

¹⁹⁶ Ibid, para. 154.

¹⁹⁷ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.475.

¹⁹⁸ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 158.

¹⁹⁹ Ibid, para. 155. Article 14 of the SCM Agreement is concerned with the calculation of the amount of a subsidy in terms of the benefit to the recipient in CVD procedures.

²⁰⁰ Article 14 of the SCM Agreement.

²⁰¹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.335.

success-dependant repayment terms of the Launch Aid funding on the profitability of Airbus LCA programmes.²⁰² According to the simulation, ‘the further repayment is pushed out in time, the greater the commercial and financial benefit to Airbus’.²⁰³ The US also claimed that the rate of return that a commercial investor in the market would demand for funding with similar repayment terms would be higher than the rate of return for the EU Launch Aid funding.²⁰⁴ Therefore, it asserted that the Launch Aid loans at issue conferred benefits to Airbus, as they were provided on terms more favourable than those available in the market.²⁰⁵

In response to the US allegations, the EU argued that the 1992 LCA Agreement was a ‘relevant rule of international law’ applicable for determining whether benefits were conferred by the Launch Aid funding granted after 1992, including those for the development of the A330-200, A340-500/600, and A380.²⁰⁶ According to the EU, Article 4 of the 1992 LCA Agreement established the level of permissible government support for aircraft development agreed by the US and the EU, at the time when the Launch Aid contracts were concluded.²⁰⁷ Hence, this Article must be taken into account in determining the existence of benefits as regards support measures in the large civil aircraft sector.²⁰⁸ In other words, the determination of whether the Launch Aid measures taken after 1992 conferred benefits must be informed by the 1992 LCA Agreement. The EU further asserted that the challenged Launch Aid measures were in compliance with the level of permissible

²⁰² The simulation was included in Gary J. Dorman, *The Effect of Launch Aid on the Economics of Commercial Airplane Programs*, 6 November 2006, Exhibit US-70. Ibid, para. 7.332.

²⁰³ Ibid, para. 7.332.

²⁰⁴ Ibid, para. 7.333.

²⁰⁵ Ibid, para. 7.328-7.334.

²⁰⁶ Ibid, para. 4.3-4.7. On 6 October 2004, the US notified the EU that it was abrogating the 1992 Agreement. However, the EU considered that the 1992 Agreement was still in force between the parties. The panel considered it was not necessary to resolve this issue and thus expressed no views on this. Ibid, para. 7.72 and footnote 1854.

²⁰⁷ For more discussions on the 1992 LCA Agreement, see Chapter 3.3.2 of this thesis.

²⁰⁸ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.336.

support set out in the 1992 LCA Agreement, and thus did not confer a benefit upon Airbus.²⁰⁹

In addition, the EU claimed that the US and the EU both continued to apply the 1992 LCA Agreement after the entry into force of the SCM Agreement, by continuing to measure their respective support measures against the benchmarks of the 1992 LCA Agreement rather than against the SCM Agreement.²¹⁰ This meant that the US acquiesced in the proposition that the subsidies to Airbus granted prior to the 1992 LCA Agreement were compatible with the SCM Agreement, and consequently, had agreed that such measures would not be challenged in WTO dispute settlement proceedings.²¹¹

However, the panel did not agree with the EU. It pointed out that the 1992 LCA Agreement was not a covered agreement under the DSU or the GATT 1994, so the panel did not have the jurisdiction to determine the rights and obligations of the parties under the 1992 LCA Agreement.²¹² More importantly, the panel explained that the fundamental weakness of the EU argument was that the provisions of the 1992 LCA Agreement could not be construed as constituting an accord that the parties would not challenge the government support committed prior to the entry into force of the SCM Agreement under the WTO.²¹³ The preamble of the 1992 LCA Agreement explicitly provided that this agreement operated without prejudice to the rights and obligations of the parties under the GATT and under other multilateral agreements negotiated under its auspices, including the SCM Agreement.²¹⁴ Consequently, the 1992 LCA Agreement provided no guidance for

²⁰⁹ Ibid, para. 7.336.

²¹⁰ Ibid, para. 7.74.

²¹¹ Ibid, para. 7.71.

²¹² Ibid, para. 7.89.

²¹³ Ibid, para. 7.94.

²¹⁴ Ibid, para. 7.95.

the benefit analysis, and there was no estoppel against the US resulting from the 1992 LCA Agreement. The panel also rejected the EU argument that all government support granted prior to the 1992 LCA Agreement should be excluded from the temporal scope of the proceedings.²¹⁵ The Appellate Body agreed with the panel and confirmed that the 1992 LCA Agreement was not applicable in the dispute.²¹⁶

In *EC - Aircraft*, the EU also emphasised that the LCA industry was unique in the sense that it was highly uncertain whether a new LCA model could be successful at the time a decision was taken to develop a new LCA model and to incur start-up costs.²¹⁷ Many factors, such as unexpected market slow-downs, exchange rate fluctuations, and political developments, could largely affect the fortune of a new LCA model. Therefore, LCA development required ‘huge up-front investments’ and a commitment of ‘tremendous resources’ in a business environment where there were many unforeseeable factors.²¹⁸ The EU asserted that these unique features of the LCA industry made it ‘susceptible to a high degree of government intervention both in terms of financial support and international regulation’.²¹⁹ According to the EU, given the nature of the LCA industry, government intervention in the industry ‘may even be considered natural’.²²⁰

The EU also claimed that, as explained by the Appellate Body in *US - Countervailing Measures on Certain EC Products*, ‘fair’ market transactions were not always the appropriate benchmarks for deciding the existence of a benefit under the SCM

²¹⁵ Ibid, para. 7.105.

²¹⁶ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1414.

²¹⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.367.

²¹⁸ Ibid, para. 7.367.

²¹⁹ Ibid, para. 7.367.

²²⁰ Ibid, para. 7.367.

Agreement.²²¹ In particular situations, it was necessary to consider ‘the ability of governments to obtain certain results from markets by shaping the circumstances and conditions in which markets operate’ and to remember that markets could be ‘severely affected’ by government policies, when determining whether a financial contribution conferred a benefit.²²² According to the EU, due to the LCA industry’s close association with heavy government intervention and international regulation, the above explanation of the Appellate Body should be taken into account when determining whether the Launch Aid measures constituted subsidies under the SCM Agreement.²²³ Therefore, the EU claimed that the appropriate way of determining whether the Launch Aid measures conferred benefits was not whether each of the Launch Aid contracts conformed to ‘perfect market conditions’. Rather, this determination should be made through assessing ‘the reasonableness of the forecast number of sales over which repayments are intended to secure the rate of return agreed to in each of the relevant contracts’.²²⁴ If the forecast was not reasonable, a benefit would be deemed to be conferred.

The EU then claimed that the Launch Aid funding was provided on the basis of ‘very prudent’ sales forecasts, with full repayment of principal plus interest over a maximum of 17 years (consistent with Article 4 of the 1992 LCA Agreement).²²⁵ These sales forecasts were conservative, and intended to ensure faster repayment. The repayment schedules would ensure adequate recoupment of the Launch Aid funding plus a return at rates which

²²¹ Ibid, para. 7.337; Appellate Body Report, *US - Countervailing Measures on Certain EC Products*, WT/DS212/AB/R, para. 123-124.

²²² Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.337; Appellate Body Report, *US - Countervailing Measures on Certain EC Products*, WT/DS212/AB/R, para. 123-124.

²²³ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.337.

²²⁴ Ibid, para. 7.337.

²²⁵ Ibid, para. 7.340.

would not be rejected in the market.²²⁶

However, the panel considered that the reasonableness of the above-mentioned repayment forecasts was not decisive in determining whether the Launch Aid measures conferred benefits. According to the panel, the determination required an analysis of whether the rate of return for the Launch Aid funding was lower than the rate of return that would be sought by a market lender for funding on similar terms.²²⁷ The rate of return of the Launch Aid funding was defined by the panel as the price that the Launch Aid contract parties agreed to pay or receive, for the rights and obligations set under these contracts. It could reflect the envisaged financial gains for the lender (the government), and the apparent financial costs for Airbus.²²⁸ If the rate of return of the Launch Aid funding was lower than that what would have been sought by a market lender, a benefit was conferred. The reasonableness of the repayment forecasts was not so relevant to the rate of return that a market lender would demand.²²⁹

After the foregoing analysis, the panel then proceeded to identify the rate of return of the Launch Aid funding and the rate of return of comparable market-based financing.²³⁰ The rates of return were 0% for certain Launch Aid contracts, but were not revealed for the remaining contracts as those rates were either ‘Business Confidential Information’ or ‘Highly Sensitive Business Information’.²³¹ As regards the rate of return of comparable market-based financing, the parties agreed that it may be constructed by adding three components: (i) the ten year long-term government borrowing rates (i.e. the general

²²⁶ Ibid, para. 7.340.

²²⁷ Ibid, para. 7.397.

²²⁸ Ibid, para. 7.398.

²²⁹ Ibid, para. 7.397.

²³⁰ Ibid, para. 7.402.

²³¹ Ibid, para. 7.489. See also Chianale (n 13), at 298. The rates of return for the Launch Aid measures were listed in Table 5 of the Panel Report.

risk-free cost of capital); (ii) the ten-year company-specific general borrowing rates (i.e. the general level of risk associated with lending to Airbus); and (iii) a project-specific risk premium (i.e. the risk profile of LCA development and features of LA/MSF).²³² The panel then compared the two rates and found that the rates of return of all the Launch Aid measures at issue were lower than the rates of return of comparable market-based financing.²³³ Consequently, the panel found all the Launch Aid measures conferred a benefit upon Airbus. The Appellate Body endorsed the panel's approach for benefit analysis,²³⁴ and upheld its finding that the Launch Aid measures at issue conferred benefits within the meaning of the SCM Agreement.²³⁵

As regards the EU R&TD measures, a part of such funding was found as financial contributions in the form of direct transfer of funds. According to the panel, such funding conferred benefits because it placed Airbus in a better position than it would otherwise have been in the absence of the funding. However, for the part of the R&TD funding that was determined as potential direct transfer of funds, namely the funding that had been committed but had not been disbursed, the US failed to establish that the commitment, in and of itself, placed Airbus in a better position than it would otherwise have been in the absence of such commitment.²³⁶ Therefore, the panel found this part of the R&TD funding did not confer benefits upon Airbus.

With respect to the EIB loans, after finding that all these loans constituted financial

²³² However, the US and the EU disagreed with the quantum of the project-specific risk premium. Each of them proposed its project-specific risk premium. The Panel did not quantify precisely the project-specific risk premium that may be associated with market financing comparable to the Launch Aid measures, but set down a range between the benchmarks proposed by the EU and the US. Chianale (n 13), at 298.

²³³ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.489, 7.490. See also Chianale (n 13), at 298.

²³⁴ However, the Appellate Body criticised the panel's method of assessing the project-specific risk premium. Chianale (n 13), at 302.

²³⁵ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 929.

²³⁶ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1502.

contributions in the form of direct transfer of funds or potential direct transfer of funds,²³⁷ the panel proceeded to determine whether these loans conferred benefits on Airbus. As the interest rates of the EIB loans were lower than those in the market, the panel found that each of the challenged EIB loans conferred a benefit upon Airbus.²³⁸ The panel emphasised that, although the non-profit nature of the lending operations of the EIB and its objectives hinted that it would provide financial assistance on beneficial terms and conditions of one kind or another, this did not necessarily mean that all loans granted by EIB or similar finance institutions would confer benefits within the meaning of the SCM Agreement.²³⁹ Rather, the determination should be made in the light of the particular facts surrounding the alleged instance of subsidisation and on a case-by-case basis.²⁴⁰

In the dispute regarding the US subsidies to Boeing, the question of benefit was also a contentious issue. For instance, it was disputed whether the NASA and DOD R&D programmes conferred benefits on Boeing. As discussed above, the panel had already found that the aeronautics R&D work that Boeing conducted under these programmes was principally for its own benefit and use.²⁴¹ According to the panel, no private entity acting pursuant to commercial considerations would provide payments and access to its own facilities to another commercial entity, on the condition that the latter performed R&D work principally for its own benefit and use.²⁴² Therefore, the panel concluded that the NASA and DOD R&D measures conferred benefits within the meaning of the SCM

²³⁷ Ibid, para. 7.738.

²³⁸ Ibid, para. 7.885. However, the Panel found that the EIB did not charge commitment fees or non-utilisation fees did not confer a benefit. Also, the ERU 700 million credit line available under the 2002 EIB finance contract to Airbus did not confer a benefit, as it was not convinced that simply showing that a credit line has been granted on beneficial term makes the recipient better off. See Chianale (n 13), at 314.

²³⁹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.888.

²⁴⁰ Ibid, para. 7.888.

²⁴¹ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1308.

²⁴² Ibid, para. 7.1039.

Agreement.²⁴³

However, the Appellate Body considered that the panel's approach and reasoning were not based on a proper market benchmark, because the panel did not make an appropriate comparison between the terms of the NASA and DOD R&D contracts and those of a comparable market transaction.²⁴⁴ According to the Appellate Body, the allocation of intellectual property rights resulting from the R&D was more favourable to the commissioned party and less favourable to the commissioning party than that of a comparable transaction in the market.²⁴⁵ As a result, Boeing obtained more, and NASA and DOD obtained less, than what they would have obtained in the market.²⁴⁶ The Appellate Body thus concluded that the NASA and DOD aeronautics R&D programmes conferred benefits on Boeing.²⁴⁷

The elements of financial contribution and benefit together define subsidies that are subject to the disciplines of the SCM Agreement. As demonstrated above, the meaning of 'financial contribution' was interpreted broadly by WTO adjudicating bodies. In terms of the benefit element, the market has been well established as the benchmark to decide whether a benefit is conferred. In view of the findings of the panels and the Appellate Body in the Airbus-Boeing disputes, government support measures in the civil aircraft industry are more likely to confer benefits on their recipients, because these measures tend to be more favourable than financing options available in the market.²⁴⁸ This is partly due

²⁴³ Ibid, para. 7.1040, para. 7.1184-7.1188

²⁴⁴ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 647.

²⁴⁵ Ibid, para. 662.

²⁴⁶ Ibid, para. 662.

²⁴⁷ Ibid, para. 666.

²⁴⁸ In *EC - Aircraft*, all of the Launch Aid measures and most of the infrastructure measures, equity infusions, R&TD funding were found to be subsidies within the meaning of the SCM Agreement. Panel Report, *EC - Aircraft*, WT/DS316/R, para. 8.1; Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1414. In *US - Aircraft*, a major part of the NASA and DOD aeronautics R&D subsidies, tax subsidies of Washington State, Kansas State, Illinois State,

to the characteristics of the civil aircraft industry. As discussed in chapter three, the development of the industry usually involves large up-front capital requirements and great technological risk. This makes it more difficult for aircraft manufacturers to obtain commercial financing on normal market terms. In sum, government support measures in relation to aircraft manufacturers are more likely to fall within the subsidy definition under the SCM Agreement.

4.5 Specificity of Subsidies in the Civil Aircraft Industry

As introduced in chapter two, specificity is described as one of the ‘gateways’ of the disciplines in the SCM Agreement.²⁴⁹ Subsidies are subject to the disciplines over prohibited and actionable subsidies only if they are specific within the meaning of Article 2 of the SCM Agreement.²⁵⁰ The SCM Agreement sets out some principles for determining whether a subsidy is specific. First, according to Article 2.1(a), a subsidy will be *de jure* specific if the granting authority, or the legislation pursuant to which the granting authority operates, explicitly limits access to the subsidy to ‘an enterprise or industry or group of enterprises or industries’ (also referred to in the SCM Agreement as ‘certain enterprises’).²⁵¹

Secondly, Article 2.1(b) provides that specificity will not exist if objective criteria or conditions governing the eligibility and the amount of subsidies are established by the

FSC/ETI tax exemptions were found to be subsidies within the meaning of the SCM Agreement. Panel Report, *US - Aircraft*, WT/DS353/R, para. 8.3; Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 1350.

²⁴⁹ Panel Report, *US - Export Restraints*, WT/DS194/R, para. 8.38. As discussed in chapter two, the other two gateways are financial contribution and benefit.

²⁵⁰ Appellate Body Report, *US - Softwood Lumber IV*, WT/DS257/AB/R, para. 72.

²⁵¹ Article 2.1(a) of SCM Agreement.

granting authority or relevant legislation.²⁵² The eligibility must be automatic, and the criteria and conditions must be strictly adhered to and 'clearly spelled out in law, regulation, or other official document, so as to be capable of verification'.²⁵³ These criteria or conditions are considered 'objective' if they are neutral, do not favour certain enterprises over others, and are economic in nature and horizontal in application.²⁵⁴

Thirdly, Article 2.1(c) is concerned with *de facto* specificity of subsidies. Even if a subsidy is not *de jure* specific or is granted based on objective criteria, it may still benefit only certain enterprises and thus be *de facto* specific.²⁵⁵ Article 2.1(c) provides that, '[i]f, notwithstanding any appearance of non-specificity resulting from the application of the principles laid down in subparagraphs (a) and (b), there are reasons to believe that the subsidy may in fact be specific, other factors may be considered'. These factors include: (i) use of a subsidy programme by a limited number of certain enterprises; (ii) predominant use of a subsidy by certain enterprises; (iii) granting of disproportionately large amounts of subsidisation to certain enterprises; and (iv) the manner in which discretion has been exercised by the granting authority in the decision to offer a subsidy.²⁵⁶ As regards the last factor, the frequency with which applications for a subsidy are refused or approved and the reasons for such decisions should be considered in particular.²⁵⁷ Moreover, the extent of diversification of economic activities within the jurisdiction of the granting authority, as well as the length of time during which the subsidy programme has been in operation, should also be taken into consideration when determining whether a subsidy is *de facto*

²⁵² Article 2.1(b) of the SCM Agreement.

²⁵³ Article 2.1(b) of the SCM Agreement.

²⁵⁴ For instance, number of employees and size of enterprise could be considered as objective criteria or conditions. Article 2.1(b), footnote 2 of the SCM Agreement.

²⁵⁵ Article 2.1(c) of the SCM Agreement.

²⁵⁶ Article 2.1(c) of the SCM Agreement.

²⁵⁷ Article 2.1(c), footnote 3 of the SCM Agreement.

specific.²⁵⁸

Apart from the foregoing rules, a subsidy will also be specific if it is limited to certain enterprises located within a designated geographical region within the jurisdiction of the granting authority.²⁵⁹ However, the setting or change of generally applicable tax rates by all levels of government entitled to do so will not be deemed to be a specific subsidy.²⁶⁰

The above provisions in the SCM Agreement provide useful guidance for assessing the specificity of a subsidy. The Appellate Body has pointed out that these principles should be considered within an analytical framework that recognises and accords appropriate weight to each principle. There may be instances in which the evidence unequivocally shows the specificity or non-specificity under one of the subparagraphs of Article 2.1. However, the Appellate Body cautioned against assessing specificity on the basis of the application of a particular subparagraph of Article 2.1 when the other subparagraphs may be applied in view of the nature and content of measures challenged. Therefore, the principles set out in the subparagraphs of Article 2.1 must be interpreted together, allowing for their concurrent application to the various legal and factual aspects of a subsidy in any given case.²⁶¹ The application of any one of these principles ‘may not by itself be determinative in arriving at a conclusion that a particular subsidy is or is not specific’.²⁶²

As regards subsidies in the civil aircraft industry, the question of specificity is important as it will determine whether the subsidies at issue are subject to the regulation of

²⁵⁸ Article 2.1(c) of the SCM Agreement.

²⁵⁹ Article 2.2 of the SCM Agreement.

²⁶⁰ Article 2.2 of the SCM Agreement.

²⁶¹ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 942. See also Chianale (n 13), at 306.

²⁶² Appellate Body Report, *US - Anti-Dumping and Countervailing Duties (China)*, WT/DS379/AB/R, para. 366; Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 942.

the SCM Agreement. If the subsidies are not specific, they cannot be legally challenged or countervailed under the SCM Agreement. In the Airbus-Boeing cases, the panels and the Appellate Body examined the specificity of the subsidy measures at issue.

In terms of *de jure* specificity, the EU claimed in *US - Aircraft* that the B&O tax reductions for the US commercial aircraft manufacturers in Washington State were *de jure* specific. The US argued that there were also differential tax rates for other industries, and thus the B&O tax reductions were not specific. The panel first found that the B&O tax reductions were not made available under the tax regime to other enterprises.²⁶³ As regards the US argument, the panel explained that the differential tax rates for other industries did not share links or commonalities with the challenged B&O tax reduction, as they were introduced at different times and for a variety of different purposes. Therefore, they were not part of the same subsidy scheme and should not be combined together. The panel thus concluded that the B&O tax reductions were specific.²⁶⁴

In *EC - Aircraft*, the US claimed that the subsidies granted under the EU Framework Programmes were *de jure* specific under Article 2.1(a) of the SCM Agreement. According to the panel, although the Framework Programmes aimed at advancing R&TD in the EU generally, they did so by channelling dedicated amounts of funding to sector-specific research areas.²⁶⁵ The R&TD grants at issue stemmed from a closed system of subsidisation: the relevant legal regime explicitly limited the access to a dedicated portion of the available Framework Programmes grants to only certain enterprises active in

²⁶³ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 847-56. See also Dominic Coppens (n 123), at 104.

²⁶⁴ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1431.

²⁶⁵ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1563.

aeronautics research.²⁶⁶ The panel explained that evidence indicated that a certain amount of subsidisation was explicitly set aside under each of the relevant Framework Programmes for the research of ‘certain enterprises’.²⁶⁷ Therefore, the panel concluded that the R&TD subsidies granted to Airbus under the Framework Programmes were *de jure* specific within the meaning of Article 2.1(a) of the SCM Agreement.²⁶⁸

The EU appealed that the specificity of the R&TD grants at issue could not be established on the basis of the allocation of funding to aeronautics-related research.²⁶⁹ It argued that each Framework Programme established a broad-based allocation mechanism ensuring equal access to a wide range of sectors and enterprises.²⁷⁰ However, the Appellate Body disagreed and explained that the fact that access to certain funding under a broader subsidy programme (i.e. the EU Framework Programme) was explicitly limited to certain enterprises (i.e. the aeronautics sector) indicated that this subsidy (R&TD grants) was *de jure* specific under Article 2.1(a) of the SCM Agreement, even if other entities equally had access to other pools of funding under that general programme.²⁷¹ The *de jure* specificity finding was based on the fact that funding was divided into separate compartments, and each component targeted certain enterprises.²⁷² Therefore, the Appellate Body upheld the panel’s finding that the R&TD grants under each of the Framework Programmes were *de jure* specific under the SCM Agreement.²⁷³

Although several of the aircraft subsidies at issue were deemed as *de jure* specific, in

²⁶⁶ Ibid, para. 7.1563; Chianale (n 13), at 306.

²⁶⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1566.

²⁶⁸ Ibid, para. 7.1566.

²⁶⁹ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 946.

²⁷⁰ Ibid, para. 946; Chianale (n 13), at 307.

²⁷¹ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 949. For more discussion, see Dominic Coppens (n 123), at 105.

²⁷² Dominic Coppens (n 123), at 105.

²⁷³ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 952.

most cases WTO members tend to give to a specific measure the appearance of a general measure.²⁷⁴ National legislation and regulations rarely expressly favour certain enterprises over others, but rather they use criteria which seem to be objective and general but turn out to be specific in practice.²⁷⁵ Therefore, many of the subsidies provided to Airbus and Boeing are concerned with the question of *de facto* specificity. However, the SCM Agreement offers no guidance on interpreting the factors relevant to *de facto* specificity determinations.²⁷⁶

In *EC - Aircraft*, the US claimed that the EIB loans to Airbus were both *de jure* and *de facto* specific. The panel examined first whether the EIB loans were *de jure* specific. It emphasised that the purpose of the specificity test is to determine whether the subsidy was sufficiently broadly available throughout an economy, so as not to benefit only 'certain enterprises'. As there was no explicit limitation on access to the EIB loans to certain enterprises, the panel found that these loans were not *de jure* specific under the SCM Agreement.²⁷⁷

As to the US claim that the EIB loans were *de facto* specific as a disproportionately large amount of the EIB funding was granted to Airbus and Airbus was the predominant user of the EIB funding programmes, the panel compared the value of the EIB loans granted to Airbus and the total value of all EIB loan disbursements over an appropriate time period. Moreover, given the highly diversified nature of the EU economy and the long-standing duration of the EIB lending programme, the panel found that the EIB loans

²⁷⁴ Claire Micheau, *State Aid, Subsidy and Tax Incentives under EU and WTO Law* (Kluwer Law International 2014), at 257.

²⁷⁵ Ibid, at 257.

²⁷⁶ Dominic Coppens (n 123), at 108.

²⁷⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.931.

to Airbus did not involve ‘the granting of disproportionately large amounts of subsidies’ or ‘predominant use’ of the EIB funding programme by Airbus.²⁷⁸ Therefore, the panel concluded that the EIB loans at issue were not *de facto* specific within the meaning of the SCM Agreement.²⁷⁹ However, as regards the research, development, test and evaluation (RDT&E) programmes of the US DOD, the panel found that almost half of the RDT&E funding went to five enterprises, all of which form part of the same industry. This demonstrated that the funding went ‘predominantly’ to firms in the defence industry, and was thus enough to establish *de facto* specificity.²⁸⁰

As mentioned above, Article 2.2 of the SCM Agreement is concerned with the specificity of regional subsidies. In *EU - Aircraft*, the US claimed that the EU infrastructure subsidies at issue were specific as they were limited to certain enterprises located within a designated geographical region. In response, the EU argued that these subsidies were granted to all rather than certain enterprises located within the designated region, and thus were not specific. However, the panel disagreed. It explained that a subsidy available only in a designated region was specific even if it was available to all enterprises in that designated region. Consequently, the panel found that most of the infrastructure-related grants at issue were specific.²⁸¹

In view of the findings of the panel and the Appellate Body in the Airbus-Boeing cases, even though aircraft subsidies are not *de jure* specific, they are likely to be found *de facto* specific or regionally specific. This is partly because of the characteristics of the civil aircraft industry. As mentioned in chapter three, the civil aircraft industry is highly

²⁷⁸ Ibid, para. 7.991, 7.996.

²⁷⁹ Ibid, para. 7.1108.

²⁸⁰ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1197, as discussed in Dominic Coppens (n 123), at 110.

²⁸¹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1244.

concentrated and there are only a very limited number of civil aircraft manufacturers. According to the SCM Agreement, a subsidy will be *de facto* specific if it is used by 'a limited number of enterprises'.²⁸² The panel in *US - Aircraft* explained that this factor for determining *de facto* specificity focuses 'on the number of enterprises that use the programme rather than the proportion of the subsidy granted to such enterprises'.²⁸³ Therefore, subsidies in the civil aircraft industry are more likely to be *de facto* specific as they are usually used by a limited number of aircraft manufacturing enterprises. Moreover, as aircraft manufacturers are located in specific regions in a country, subsidies for them are more likely to be regarded as regionally specific under Article 2.2 of the SCM Agreement. Finally, the WTO case-law has not accepted that any of the challenged subsidies is non-specific as a result of the application of the objective eligibility criteria under Article 2.1(b) of the SCM Agreement.²⁸⁴ In sum, although detailed analyses in a particular case could be much more complex, there is a fairly significant chance that any subsidy in the civil aircraft industry will be found specific under the SCM Agreement.²⁸⁵

4.6 Adverse Effects of Subsidies in the Civil Aircraft Industry

As mentioned in chapter two, the SCM Agreement did not condemn all specific subsidies. Subsidies will only be deemed as illegal if they are prohibited subsidies, or if

²⁸² Article 2.1(c) of the SCM Agreement.

²⁸³ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.777.

²⁸⁴ See Dominic Coppens (n 123), at 106.

²⁸⁵ In *US - Aircraft*, a major part of the tax subsidies of Washington State, Kansas State, Illinois State, NASA R&D subsidies, DOD R&D subsidies, FSC/ETI tax exemptions were found to be specific subsidies. According to the panel, the amount of the specific subsidies to Boeing was at least \$5.3 billion. Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1431; Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 1350. In *EC - Aircraft*, all of the challenged Launch Aid subsidies and most of the infrastructure subsidies, equity infusions, R&TD funding were determined to be specific subsidies. Panel Report, *EC - Aircraft*, WT/DS316/R, para. 8.1; Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1414.

they are actionable subsidies that cause adverse effects within the meaning of the SCM Agreement. Most of the claims in *EC - Aircraft* and *US - Aircraft* were concerned with the use of actionable subsidies. The key question was thus whether the aircraft subsidies at issue caused adverse effects.

4.6.1 Serious Prejudice

As mentioned in chapter two, the first type of adverse effect under the SCM Agreement is serious prejudice, which includes several kinds of price or volume effects listed in Article 6.3. In *EC - Aircraft*, the panel adopted a two-step approach for assessing whether the challenged EU subsidies caused serious prejudice to the interests of the US.²⁸⁶ It first assessed whether there were market phenomena under Articles 6.3 of the SCM Agreement. After that, it examined whether the identified phenomena were caused by the challenged EU subsidies.

4.6.1.1 Displacement or Impedance in the Market of the Subsidising Member

According to Article 6.3(a) of the SCM Agreement, serious prejudice may arise in any case where the effect of a subsidy is to displace or impede the imports of a like product of another WTO member into the market of the subsidising member. In *EC - Aircraft*, the US presented aggregated market share information comparing the relative position of Airbus and Boeing in the EU market, in terms of annual deliveries of LCA and their value

²⁸⁶ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1731; Chianale (n 13), at 317.

measured by list price.²⁸⁷ However, the EU claimed that the displacement or impedance analysis should be based on LCA orders rather than LCA deliveries, and that the US must prove the displacement or impedance on a sale-by-sale basis.²⁸⁸

The panel disagreed with the EU. It stated that the terms ‘imports’ and ‘exports’ in Article 6.3(a) and 6.3(b) of the SCM Agreement suggest that the displacement or impedance analysis should focus on LCA deliveries rather than orders.²⁸⁹ Although an order could reflect future imports or exports, it was not within the ordinary meaning of ‘imports’ and ‘exports’.²⁹⁰ The panel also disagreed with the EU that the displacement or impedance effects must be demonstrated on a sale-by-sale basis, as nothing in the language of Article 6.3 of the SCM Agreement requires such an approach.²⁹¹

As regards whether there was displacement or impedance of imports of Boeing aircraft into the EU market, the panel first explained the meaning of displacement or impedance. According to the panel, displacement was concerned with situations where sales volume declined, while impedance was concerned with situations where sales which would have otherwise occurred were impeded.²⁹² The market data clearly demonstrated that Boeing’s share in the EU market declined from 2001 to 2006, while Airbus’ share increased in the same time period.²⁹³ Given that Airbus was the only competitor of Boeing in the LCA market, the panel concluded that the imports of Boeing aircraft into the EU

²⁸⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7. 1740.

²⁸⁸ Ibid, para. 7. 1745. See also Chianale (n 13), at 317.

²⁸⁹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1748.

²⁹⁰ Ibid, para. 7.1747.

²⁹¹ Ibid, para. 7. 1751.

²⁹² Ibid, para. 7. 1738.

²⁹³ In 2001, Boeing’s share in the EU LCA market was 42%, measured by quantity of LCA delivered. It dropped to 38% in 2002, increased to 41% in 2003 and 2004, and finally dropped to 33% in 2005 and 2006. Airbus’ share in the EU LCA market was 58% in 2001, increased to 62% in 2002 before declining to 59% in 2003 and 2004, then increased again to 67% in 2005 and 2006. Ibid, para. 7.1753.

market were displaced by Airbus aircraft.²⁹⁴

4.6.1.2 Displacement or Impedance in the Market of a Third Country

The analysis of displacement or impedance in a third country market was similar to that concerning the displacement or impedance in the market of the subsidising member.²⁹⁵ In *EC - Aircraft*, the US presented market information about the number of aircraft deliveries by Airbus and Boeing to Australia, China, Singapore, Korea, Brazil, Mexico and India.²⁹⁶ It also provided data of aircraft orders for the Indian market to support its claim of threat of serious prejudice in the form of likely future displacement.²⁹⁷

The panel assessed the evidence provided by the US. It found that the market share of Airbus increased significantly in the Chinese and Australian markets in the reference time period.²⁹⁸ The situation was similar in the markets of Brazil, Chinese Taipei, Korea, Mexico and Singapore, although it was less compelling as there were only sporadic sales in these markets.²⁹⁹ Given that Airbus was the only competitor of Boeing in these markets, the panel concluded that the US exports of large civil aircraft were displaced by Airbus aircraft in these markets.³⁰⁰ The panel also noted that Airbus obtained many more orders in the Indian market than Boeing, and it considered this to be a massive increase for Airbus' market share. It thus found a likelihood of future displacement of Boeing LCA by Airbus in the Indian market.

²⁹⁴ Ibid, para. 7.1758.

²⁹⁵ Chianale (n 13), at 317.

²⁹⁶ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1773.

²⁹⁷ Ibid, para. 7.1778.

²⁹⁸ Ibid, para. 7.1790.

²⁹⁹ Ibid, para. 7.1791.

³⁰⁰ Ibid, para. 7.1791.

In the appellate review, the Appellate Body stated that a displacement would arise if imports or exports of a like product were replaced by the sales of the subsidised product. The replacement could only happen if these products were competing with each other. Therefore, identification of the subsidised product and the like product and a determination that these products were competing with each other was a prerequisite for a displacement analysis.³⁰¹ It further explained that whether these products were competing in the same market and may displace each other should be answered through an objective assessment of the nature and extent of the competition relationship between these products.³⁰² This was independent from whether the subsidised product at issue benefited from the same subsidies, as products benefiting from the same subsidies may in fact compete in very different markets.

Due to the foregoing reasons, the Appellate Body found that the panel committed legal error by assessing displacement on the basis of a single subsidised product and a single product market.³⁰³ According to the Appellate Body, the panel did not make an objective and independent determination of the relevant product markets, or the markets in which the subsidised products competed with the like products.³⁰⁴ Consequently, the Appellate Body reversed the panel's displacement findings that were based on a single

³⁰¹ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1119.

³⁰² *Ibid.*, para. 1123; Chianale (n 13), at 323.

³⁰³ In *EC - Aircraft*, the EU claimed that there were three subsidised products competing with three like products in three product markets, including the single-aisle LCA market (Boeing 737NG and Airbus A320 families); the 200-300 seat LCA market (Boeing 767, 787 and Airbus A330 families); and the 300-400 seat LCA market (Boeing 777 and Airbus A340 families). However, agreeing with the US, the panel determined that the whole family of Airbus LCA constituted the subsidised product, and the whole family of Boeing LCA constituted the like product. According to the panel, large civil aircraft can be categorised according to various parameters, but none of them prevails. Subsidies benefiting one particular aircraft model may have spill-over effects on other models, and that there was at least some competition between similar aircraft markets. Moreover, the whole family of Boeing LCA has characteristics closely resembling the whole family of Airbus LCA. See Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1755.

³⁰⁴ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1128.

subsidised product and a single like product.³⁰⁵

The Appellate Body completed its own displacement analysis based on the undisputed evidence about the number of LCA sold by and the market share of Boeing and Airbus in three product markets: the single-aisle LCA product market, the twin-aisle LCA product market and the very large civil aircraft (VLCA) product market.³⁰⁶

According to the Appellate Body, the term displacement connoted that there was a substitution effect between the subsidised product and the like product.³⁰⁷ There would be displacement if imports of a like product were substituted by the subsidised product in the market of the subsidising member, or if exports of the like products were substituted by exports of the subsidised product in a third country market.³⁰⁸ The displacement analysis should focus on the market trend, taking into account both volumes and market shares.³⁰⁹ The Appellate Body then conducted straightforward analysis: it looked at relevant market data and examined whether a decline in Boeing's sales can be observed during the reference period in the three product markets mentioned above.³¹⁰ It explained that, there would be no displacement if Boeing's sales increased during the reference time period in a particular product market, or if Boeing made no sales in a particular product market throughout the reference time period, or if Boeing was the sole supplier in a particular product market.³¹¹

Finally, the Appellate Body found that there was no displacement in the VLCA product market in any geographic market, because the Boeing 747 was the only product in

³⁰⁵ Ibid, para. 1137.

³⁰⁶ Ibid, para. 1178; Chianale (n 13), at 324.

³⁰⁷ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1160.

³⁰⁸ Ibid, para. 1160.

³⁰⁹ Ibid, para. 1170.

³¹⁰ Ibid, para. 1179.

³¹¹ Ibid, para. 1179; Chianale (n 13), at 324.

that product market during the reference period.³¹² In terms of the single-aisle and twin-aisle LCA product markets, the Appellate Body found that there was displacement in the EU market.³¹³ However, there was no displacement in these product markets in most of the third country markets.

4.6.1.3 Significant Lost Sales in the Same Market

Besides displacement or impedance, the US also claimed in *EC - Aircraft* that the EU subsidies for Airbus caused significant lost sales within the meaning of Article 6.3(c) of the SCM Agreement.³¹⁴ According to the US, some clients ultimately ordered Airbus aircraft rather than Boeing aircraft in a number of sales campaigns.³¹⁵ Boeing lost these sales as Airbus significantly undercut Boeing's aircraft prices to keep its own lower than those of Boeing aircraft.³¹⁶ The EU did not contest that Boeing lost the sales at issue. However, it claimed that these sales were lost for reasons other than price undercutting.³¹⁷ The factors leading to Boeing's failure to make certain sales included customer mismanagement by Boeing, the perceived benefits of particular Airbus LCA, certain political considerations, technical specifications, fleet and route structure, etc.³¹⁸ Therefore, the EU asserted that the lost sales could not be considered the result of the subsidies for Airbus.

The panel stated that lost sales were a separate volume effect in Article 6.3(c) of the

³¹² Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1179.

³¹³ Ibid, para. 1180-86.

³¹⁴ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1793.

³¹⁵ The evidence included, for instance, media reports, press releases, and public disclosures by certain airlines. Ibid, para. 7.1797, 7.1800; Chianale (n 13), at 318.

³¹⁶ Chianale (n 13), at 318.

³¹⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1802.

³¹⁸ Ibid, para. 7.1802; Chianale (n 13), at 318.

SCM Agreement. A sale did not have to be lost as a result of a price undercutting, suppression or depression in Article 6.3(c) to qualify as a lost sale within the meaning of the SCM Agreement.³¹⁹ Therefore, although the panel did not find significant price undercutting on the basis of the available evidence, it determined that Boeing lost sales to Airbus for certain purchases.³²⁰ Moreover, given the number of aircraft and the sales volume at issue, as well as the learning effects and economies of scale they could generate, the panel concluded that the lost sales were significant.³²¹

The EU appealed the panel's decision that the Airbus sales of A380 to Emirates Airlines constituted lost sales to Boeing.³²² It claimed that the panel failed to address the factors indicating the absence of competition between the A380 and the Boeing 747 in the sale campaign at issue. The Appellate Body explained that lost sales were sales that suppliers of the complaining member failed to obtain which were won instead by suppliers of the subsidising member.³²³ The term was a relational concept and included consideration of the behaviour of the subsidised firm, which must have won the sales, and the behaviour of the competing firm, which allegedly lost them.³²⁴ Due to the duopoly of the LCA market, namely the fact that Airbus and Boeing were the only suppliers in the LCA market, Airbus and Boeing were competing for the Emirates sales even if there were no formal offers.³²⁵ It thus upheld the panel's finding that Boeing lost the Emirates Airlines sales to Airbus.³²⁶

³¹⁹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1843.

³²⁰ *Ibid.*, para. 7.1845.

³²¹ *Ibid.*, para. 7.1845.

³²² Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1213.

³²³ *Ibid.*, para. 1214.

³²⁴ *Ibid.*, para. 1214.

³²⁵ *Ibid.*, para. 1228.

³²⁶ *Ibid.*, para. 1414.

4.6.1.4 Significant Price Undercutting, Price Suppression and Price Depression

According to Article 6.3(c) of the SCM Agreement, there will be serious prejudice if subsidies result in certain types of price effects, including significant price undercutting, price suppression and price depression. As regards price undercutting, a comparison of the prices of the subsidised product and the like product was the basis for the analysis. In *EC - Aircraft*, the US claimed that there was significant price suppression and price depression in the world LCA market caused by EU subsidies to Airbus.³²⁷ The panel recalled the conclusion of the panel in *US - Upland Cotton*:

‘price suppression’ refers to the situation where ‘prices’ ... either are prevented or inhibited from rising (i.e. they do not increase when they otherwise would have) or they do actually increase, but the increase is less than it otherwise would have been. Price depression refers to the situation where ‘prices’ are pressed down, or reduced.³²⁸

This explanation was approved by the Appellate Body in its review of the panel report.³²⁹ The Appellate Body further elaborated on the notions of price suppression and price depression in *US - Upland Cotton (Article 21.5 - Brazil)*:

price depression referred to falling price, which was a directly observable phenomenon.

³²⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1847.

³²⁸ Panel Report, *US - Upland Cotton*, WT/DS267/R, para. 7.1277.

³²⁹ Appellate Body Report, *US - Upland Cotton*, WT/DS267/AB/R, para. 424.

Price suppression was concerned with whether price was lower than it would otherwise have been as a result of the subsidies. Price suppression was not directly observable but identifiable by comparing an observable factual situation (price) with a counterfactual situation (what price would have been in the absence of the subsidies).³³⁰

The US argued that both of the price phenomena were demonstrated in the world market prices of several Boeing aircraft models. The US presented evidence of the changes of the annual indexed Boeing LCA prices, and the US Aircraft Manufacturers Producer Price Index (PPI), which measured the general industry costs of the LCA industry. According to the US, the PPI was a proper proxy for the amount by which aircraft prices could have been expected to rise in the absence of external factors including subsidies.³³¹ The US then claimed that the indexed prices of Boeing large civil aircraft on the world market declined (price depression) and did not follow the PPI (price suppression).³³²

As the prices of the vast majority of Boeing aircraft models (except the Boeing 777) declined between 2001 and 2006,³³³ the panel found that there was significant price depression in the world market price of Boeing LCA in the reference time period.³³⁴ As regards price suppression, the EU argued that the appropriate measure for assessing Boeing's cost inflation was not the PPI but its operating margins. This was because Boeing had introduced restructuring and cost-cutting measures resulting in reduced manufacturing

³³⁰ Appellate Body Report, *US - Upland Cotton (Article 21.5 - Brazil)*, WT/DS267/AB/RW, para. 351; Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1846.

³³¹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1847.

³³² *Ibid.*, para. 7.1847; Chianale (n 13), at 319.

³³³ The prices of the 777 declined in only one of five years between 2001 and 2006, but the sales of the Boeing 777 only represented a small proportion of Boeing's overall LCA sales over the reference period. This thus did not affect the panel's finding regarding the overall significant price depression. Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1855. See also Chianale (n 13), at 319.

³³⁴ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1855.

costs. However, the panel disagreed and considered the PPI to be the suitable benchmark for determining the price level that would have been expected. It thus found that there was a clear degree of price suppression in the world market price for each of the Boeing LCA models at issue, which was significant for the Boeing 737, 767 and 747.³³⁵

4.6.1.5 Causation

After identifying the volume or price effects under Article 6.3 of the SCM Agreement, it must be established that there is a causal link between the challenged subsidies and these effects. As mentioned above, the panel in *EC - Aircraft* took a two-step approach to tackle the causation issue. As the second step, the panel assessed whether the identified market phenomena were caused by the challenged subsidies to Airbus.

In this regard, the US advanced two theories regarding the causation analysis.³³⁶ The first one was the product theory of causation, namely that Airbus would not have been able to develop and launch various LCA models at the time and in the way it did. In this regard, the US presented the Dorman Report, which simulated the impact of the Launch Aid funding on the decisions of Airbus to develop and launch a LCA model.³³⁷ This report demonstrated that the granting of the Launch Aid subsidies was 'likely to change the behaviour of the recipient with respect to a decision to launch a LCA by increasing the likelihood of an affirmative decision to go forward with the launch'.³³⁸

³³⁵ The price suppression was not significant for the Boeing 777. However, as the Boeing 777 represented only a small proportion of Boeing's overall LCA sales over the reference period, this did not affect the panel's decision in terms of significant price suppression. Ibid, para. 7.1861. See also Chianale (n 13), at 319.

³³⁶ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1877; Chianale (n 13), at 319.

³³⁷ This report was provided by Doctor Gary Dorman of NERA Economic Consulting.

³³⁸ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1912.

The panel found that the evidence supported the inference that, ‘but for’ the Launch Aid subsidies, Airbus would not have been able to launch each of its existing range of LCA models.³³⁹ This was closely related to the nature of LCA production, which involved long-term development process and product presence in the market.³⁴⁰ Therefore, the panel concluded that Airbus would not have been able to launch and bring to the market its LCA models ‘as originally designed and at the time that it did’ but for the challenged subsidies.³⁴¹ However, the panel considered that this did not necessarily mean that the displacement or lost sales would not have happened but for the Launch Aid subsidies to Airbus.³⁴² It further analysed the characteristics of the LCA market, and distinguished several counterfactual competitive scenarios of what would have happened if no subsidies had been granted to Airbus. It then found that the displacement and lost sales of Boeing LCA in the EU and certain third country markets would not have happened but for the challenged Launch Aid subsidies to Airbus, and thus were an effect of these subsidies.³⁴³

The US also applied the product theory of causation to the non-Launch Aid subsidies at issue, arguing that these subsidies had similar effects to the Launch Aid subsidies as they also shifted the LCA development costs from Airbus to the government, and allowed Airbus to launch LCA models at a pace impossible in their absence.³⁴⁴ The panel agreed with the US and found that the non-Launch Aid subsidies complemented and supplemented the product effect of the Launch Aid subsidies.

In addition to the product theory of causation, the US also advanced the price theory

³³⁹ Ibid, para. 7.1920; Dominic Coppens (n 123), at 181.

³⁴⁰ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.1976.

³⁴¹ Ibid, para. 7.1976.

³⁴² Ibid, para. 7.1984; Dominic Coppens (n 123), at 182.

³⁴³ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 8.2.

³⁴⁴ Chianale (n 13), at 321.

of causation. It claimed that Airbus would not have been able to lower its LCA prices as it did without the EU subsidies. According to the US, the challenged EU subsidies, in particular the Launch Aid subsidies, significantly benefited non-operating cash flow of Airbus and lowered its cost of capital. This provided Airbus with the financial means to lower its LCA prices and led to significant price suppression and price depression under the SCM Agreement. However, the panel considered that the US failed to prove that the Launch Aid subsidies enabled Airbus to lower its LCA prices, even though these subsidies might have improved the financial situation of Airbus or resulted in lower cost of capital.³⁴⁵

The Appellate Body assessed the above-mentioned two-step approach of the panel to the causation analysis. Although it considered that the panel's two-step approach was permissible, the Appellate Body expressed its preference for a unitary approach, in which the both elements were to be analysed together.³⁴⁶ In its analysis, the Appellate Body emphasised that there must be 'genuine and substantial relationship of cause and effect' between the challenged subsidies and the alleged market phenomena under Article 6.3 of the SCM Agreement.³⁴⁷ The term 'genuine' simply requires that the nexus between cause and effect is 'real' or 'true', whereas 'substantial' concerns the relative importance of subsidies in bringing about the market phenomena.³⁴⁸ Panels should ensure that the effects of other factors on the market phenomena are not improperly attributed to the challenged

³⁴⁵ Ibid, at 322.

³⁴⁶ The Appellate Body considered that the unitary approach 'has a sound conceptual foundation' and, 'it may be difficult to ascertain the existence of some of the market phenomena in Article 6.3 without considering the effect of the subsidy at issue'. Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1107.

³⁴⁷ Ibid, para. 1232.

³⁴⁸ The Appellate Body referred to the dictionary meaning of 'substantial': '[h]aving solid worth or value, of real significance; solid; weighty; important, worthwhile' and '[o]f ample or considerable amount or size; sizeable, fairly large'. Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, footnote 1865, 1866. See also Dominic Coppens (n 123), at 165.

subsidies and do not dilute the ‘genuine and substantial link’.³⁴⁹

The Appellate Body found that the panel’s conclusion, namely that a non-subsidised Airbus would have been less competitive and would not have achieved the market performance between 2001 and 2006, provided a sufficient basis to establish a genuine and substantial causal link between the challenged EU Launch Aid subsidies and the displacement and lost sales.³⁵⁰ It also examined whether other subsidies complemented the product effect of the Launch Aid subsidies in the sense that they similarly contributed to the ability of Airbus to launch its LCA models.³⁵¹ According to the Appellate Body, as the Launch Aid subsidies were a ‘substantial’ cause of displacement or lost sales, the non-Launch Aid subsidies would complement the effect of the Launch Aid subsidies if there was a ‘genuine’ causal link between these subsidies and the market phenomena.³⁵² It found that the EU infrastructure measures and equity infusions had a genuine connection with the ability of Airbus to launch LCA, and thus complemented the product effect of the Launch Aid subsidies.³⁵³ The R&TD subsidies did not complement the Launch Aid subsidies because it was not established that these subsidies provided Airbus with competitive advantage through improving the technologies incorporated in Airbus LCA or their production process.³⁵⁴

4.6.2 Injury

³⁴⁹ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1232.

³⁵⁰ Ibid, para. 1378.

³⁵¹ Ibid, para. 1378.

³⁵² Ibid, para. 1378; Chianale (n 13), at 327.

³⁵³ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1407; Chianale (n 13), at 327.

³⁵⁴ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1407; Chianale (n 13), at 327; Dominic Coppens (n 123), at 182.

In addition to serious prejudice, another kind of adverse effect under Article 5 of the SCM Agreement is injury to the domestic industry of a WTO member. In *EC - Aircraft*, the US claimed that EU subsidies to Airbus caused injury to its domestic LCA industry.³⁵⁵

As regards the injury analysis, one important preliminary issue was the identification of the 'domestic industry' at issue. The panel found that Boeing was the only producer of large civil aircraft in the relevant time period. Therefore, it constituted the whole of the domestic industry of LCA manufacturing in the US.³⁵⁶ In its injury analysis the panel also undertook a two-step approach similar to the serious prejudice analysis. It first examined whether there was an injury and, as a second step, it examined whether the injury was caused by the subsidised imports.³⁵⁷

In the first step, the panel emphasised that the term 'injury to the domestic industry' must be interpreted harmoniously with Article 15 of the SCM Agreement, which is concerned with the determination of injury in countervailing duty investigations. As mentioned in chapter two, this term is used in the same sense as in the rules over the imposition of countervailing duties under the SCM Agreement.³⁵⁸ It thus includes material injury, threat of material injury, or material retardation of the establishment of such an industry.³⁵⁹ According to the panel, to prove that a domestic industry was materially injured, it must be established that the domestic industry's overall performance (or at least some relevant factors) deteriorated during the reference time period.³⁶⁰ Therefore, an overall evaluation of the concerned industry and the relevant elements for determining

³⁵⁵ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.2029.

³⁵⁶ *Ibid.*, para. 7.2044.

³⁵⁷ *Ibid.*, para. 7.2058.

³⁵⁸ Article 5(a), footnote 11 of the SCM Agreement.

³⁵⁹ Article 15, footnote 45 of the SCM Agreement.

³⁶⁰ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.2084, 7.2110-7.2112.

injury set forth in Article 15 of the SCM Agreement was essential.³⁶¹

The panel assessed the information regarding Boeing's operations in the US, including aircraft production, sales, operating income, return on assets, cash flow, number of employees, wages paid, productivity, etc.³⁶² It found that Boeing's condition deteriorated from 2001 to 2003 following the collapse in demand for LCA after the 9/11 event. However, Boeing's performance started to recover in 2004, and was significantly improved in 2006. The panel noted that the data presented by the US and the EU demonstrated to a large extent the same picture, even although the two parties arrived at different conclusions.³⁶³ Therefore, the panel concluded that the condition of Boeing in the reference period did not warrant a finding that the US domestic LCA industry was materially injured.³⁶⁴ In other words, Boeing had successfully competed with the subsidised imports of Airbus aircraft to the extent that no material injury could be found.³⁶⁵

The US attributed the improvement of Boeing's performance after 2002 to its cost-cutting efforts and productivity improvements through cutting in wages and employment. However, the panel considered that declines in wages and employment in a domestic industry did not necessarily indicate that the industry was injured.³⁶⁶ The panel also examined the US argument regarding threat of material injury. It found that the improvement in Boeing's performance was likely to continue, and its improved efficiency and productivity could also enable its performance to continue. Hence, the panel concluded

³⁶¹ Ibid, para. 7.2083.

³⁶² Ibid, Table 42 and Table 43. Most of the information provided by the US was classified, except that of production, sales and operating income.

³⁶³ Ibid, para. 7.2104.

³⁶⁴ Ibid, para. 7.2111.

³⁶⁵ Ibid, para. 7.2157.

³⁶⁶ Ibid, para. 7.2107.

that there was no threat of material injury to the US LCA industry.³⁶⁷

In view of the above, it is clear that the analysis of adverse effects in aircraft subsidy disputes is closely related to the characteristics of the civil aircraft industry and the competitive conditions in the market. As pointed out by the Appellate Body, serious prejudice is more likely to be caused by subsidies in markets where market players exercise market power (e.g. a duopoly) rather than in perfectly competitive markets.³⁶⁸ As there are only two dominant aircraft suppliers in the global LCA market, the increase of sales of each one is very likely to impact the market performance of the other. This may thus lead to the market phenomena resulting in serious prejudice or injury within the meaning of the SCM Agreement. Therefore, due to the fact that the civil aircraft industry is highly concentrated and the market is duopolistic, subsidies in the civil aircraft industry are more likely to cause adverse effects within the meaning of the SCM Agreement.

4.7 Export Subsidies in the Civil Aircraft Industry

In the early stage of the twentieth century, there was a general trend of increasing government involvement in export trade financing.³⁶⁹ Since the 1970s, many countries increased the level of government subsidisation in order to promote exports of domestic products, partly because of the rising interest rate and heightened competition in export

³⁶⁷ Ibid, para. 7.2186.

³⁶⁸ Appellate Body Report, *US - Aircraft*, WT/DS353/AB/R, para. 1293. See also Dominic Coppens (n 123), at 170.

³⁶⁹ It was in the 1950s export credits guarantees were introduced by European credit agencies. In the 1960s, long-term government export financing first appeared, when competition between exporters increased. See Andrew M Moravcsik, 'Disciplining Trade Finance: The OECD Export Credit Arrangement' (1989) 43 *International Organisation* 173, at 177-178.

markets.³⁷⁰ Government export subsidisation took the form of loan guarantees or insurance, or more direct funding such as direct loans, interest rate subsidies, and public financing, which were usually more favourable than those available in the market.³⁷¹

As discussed in chapter three, the civil aircraft industry is to some extent export-oriented, as the industry is a major ‘export driver’ sector with great export potential. Civil aircraft manufacturers are keen to expand their export markets, and governments are usually willing to promote their export performance. Export subsidies can thus play an important role in boosting the development of aircraft firms. However, as mentioned in chapter two, export subsidies are *per se* prohibited and subject to very stringent disciplines under the SCM Agreement due to their trade-distorting nature.³⁷² The use of export subsidies by governments is a contentious issue in subsidy disputes concerning the civil aircraft industry. In this regard, the earlier series of aircraft subsidy disputes between Brazil and Canada were mainly concerned with export subsidies for regional aircraft manufacturers.³⁷³

In the Airbus-Boeing disputes, the US and the EU both claimed that the other granted export subsidies to their respective aircraft manufacturers. In *EC - Aircraft*, the US argued that the Launch Aid subsidies provided by the UK, French, German and Spanish governments for certain Airbus aircraft models were export subsidies within the meaning of the SCM Agreement.³⁷⁴ As mentioned in chapter two, export subsidies are defined as

³⁷⁰ Ibid, at 177.

³⁷¹ Ibid, at 177.

³⁷² Dominic Coppens (n 123), at 7.

³⁷³ *Brazil - Export Financing Programme for Aircraft* (DS 40); *Canada - Measures Affecting the Export of Civilian Aircraft* (DS 70); *Canada - Export Credits and Loan Guarantees for Regional Aircraft* (DS 222). For more discussion on these cases, see chapter five of this thesis.

³⁷⁴ These models included the Airbus A380, the A340-500/600 and the A330-200. Panel Report, *EC - Aircraft*, WT/DS316/R, para. 4.149.

subsidies in law or in fact contingent on export performance under the SCM Agreement.³⁷⁵

The main question concerning export subsidies is to determine the export contingency of the subsidies at issue.

The panel recalled the explanation of the Appellate Body in previous disputes that there were three elements for determining whether a subsidy was export contingent, including: (1) the granting of a subsidy; (2) that was tied to; and (3) actual or anticipated exportation or export earnings.³⁷⁶

As regards the first element, the US already claimed that each of the challenged Launch Aid measure constituted subsidies within the meaning of the SCM Agreement. As for the third element, the US asserted that the EU member states were fully aware of the structure of the global LCA market and that Airbus was highly export-oriented.³⁷⁷ Airbus was a global company operating in a global market, and the Airbus A380, A340-500/600 and A330-200 projects would lead to exporting most, if not all, of its productions.³⁷⁸ Therefore, the EU member states had anticipated that the Launch Aid programmes would benefit exports of aircraft products.³⁷⁹

The second element was 'at the very heart of the legal standard' in determining export contingency.³⁸⁰ In this regard, the main question was whether the granting of the Launch Aid subsidies was in fact 'tied to' anticipated exports of Airbus aircraft. According to the

³⁷⁵ Article 3.1 of the SCM Agreement.

³⁷⁶ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.583; Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 169.

³⁷⁷ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.583.

³⁷⁸ The evidence included: the Airbus' Global Market Forecasts; business cases; project appraisals by the granting government; sales expectations described in some contracts; repayment schedules of some contracts envisaging that repayment would be made over a number of sales exceeding the Airbus forecasted sales to the EU over a comparable period of time; and Airclaims data showing that the majority of Airbus sales 1992-2005 were made in export markets. Chianale (n 13), at 301.

³⁷⁹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.583.

³⁸⁰ Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 171.

US, the EU granted the Launch Aid subsidies through contracts in which the funding was tied to Airbus making repayments over a number of LCA sales which necessarily involved exports.³⁸¹ The relevant facts surrounding the decisions to provide the challenged Launch Aid subsidies demonstrated that there was a relationship of ‘conditionality’ or ‘dependence’ between these subsidies and export performance. Therefore, the Launch Aid subsidies were in fact ‘tied to’ anticipated exportation.³⁸²

The panel generally accepted the US argument. Mainly because of the exchange of commitments between Airbus and certain EU member state governments whereby these governments agreed to provide funding for Airbus, and Airbus agreed to make repayments with revenue generated from a specified number of LCA sales achievable only through exports, the panel determined that the German, the Spanish and the UK Launch Aid funding for the A380 constituted export subsidies that were prohibited under the SCM Agreement.

In the appellate review, the Appellate Body elaborated on the rules regarding the determination of export contingency. It explained the fact that the granting authority expected that exportation would occur alone was not sufficient to meet the standard of *de facto* export contingency: the granting of the subsidy must be ‘tied to’ anticipated exportation.³⁸³ The ordinary meaning of ‘tied to’ confirmed that a relationship of conditionality must be demonstrated. This relationship can be established if the granting of the subsidy was geared to induce the promotion of the recipient’s future export

³⁸¹ Panel Report, *EC - Aircraft*, WT/DS316/R, para. 7.586.

³⁸² *Ibid.*, para. 7.586.

³⁸³ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1102.

performance.³⁸⁴ The standard of *de facto* export contingency would be met if the subsidy was granted to incentivise the recipient to export in a way that was not reflective of the supply and demand conditions in domestic and export markets undistorted by the granting of the subsidy.³⁸⁵ The assessment of *de facto* export contingency could be based on a comparison between, on the one hand, the ratio of anticipated export to domestic sales of the subsidised product that would come about in consequence of the granting of the subsidy, and, on the other hand, the situation in the absence of the subsidy.³⁸⁶ If the comparison demonstrated that the granting of the subsidy at issue provided an incentive to skew anticipated sales towards exports, this would be an indication that the granting of the subsidy was in fact tied to anticipated exportation within the meaning of the SCM Agreement.³⁸⁷

On the basis of the foregoing, the Appellate Body found that the panel erroneously equated the standard of *de facto* export contingency with the reasons for granting the subsidies.³⁸⁸ The *de facto* export contingency could not be established solely because the granting authority anticipated export performance. Therefore, the standard of the panel with respect to determining whether the subsidies were in fact tied to export performance was not appropriate. The Appellate Body thus reversed the panel's findings regarding *de facto* export contingency of the Launch Aid subsidies to Airbus.³⁸⁹

On the other side, the EU claimed in *US - Aircraft* that the FSC/ETI subsidies and

³⁸⁴ Ibid, para. 1102.

³⁸⁵ Ibid, para. 1102.

³⁸⁶ The ratio of export sales to domestic sales absent the subsidies could be assessed based on the pre-subsidy historical sales of the product by the recipient in the domestic and export markets, or based on the performance that a profit-maximising firm would be expected to achieve in these markets in the absence of the subsidy. Ibid, para. 1047; Chianale (n 13), at 304.

³⁸⁷ Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para. 1047.

³⁸⁸ Ibid, para. 1103.

³⁸⁹ However, the Appellate Body could not complete the *de facto* export contingency analysis due to the lack of sufficient information on the basis of the available evidence. Ibid, para. 1104.

some of the Washington State tax incentives granted to Boeing were export subsidies within the meaning of the SCM Agreement.³⁹⁰ As already outlined in this chapter, the FSC/ETI subsidies had been the subject of a previous WTO dispute. These subsidies were already found to be export subsidies in *US - FSC*.³⁹¹ The US argued that these subsidies no longer existed, and another identical finding was superfluous and would add nothing to the effect of the earlier DSB rulings or recommendations.³⁹²

However, the panel considered that the existence of the previous panel and appellate rulings in *US - FSC* did not provide a valid reason for refraining from making a finding in this case.³⁹³ It recalled the explanation of the Appellate Body in *US - Upland Cotton* that, ‘the fact that a measure has expired may affect what recommendation a panel may make...it is not, however, dispositive of the preliminary question of whether a panel can address claims in respect of that measure’.³⁹⁴ Even if the FSC/ETI measures no longer existed, this did not mean that the panel should not make a finding on these measures.³⁹⁵ More importantly, the panel considered that the subject matter in *US - Aircraft* was not exactly the same with that in *US - FSC*. The subject matter in the latter was the legislative provisions as such and was not concerned with these provisions as applied in particular cases. In *US - Aircraft*, what the EU challenged was ‘the FSC/ETI measures listed in the panel request, to the extent that they provided and [...] continue to provide subsidies to Boeing’.³⁹⁶ It was not asking the panel to determine whether the US failed to comply with

³⁹⁰ Panel Report, *US - Aircraft*, WT/DS353/R, para. 4.253, para. 4.254.

³⁹¹ See, for instance, Appellate Body Report, *US - FSC (Article 21.5 - EC)*, WT/DS108/AB/RW, paras. 256(b), 256 (f), 257; Appellate Body Report, *US - FSC (Article 21.5 - EC II)*, WT/DS108/AB/RW2 (n 88), para. 100(b).

³⁹² Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1458.

³⁹³ Ibid, para. 7.1460.

³⁹⁴ Ibid, para. 7.1462, citing Appellate Body Report, *US - Upland Cotton*, WT/DS267/AB/R (n 329), para. 272.

³⁹⁵ Panel Report, *US - Aircraft*, WT/DS353/R, para. 7.1462.

³⁹⁶ Ibid, para. 7.1444. The EU also filed an actionable subsidy claim against the FSC/ETI measures, so it must establish that the measures at issue caused adverse effects to its interests under Article 5 of the SCM Agreement.

the previous findings and recommendations in *US - FSC*.

After examining the measures at issue, the panel found that the FSC/ETI subsidies continued to exist to the extent that Boeing received them through the transition and grandfather provisions in the AJCA and ETI Act.³⁹⁷ The panel decided that the measures that were effective at the time of the establishment of the panel were prohibited export subsidies within the meaning of the SCM Agreement.³⁹⁸

As regards the Washington State tax incentives, the EU argued that the Washington State HB 2294 tax incentives were in fact contingent upon export performance, thus constituting export subsidies under the SCM Agreement.³⁹⁹ The panel also examined the three elements mentioned above for export contingency analysis.⁴⁰⁰ The key question was whether the granting of these tax subsidies was tied to anticipated exports of Boeing aircraft.

In this regard, the EU argued that the HB 2294 itself was contingent on the siting of a LCA final assembly facility that could produce at least 36 Boeing 787s annually in Washington State.⁴⁰¹ As it was unlikely that Boeing would sustain an annual production rate of 36 Boeing 787 aircraft for the US market alone, this project must involve export sales of the Boeing aircraft.⁴⁰²

However, the panel did not agree with the EU that the capacity requirement of the final assembly facility in the HB 2294 was sufficient to establish the 'tie' between the

³⁹⁷ Ibid, para. 7.1459.

³⁹⁸ Ibid, para. 7.1464.

³⁹⁹ Ibid, para. 7.1456.

⁴⁰⁰ Ibid, para. 7.1519.

⁴⁰¹ Ibid, para. 4.254.

⁴⁰² Ibid, para. 4.254.

granting of the subsidies and anticipated exportation.⁴⁰³ The panel explained that the inclusion of the capacity condition in the HB 2294 may not result from the anticipation of Boeing's LCA exports. It might have been included due to a concern to create 'higher value jobs, tax income, and upstream activity' in Washington State, as argued by the US.⁴⁰⁴ Hence, the panel decided that further corroborating evidence was required to establish that the HB 2294 subsidies were granted because of the anticipated exports.

The EU further claimed that only US companies manufacturing products which would necessarily be exported could receive the HB 2294 subsidies. The panel emphasised that the fact that a subsidy was granted to an exporting company could not, by itself, establish the existence of export contingency. The panel compared the evidence in this case with that in *Canada - Aircraft*. It found that the evidence in the latter well demonstrated that the granting authorities 'relied upon and attached importance to the expected export performance of applicants for subsidies'.⁴⁰⁵ However, in *US - Aircraft*, the evidence was more inclined to demonstrate that the grant of the HB 2294 tax subsidies was associated with the aim to boost employment, rather than to boost the anticipated exportation.⁴⁰⁶ The panel found that, even taking other evidence into consideration, the EU still failed to establish the 'tie' between the HB 2294 subsidies and anticipated exportation.⁴⁰⁷ Therefore, it concluded that the HB 2294 tax subsidies were not tied to export performance and thus did not constitute export subsidies within the meaning of the SCM Agreement.⁴⁰⁸

In view of the Airbus-Boeing disputes and those between Canada and Brazil, it is

⁴⁰³ Ibid, para. 7.1576.

⁴⁰⁴ Ibid, para. 7.1577.

⁴⁰⁵ Ibid, para. 7.1581.

⁴⁰⁶ Ibid, para. 7.1582.

⁴⁰⁷ Ibid, para. 7.1580.

⁴⁰⁸ Ibid, para. 7.1590.

clear that governments have made use of export subsidies to promote the civil aircraft industry, even though these subsidies are strictly prohibited by the SCM Agreement. As mentioned in chapter three, the civil aircraft industry is to a great extent export-oriented. To stimulate the exports of civil aircraft products is usually an important economic policy objective of governments in aircraft manufacturing countries. Subsidies in the industry are thus more likely to have some link with the export of civil aircraft. This would affect the determination of export contingency of subsidies in the civil aircraft industry. However, as export subsidies are considered directly trade-distorting and are subject to stringent disciplines, governments have become much more cautious about using them in general.

4.8 Conclusion

The Airbus-Boeing disputes involved many important legal issues under WTO subsidy rules. These legal issues were extensively argued by the US and the EU in the cases, and the WTO panels and the Appellate Body have adjudicated on them.

As regards the identification of subsidies, the adjudicating bodies and WTO case-law have adopted a broad interpretation of the definition of 'subsidy'. The support measures concerning the civil aircraft industry are mostly covered by the definition of subsidy under the SCM Agreement. As regards the specificity of subsidies in the civil aircraft industry, these subsidies are more likely to be deemed as *de facto* specific or regionally specific, partly as the industry is highly concentrated and there are only a very limited number of aircraft manufacturers. In terms of adverse effects, subsidies to aircraft firms are more

likely to cause serious prejudice or injury due to the duopolistic structure and the competitive conditions of the global LCA market. Regarding the question of export subsidies, subsidies in the civil aircraft industry are more likely to be linked with export performance because the industry is to some extent export-oriented.

In sum, in view of the findings of the panels and the Appellate Body in the Airbus-Boeing cases and relevant WTO case-law, subsidies in the industry are more likely to be found illicit under the WTO subsidy rules. This is closely relevant to the nature and characteristics of the civil aircraft industry and market. As a result, WTO rules on the use of subsidies, when being applied in the civil aircraft industry, could be too stringent to allow enough policy space for governments to support the development of the civil aircraft industry, which is usually an important economic policy objective for aircraft manufacturing countries. This also seems to be in contradiction with the objective of the SCM Agreement in terms of balancing the demand to discipline subsidy use with the need to use subsidies for legitimate policy goals.

As all of the disputes over aircraft subsidies have been brought before the WTO dispute settlement mechanism, whether the subsidy problem concerning the civil aircraft industry can be effectively dealt with depends to a large extent on how the mechanism operates in this area. This will be examined in the next chapter.

Chapter 5 - Settlement of Disputes over Subsidies in the Civil Aircraft Industry

5.1 Introduction

Besides dealing with the substantive legal issues concerning the use of subsidies, the successful solution to the problem of aircraft subsidies also depends to a large extent on the operation of the WTO dispute settlement mechanism. The dispute settlement mechanism is a central element in providing security and predictability to the WTO multilateral trading system.¹ The aim of the mechanism is to resolve disputes between WTO members promptly and effectively.² The disputes over aircraft subsidies between Canada and Brazil, and those between the US and the EU, have all been referred to the multilateral procedures under the mechanism. Nevertheless, although the WTO dispute settlement mechanism is considered successful overall, there has been much doubt raised regarding its effectiveness in dealing with aircraft subsidy disputes.

This chapter first provides an overview of the WTO dispute settlement mechanism as well as the special dispute settlement rules and procedures in the SCM Agreement. It then assesses each main procedure under the WTO dispute settlement mechanism, including the consultation, panel and appellate procedure, implementation and compliance in the context of the aircraft subsidy disputes. This chapter attempts to answer the question of whether the WTO dispute settlement mechanism, along with the special dispute settlement rules and

¹ Article 3:2 of the DSU.

² Article 3:2 of the DSU. Peter van den Bossche, *The Law and Policy of the World Trade Organisation: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008), at 171.

procedures in the SCM Agreement, are effective in resolving disputes over subsidies in the civil aircraft industry.

5.2 Overview of the WTO Dispute Settlement Mechanism

The WTO dispute settlement mechanism is the most frequently used international mechanism for the settlement of trade disputes among governments. It was a result of the Uruguay Round negotiations and was established through the Dispute Settlement Understanding (DSU). It is not an entirely novel system but is based on the practice and experience in the resolution of trade disputes under the GATT 1947.³

The GATT 1947 contained two brief provisions on dispute settlement, namely Article XXII and Article XXIII. As the GATT 1947 was initially considered as an interim framework for tariff negotiations, and also given that the Havana Charter contained an extensive chapter regarding dispute settlement, the GATT 1947 neither explicitly referred to ‘dispute settlement’ nor provided for detailed procedures to address disputes.⁴

Article XXII was concerned with consultation in terms of dispute settlement. It provided that any GATT contracting party should accord sympathetic consideration to, and afford adequate opportunity for, consultation requested by another contracting party regarding any matter affecting the operation of the GATT 1947. Moreover, a contracting party may request the Contracting Parties to consult with the other contracting party or

³ John H Jackson, William J Davey and Alan O Sykes, *Legal Problems of International Economic Relations: Cases, Materials, and Text on the National and International Regulation of Transnational Economic Relations* (4th edn, West Group 2002), at 257; Bossche (n 2), at 170.

⁴ Bossche (n 2), at 170; Ernst-Ulrich Petersmann (ed), *International Trade Law and the GATT/WTO Dispute Settlement System* (Kluwer Law International 1997), at 33; Jackson, Davey and Sykes (n 3), at 257. For more discussion on the Havana Charter, see chapter two of this thesis.

parties in respect of any matter for which it has not been possible to find a satisfactory solution through the bilateral consultation.

Article XXIII of the GATT 1947 was entitled 'Nullification or Impairment'. Article XXIII:1 provided that:

If any contracting party should consider that any benefit accruing to it directly or indirectly under this Agreement is being nullified or impaired or that the attainment of any objective of the Agreement is being impeded as the result of

- (a) the failure of another contracting party to carry out its obligations under this Agreement, or
- (b) the application by another contracting party of any measure, whether or not it conflicts with the provisions of this Agreement, or
- (c) the existence of any other situation,

the contracting party may, with a view to the satisfactory adjustment of the matter, make written representations or proposals to the other contracting party or parties which it considers to be concerned. Any contracting party thus approached shall give sympathetic consideration to the representations or proposals made to it.

Article XXIII:2 of the GATT 1947 provided that:

If no satisfactory adjustment is effected between the contracting parties concerned

within a reasonable time, or if the difficulty is of the type described in paragraph 1 (c) of this Article, the matter may be referred to the Contracting Parties. The Contracting Parties shall promptly investigate any matter so referred to them and shall make appropriate recommendations to the contracting parties which they consider to be concerned, or give a ruling on the matter, as appropriate. [...] If the Contracting Parties consider that the circumstances are serious enough to justify such action, they may authorise a contracting party or parties to suspend the application to any other contracting party or parties of such concessions or other obligations under this Agreement as they determine to be appropriate in the circumstances. If the application to any contracting party of any concession or other obligation is in fact suspended, that contracting party shall then be free, not later than sixty days after such action is taken, to give written notice to the Executive Secretary to the Contracting Parties of its intention to withdraw from this Agreement and such withdrawal shall take effect upon the sixtieth day following the day on which such notice is received by him.

From 1950s, working parties were set up to deal with disputes under Article XXIII of the GATT 1947.⁵ The working parties were ‘open-ended’ and accessible to all contracting parties, including the parties to the disputes.⁶ The working parties worked on the basis of consensus, and thus the GATT dispute settlement usually involved a strong element of conciliation and negotiation.⁷ When disputes arose, the priority was to find politically-acceptable solutions, rather than determine whether the measures at issue were

⁵ Petersmann (n 4), at 34. At the beginning stage of the GATT, disputes between contracting parties were usually considered by the Contracting Parties acting jointly. See Jackson, Davey and Sykes (n 3), at 257.

⁶ Pierre Pescatore, ‘The GATT Dispute Settlement Mechanism’ (1993) 27 *Journal of World Trade* 5, at 6.

⁷ Petersmann (n 4), at 34.

consistent with the GATT rules.⁸ As a result, the process was rarely successful since the working party had no answer if the disputants themselves could not agree on a solution.⁹

As the working party approach was soon considered flawed, 'panels' were introduced to adjudicate disputes in the 1950s, and has since become a common practice in the GATT and WTO.¹⁰ Unlike working parties, a panel would not include members from a contracting party that was party to the dispute. However, the findings and conclusions of the panels would become legally binding only if adopted by consensus by the GATT Council.¹¹ Due to the increasing complexity of international trade and its regulation, the Contracting Parties continued to introduce changes into the dispute settlement system. During the Kennedy Round and the Tokyo Round negotiations, several decisions and understandings regarding dispute settlement rules and procedures were adopted.¹²

In general, the GATT dispute settlement mechanism was quite successful in resolving disputes to the satisfaction of the parties.¹³ This achievement of the mechanism was 'rare, if not unique, in the history of international legal institutions in terms of dispute settlement'.¹⁴ More importantly, the GATT dispute settlement system transformed from a power-based system settling disputes through diplomatic negotiations into a rule-based

⁸ Christian A. Melischek, *The Relevant Market in International Economic Law: A Comparative Antitrust and GATT Analysis* (Cambridge University Press 2013), at 114.

⁹ Paul J. I. M. De Waart, Erik M. G. Denters and Nico Schrijver, *Reflections on International Law from the Low Countries: In Honour of Paul De Waart* (Kluwer Law International 1998), at 459.

¹⁰ Jackson, Davey and Sykes (n 3), at 257; Paul J. I. M. De Waart, Erik M. G. Denters and Nico Schrijver (n 9), at 459.

¹¹ Jackson, Davey and Sykes (n 3), at 257; Bossche (n 2), at 170.

¹² These decisions or understandings mainly included: the Decision of 5 April 1966 on 'Procedures under Article XXIII' applying to disputes between a developing contracting party and a developed contracting party; the 'Understanding Regarding Notification, Consultation, Dispute Settlement and Surveillance' of 28 November 1979; the Decision on 'Dispute Settlement Procedures' of 29 November 1982; the Decision on 'Dispute Settlement Procedures' of 30 November 1984; and the Decision on 'Improvements to the GATT Dispute Settlement and Procedures' of 12 April 1989. See World Trade Organisation, *Guide to GATT Law and Practice: Analytical Index* (Bernan Press 1995), at 632-42.

¹³ According to Professor Hudec: 'The GATT dispute settlement procedure has been a quite successful international legal institution. The overall success rate of 88 percent, or even the 1980's success rate of 81 percent, means that at least four out of five valid complaints are being dealt with successfully...' See Robert E Hudec, *Enforcing International Trade Law: The Evolution of the Modern GATT Legal System* (Butterworth Legal Publishers 1993), at 353. See also Jackson, Davey and Sykes (n 3), at 257.

¹⁴ Hudec (n 13).

system settling disputes through adjudication.¹⁵ This enhanced the predictability and legal security of the multilateral trading system and international economic order.¹⁶

Nevertheless, despite being considered mostly successful, the GATT dispute settlement system still had a number of serious defects.¹⁷ For instance, as the GATT dispute settlement system was consensus-based, the losing party could postpone or prevent any unfavourable decisions or conclusions from becoming legally binding.¹⁸ This has been regarded as a major shortcoming of the GATT dispute settlement system.¹⁹ Moreover, the GATT dispute settlement system was to some extent fragmented. As stated above, the system developed through both practice as well as a number of codifications and amendments. Besides the general dispute settlement system based on Article XXII and Article XXIII, several GATT trade agreements contained specific dispute settlement rules and procedures, under the control of each agreement's supervisory body.²⁰ GATT contracting parties could not always agree as to which trade agreement should be used to resolve the dispute. This then facilitated the problem of 'forum shopping'.²¹ By 'forum shopping' manipulation, contracting parties could seek to prolong or avoid procedures where a particular dispute seemed to fit more than one dispute settlement procedure.²²

¹⁵ Bossche (n 2), at 170.

¹⁶ Petersmann (n 4), at 47-49.

¹⁷ John H Jackson, *The World Trading System: Law and Policy of International Economic Relations* (2nd edn, MIT Press 1997), at 112.

¹⁸ Ivo Van Bael, 'The GATT Dispute Settlement Procedure' (1988) 22 *Journal of World Trade* 67, at 73; United States International Trade Commission, *Review of the Effectiveness of Trade Dispute Settlement under the GATT and the Tokyo Round Agreements: Report to the Committee on Finance, U.S. Senate, on Investigation No. 332-212 Under Section 332(g) of the Tariff Act of 1930* (US International Trade Commission 1985), at 71; William J Davey, 'Dispute Settlement in GATT' (1987) 11 *Fordham International Law Journal* 51, at 84.

¹⁹ Bossche (n 2), at 170.

²⁰ The GATT dispute settlement system consisted of several sub-systems: general dispute settlement system based on Article XXII and Article XXIII; specific rules dealing with specific subject areas or groups of countries; and regimes under Tokyo Round agreements. John H Jackson, 'GATT Machinery and the Tokyo Round Agreements' in William R Cline (ed), *Trade Policy in the 1980s* (Peterson Institute 1983), at 185-87; Paul J. I. M. De Waart, Erik M. G. Denters and Nico Schrijver (n 9), at 459-60.

²¹ In one case, for instance, GATT contracting party had to request the establishment of different panels under the Tokyo Round Subsidies Code and under the GATT to examine its rights respectively. See Petersmann (n 4), at 53.

²² John H Jackson, 'The Birth of the GATT-MTN System: A Constitutional Appraisal' (1980) 12 *Law and Policy in*

Besides the above-mentioned defects, there were other problems regarding the GATT dispute settlement system. For instance, there was: no explicit time limit for dispute settlement; increasing recourse to unilateral trade sanctions; a lack of transparency in dispute settlement proceedings; problems regarding implementation of GATT dispute settlement rulings.²³ These problems raised concerns among GATT contracting parties and enabled them to realise the need to strengthen the dispute settlement mechanism.²⁴

During the Uruguay Round, the Dispute Settlement Negotiating Group was set up to reform and strengthen the GATT dispute settlement system.²⁵ After several years of tough negotiation, the new dispute settlement mechanism was established under the WTO framework and was mainly contained in the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU). According to the DSU, WTO members 'affirm their adherence to the principles for the management of disputes heretofore applied under Articles XXII and XXIII of GATT 1947, and the rules and procedures as further elaborated and modified herein'.²⁶ The past GATT dispute settlement practice thus remains relevant for the WTO dispute settlement mechanism.²⁷

According to former WTO Director-General Renato Ruggiero, the dispute settlement mechanism is in many ways the central pillar of the WTO multilateral trading system and the WTO's most noteworthy contribution to the stability of the global economy. The new dispute settlement mechanism is considered to be stronger, more automatic and more

International Business 21, at 44.

²³ Petersmann (n 4), at 53-54.

²⁴ Ibid, at 54.

²⁵ The declaration set up two broad negotiating objectives for reform of the dispute settlement process. The first one was to strengthen the dispute settlement rules and procedures. The other was to formulate measures designed to enhance surveillance of the process with a view to increasing compliance. See Terence P Stewart (ed), *The GATT Uruguay Round: A Negotiating History (1986-1992)*, vol II (Kluwer Law and Taxation Publishers 1993), at 2725.

²⁶ Article 3:1 of the DSU.

²⁷ Article XVI: 1 of the WTO Agreement.

credible than its GATT predecessor.²⁸ It has been demonstrated that the mechanism is quite efficacious in handling disputes between WTO members.²⁹

The mechanism has broad jurisdiction over disputes between WTO members under the ‘covered agreements’ listed in Appendix 1 of the DSU, including the SCM Agreement.³⁰ According to the DSU, when members seek the redress of a violation of obligations, nullification or impairment of benefits under the covered agreements, or an impediment to the attainment of any objective of the covered agreements, they should have recourse to, and abide by, the rules and procedures of the DSU.³¹ This thus reflects the exclusive nature of the WTO dispute settlement mechanism.³²

Besides the DSU, several WTO agreements contain special dispute rules and procedures, which are all listed in Appendix 2 of the DSU as ‘Special or Additional Rules and Procedures Contained in the Covered Agreements’.³³ According to the DSU, these special or additional rules and procedures in Appendix 2 should prevail if there is a difference between these special rules and those of the DSU.³⁴ As noted in chapter two, the SCM Agreement stipulates some dispute settlement rules and procedures for dealing with subsidy disputes, which are specific and additional to the rules of the DSU.

As mentioned above, all disputes over aircraft subsidies have been brought before the

²⁸ ‘The Future Path of the Multilateral Trading System’ (*WTO Director-General's Address to the Korean Business Association*), 17 April 1997.

²⁹ Gregory C. Shaffer and Ricardo Meléndez-Ortiz, *Dispute Settlement at the WTO: The Developing Country Experience* (Cambridge University Press 2010), at 275.

³⁰ The covered agreements include the WTO Agreement, the GATT 1994 and all other multilateral agreements on trade in goods, the GATS, the TRIPS Agreement and the DSU. Bossche (n 2), at 178.

³¹ Article 23:1 of the DSU.

³² Petersmann (n 4), at 57.

³³ These agreements include the Agreement on the Application of Sanitary and Phytosanitary Measures, the Agreement on Textiles and Clothing, the Agreement on Technical Barriers to Trade, the Agreement on Implementation of Article VI of GATT 1994, the Agreement on Implementation of Article VII of GATT 1994, the Agreement on Subsidies and Countervailing Measures, the GATS. Besides, certain WTO plurilateral trade agreements also have their own dispute settlement rules and procedures.

³⁴ Article 1:2 of the DSU.

WTO dispute settlement mechanism. The next sections will explore whether the mechanism established by the DSU, together with the special dispute settlement rules in the SCM Agreement, are effective in dealing with aircraft subsidy disputes by examining each key procedure under the mechanism.

5.3 Consultations

According to the DSU, if the benefit of a WTO member is nullified or impaired due to the violation of any covered agreement by other members, it can request consultation with the member concerned.³⁵ Consultation is the first step of the WTO dispute settlement proceedings. This is because the WTO has a clear preference for resolving disputes amicably through consultations between the disputing parties.³⁶ Under the dispute settlement mechanism, consultation is mandatory and prepositive, so the parties to a dispute must enter into consultation before resorting to panel adjudication.³⁷ According to the DSU, consultations should be confidential, and without prejudice to the rights of any member in any further proceedings.³⁸

In terms of the consultation procedure, the SCM Agreement provides that if a member believes that prohibited subsidies are granted or maintained, or that actionable subsidies granted or maintained by another WTO member result in adverse effects to its interests, it may request consultation with the subsidising member.³⁹ Upon the request for consultation,

³⁵ Article 4 of the DSU.

³⁶ Bossche (n 2), at 269.

³⁷ See, for instance, Thomas A. Zimmermann, *Negotiating the Review of the WTO Dispute Settlement Understanding* (Cameron May 2006), at 21.

³⁸ Article 4:6 of the DSU.

³⁹ Article 4.1 and Article 7.1 of the SCM Agreement.

the member believed to be granting or maintaining the prohibited subsidies or actionable subsidies in question should enter into such consultations as soon as possible.⁴⁰ If a mutually agreed solution has not been reached within 30 days or 60 days of the request for consultations in terms of prohibited subsidies or actionable subsidies respectively, any disputing party may refer the matter to the Dispute Settlement Body (DSB) for the immediate establishment of a panel, unless the DSB decides by consensus not to establish a panel.⁴¹

Consultations enable the disputing parties to understand the factual situation and legal claims in the dispute, in order to reach a mutually agreed solution. This may allow them to resolve the matter without further proceedings.⁴² The resolution of disputes can be more cost-effective than adjudication by a panel, and thus benefit the long-term trade relations between the disputing parties.⁴³ In fact, consultations have played a significant role in settling disputes in the WTO, as a large proportion of disputes have been solved through direct consultations between the parties (either through settlements or abandonment of a case).⁴⁴

In terms of the subsidy disputes concerning the civil aircraft industry, the US and the EU have stated that their preference would be to negotiate rather than to litigate the subsidy disputes.⁴⁵ As mentioned in chapter three, the two sides had engaged in extensive

⁴⁰ Article 4.3 and Article 7.3 of the SCM Agreement.

⁴¹ Article 4.4 and Article 7.4 of the SCM Agreement. According to the SCM Agreement, the time period can be extended by mutual agreement of the parties. Footnote 6 to Article 4.4, footnote 20 to Article 7.4 of the SCM Agreement.

⁴² Bossche (n 2), at 270.

⁴³ Appellate Body Report, *Mexico - Corn Syrup (Article 21.5 - US)*, WT/DS132/AB/RW, para. 54.

⁴⁴ For instance, of the 439 trade disputes that have been brought to the WTO since 1995 until June 2012, only 206 cases reached the panel process, less than half the number of the disputes. See *WTO News*, 'Lamy Cites Very Broad Confidence in WTO Dispute Settlement' (28 June 2012), <www.wto.org/english/news_e/sppl_e/sppl240_e.htm> accessed 6 January 2015. For more discussion, see Jackson, Davey and Sykes (n 3), at 259; Ryan E Lee, 'Dogfight: Criticizing the Agreement on Subsidies and Countervailing Measures Amidst the Largest Dispute in World Trade Organisation History' (2006) 32 North Carolina Journal of International Law and Commercial Regulation 115, at 137.

⁴⁵ Lee (n 44), at 136.

negotiations in an attempt to modify the 1992 LCA Agreement before they brought their cases to the WTO.⁴⁶ However, both the earlier consultations and those under the WTO dispute settlement mechanism failed to reach a satisfactory resolution to the aircraft subsidy disputes.⁴⁷

In fact, it is unlikely that consultations under the WTO dispute settlement mechanism would work in terms of settling the Airbus-Boeing subsidy disputes. The reason for requesting consultations and initiating the WTO dispute settlement procedures was precisely because the earlier negotiations between the US and the EU had failed.⁴⁸ In most of the WTO disputes, the members concerned carried out extensive negotiations outside the WTO before requesting consultations under the WTO dispute settlement mechanism.⁴⁹ As mentioned above, many WTO cases do not go beyond the consultation stage, during which they are either settled or halted for other reasons.⁵⁰ However, when the stakes involved are high, it is unlikely that the disputes can be resolved during the consultation stage.⁵¹ In that situation, the consultations under the mechanism embodied a more political or diplomatic rather than juridical atmosphere. This has been demonstrated in previous WTO cases, such as the *EC - Bananas* case⁵² and the *US - FSC* case,⁵³ in which consultations did not work.

⁴⁶ Robert J. Carbaugh and John Olienyk, 'Boeing-Airbus Subsidy Dispute: A Sequel' (2004) 4 *Global Economy Journal*, at 3.

⁴⁷ Özgür Caliskan, 'An Analysis of the Airbus-Boeing Dispute from the Perspective of the WTO Process' (2010) 10 *Ege Academic Review* 1129, at 1132. The US withdrew from the negotiations to modify the 1992 LCA Agreement. Robert J. Carbaugh and John Olienyk (n 46), at 3.

⁴⁸ Lee (n 44), at 154.

⁴⁹ *Ibid.*, at 137.

⁵⁰ WTO Secretariat, *A Handbook on the WTO Dispute Settlement System* (Cambridge University Press 2004), at 43-44.

⁵¹ Andrew Guzman and Beth A. Simmons, 'To Settle or Empanel? An Empirical Analysis of Litigation and Settlement at the World Trade Organisation' (2002) 31 *Journal of Legal Studies* 205, at 222.

⁵² *European Communities - Regime for the Importation, Sale and Distribution of Bananas*, WT/DS27.

⁵³ *United States - Tax Treatment for 'Foreign Sales Corporations' (US - FSC)*, WT/DS108. As discussed in Chapter four, this WTO case was relevant to the disputes between the EU and the US over aircraft subsidies.

Consultations did not work in dealing with disputes over subsidies in the civil aircraft industry due mainly to the great importance that the industry has for both the EU and the US. Resolving the disputes through consultation would require (unlikely) concessions from both sides. If the US and the EU truly preferred to settle the disputes, they would have requested good offices, conciliation and mediation under the mechanism.⁵⁴ As discussed in chapter three, discontinuing subsidisation of the civil aircraft industry could directly affect the development and even survival of the civil aircraft manufacturers. This may have a great impact on their national economies. Moreover, as the issue is politically sensitive, the difficulty to settle the disputes through consultations was further increased.

5.4 Panel and Appellate Procedures

The panel and the appellate procedures are the key parts of the WTO dispute settlement mechanism. According to the DSU, if a WTO member does not reply to the consultation request or the consultation fails to settle a dispute within a certain time period, the complaining member may refer the case to a dispute settlement panel for adjudication.⁵⁵ The DSU elucidates the right of the complaining party to have a panel established. It provides that, 'if the complaining party so requests, a panel shall be established at the latest at the DSB meeting following that at which the request first appears on the DSB's agenda, unless at that meeting the DSB decides by consensus not to establish a panel.'⁵⁶ Due to this reverse consensus approach, the panel will always be

⁵⁴ Lee (n 44), 155.

⁵⁵ Article 4:3, Article 4:7 of the DSU.

⁵⁶ Article 6:1 of the DSU.

established by the DSB. The establishment of panels is thus quasi-automatic, which is different from the previous GATT system where parties were able to block the establishment of a panel unilaterally.⁵⁷ In terms of subsidy disputes, the SCM Agreement provides that if the consultation fails to result in a mutually accepted solution, any member may refer the matter to the DSB for the establishment of a panel, unless the DSB decides by consensus not to do so.⁵⁸

According to the DSU, panels should have well qualified members, whether or not drawn from government institutions.⁵⁹ The panellists should serve in their individual capacities and not as government representatives or representatives for any organisation.⁶⁰ WTO members should avoid giving them instructions or influencing them on matters before a panel. If the disputing parties fail to agree on the composition of the panel, the WTO Director-General should determine the composition at the request of either party in consultation with the parties, the chairpersons of the DSB, and the relevant council or committee.⁶¹

The SCM Agreement sets forth specific time limits for the panel procedures in disputes over subsidies. First, the time frame for panel composition is compressed when dealing with subsidy disputes. The time limit to compose the panel in the DSU is 20 days after the panel is established.⁶² However, in the case of prohibited subsidies, the panellists

⁵⁷ In GATT times, persistent complainants virtually always succeeded in getting the GATT Council to establish a panel, but there success sometimes came only after long periods of delay. Jackson, Davey and Sykes (n 3), at 260.

⁵⁸ Article 4.4 and Article 7.4 of the SCM Agreement.

⁵⁹ According to the DSU, the qualified individuals include governmental or non-governmental individuals who have served on or presented a case to a panel, served as a representative of a member or of a contracting party to GATT 1947 or as a representative to the Council or Committee of any covered agreement, or in the WTO Secretariat, or served as senior trade official of a member. Moreover, those who have taught or published on international trade law or policy are also qualified. See Article 8 of the DSU.

⁶⁰ Article 8:9 of the DSU.

⁶¹ Article 8:7 of the DSU.

⁶² Article 8:7 of the DSU.

should be selected immediately.⁶³ For actionable subsidies, the composition of the panel should be finalised 15 days after the panel is established.⁶⁴

Secondly, the SCM Agreement also has different arrangements for subsidy disputes in terms of the time frame to issue the panel report. While in general the DSU time limit in which the panel should conduct its examination should not exceed six months,⁶⁵ the time limits for dealing with subsidy disputes are compressed. Regarding prohibited subsidies, panel report should be circulated to all members within 90 days after the composition and the establishment of the panel's terms of reference.⁶⁶ The report should be adopted by the DSB within 30 days after the panel report is issued to WTO members, unless one of the dispute parties formally notifies the DSB of its decision to appeal, or if the DSB decides by consensus not to adopt the report.⁶⁷ Moreover, the SCM Agreement provides that, except for those specifically provided for in Article 4 of the SCM Agreement, time-periods applicable for the conduct of prohibited subsidy disputes should be half the time prescribed in the DSU.⁶⁸

In the case of actionable subsidies, the panel report must be circulated within 120 days from the date of the composition and establishment of the panel's terms of reference.⁶⁹ The report should be adopted by the DSB within 30 days after the issuance of the panel report to all members, unless one of the dispute parties formally notifies the DSB

⁶³ Article 4.4 of the SCM Agreement.

⁶⁴ Article 7.4 of the SCM Agreement.

⁶⁵ In cases of urgency, including those relating to perishable goods, the panel should aim to issue the panel report within three months. Article 12:8 of the DSU.

⁶⁶ Article 4.6 of the SCM Agreement.

⁶⁷ Article 4.8 of the SCM Agreement. This is shorter than the general time limit to adopt the panel report, which is 60 days in accordance with Article 16:4 of the DSU.

⁶⁸ Article 4.12 of the SCM Agreement.

⁶⁹ Article 7.5 of the SCM Agreement.

of its decision to appeal, or if the DSB decides by consensus not to adopt the report.⁷⁰

In view of the above, there is a compressed time frame for dealing with subsidy disputes under the WTO dispute settlement mechanism. This to some extent reflects the WTO's negative attitude towards subsidies: government subsidies are protectionist and trade-distorting. Accordingly, these disputes have to be addressed as quickly as possible.

Under the WTO dispute settlement mechanism, panel reports may be appealed to the Appellate Body.⁷¹ In fact, about 70 percent of the circulated panel reports are appealed to the Appellate Body.⁷² The appellate procedure is an important innovation and one of the most important developments of the WTO dispute settlement mechanism compared with the GATT dispute settlement system. Unlike panels, the Appellate Body is a standing body composed of seven members who are appointed by the DSB to serve for four-year terms.⁷³ The members of the Appellate Body must be persons of recognised authority, with demonstrated expertise in law, international trade and the subject matter of the covered agreements.⁷⁴ Like panellists, they should be unaffiliated with any government.⁷⁵

The appellate review is limited to issues of law covered in the panel report and legal interpretation developed by the panel.⁷⁶ The Appellate Body may uphold, modify or reverse the legal findings and conclusions of the panel.⁷⁷ However, the Appellate Body cannot remand a case to a panel, so it usually completes the analysis of particular issues if

⁷⁰ Article 7.6 of the SCM Agreement.

⁷¹ Article 17 of the DSU.

⁷² Peter van den Bossche and Werner Zdouc, *The Law and Policy of the World Trade Organisation: Text, Cases and Materials* (3rd edn, Cambridge University Press 2013), at 240.

⁷³ Each member of the Appellate Body may be reappointed once. See Article 17:2 of the DSU.

⁷⁴ Article 17:3 of the DSU.

⁷⁵ Article 17:3 of the DSU.

⁷⁶ Article 17:6 of the DSU.

⁷⁷ Article 17:13 of the DSU.

it has significantly modified the panel's reasoning.⁷⁸

According to the DSU, the appellate procedure should not exceed 60 days from the date a disputing party formally notifies of its decision to appeal to the date the Appellate Body circulates its report.⁷⁹ If the Appellate Body considers that it cannot finish the work within 60 days, it should inform the DSB of the reasons for the delay but in no case should the proceeding exceed 90 days.⁸⁰ The Appellate Body report should be adopted by the DSB automatically within 30 days following its circulation to the members, and accepted by the parties unconditionally unless there is a consensus of the DSB to the contrary.⁸¹

In terms of subsidy disputes, the SCM Agreement sets forth an expedited appellate time frame for dealing with prohibited subsidies. For disputes regarding prohibited subsidies, the Appellate Body should issue its decision within 30 days from the date when the party to the dispute formally notifies of its intention to appeal.⁸² If the Appellate Body considers that it cannot provide its report within 30 days, it should inform the DSB of the reasons for the delay and an estimate of the period within which it will submit its report. In no case should the proceeding exceed 60 days.⁸³ The Appellate Body report should be adopted by the DSB within 20 days following its issuance to the members unless the DSB decides by consensus not to adopt the report.⁸⁴ The time limit for disputes over actionable subsidies in the SCM Agreement is basically the same as that in the DSU, except that the Appellate Body report should be adopted by the DSB within 20 days following its issuance

⁷⁸ Jackson, Davey and Sykes (n 3), at 265.

⁷⁹ Article 17:5 of the DSU.

⁸⁰ Article 17:5 of the DSU.

⁸¹ Article 17:14 of the DSU.

⁸² Article 4.9 of the SCM Agreement.

⁸³ Article 4.9 of the SCM Agreement.

⁸⁴ Article 4.9 of the SCM Agreement.

to the members.⁸⁵

The panel and appellate procedures are the key parts of the WTO dispute settlement mechanism. Although, compared with the GATT dispute settlement system, the WTO dispute settlement procedures have achieved great progress, there have been criticisms. For instance, it has been argued that the panel and appellate proceedings should be more transparent.⁸⁶ Wolff opined that the secrecy existing in these proceedings could damage public confidence and support for the WTO dispute settlement mechanism, and even the entire WTO system as a whole.⁸⁷ Inspections of public scrutiny do not work in the WTO dispute settlement procedures.⁸⁸ It has thus been suggested that openness would be an effective way to defend against accusations that the institution is hiding something, or that it is biased, incompetent, or worse.⁸⁹

In addition, the idea of a standing panel body has been proposed.⁹⁰ Panel members usually have their own jobs and are not 'full-time' workers for the Dispute Settlement Body. As the WTO becomes larger and the dispute settlement issues become more complex, the 'part-time' panellists may find it increasingly difficult for them to finish their work within the time limit of the DSU, since the complicated issues, legal and otherwise, require

⁸⁵ Article 7.7 of the SCM Agreement.

⁸⁶ William F Davey, 'The WTO Dispute Settlement System' (2000) 3 *Journal of International Economic Law* 15, at 17.

⁸⁷ Alan Wm Wolff, 'Problems with WTO Dispute Settlement' (2001) 2 *Chicago Journal of International Law* 417, at 422.

⁸⁸ Jeffrey Waincymer, 'Transparency of Dispute Settlement within the World Trade Organisation' (2000) 24 *Melbourne University Law Review* 797, at 812.

⁸⁹ Alan Wm Wolff, 'Reflections on WTO Dispute Settlement' (1998) 32 *International Lawyer* 951, at 955.

⁹⁰ The EU first proposed the creation of a standing panel body in the 1998 DSU reform. These proposals did not obtain detailed and serious discussion. However, although thought to be premature by many, the idea was supported by Professor Hudec and Professor Davey, the former Director of the legal division and a key player in WTO dispute settlement. See Robert E. Hudec, 'The New WTO Dispute Settlement Procedure: An Overview of the First Three Years' (1999) *Minnesota Journal of Global Trade*, at 38-39; William J. Davey, 'A Permanent Panel Body for WTO Dispute Settlement: Desirable or Practical?' in Daniel L. M. Kennedy and James D. Southwick (eds), *The Political Economy of International Trade Law* (Cambridge University Press 2002), at 19-20. For more discussion, see Thomas Cottier, 'The WTO Permanent Panel Body: A Bridge Too Far?' in Thomas Cottier (ed), *The Challenge of WTO Law: Collected Essays* (Cameron May 2007), at 201; Thomas Cottier, 'Proposals for Moving from Ad Hoc Panels to Permanent WTO Panelists' in Federico Ortino and Ernst-Ulrich Petersmann (eds), *The WTO Dispute Settlement System 1995-2003* (Kluwer Law International 2004), at 32.

much time to deal with. In addition, commentators have even argued that some panel members are not competent for their task.⁹¹ Given that it has become more difficult for disputing parties to agree on the selection of panel members, and that the WTO Director-General has had to appoint panellists frequently, it has been argued that a permanent panel body is necessary and inevitable.⁹²

In the Airbus-Boeing subsidy disputes, there were also issues with the panel and appellate procedures. The main problem was that the penal and appellate procedures were much longer than the time limit under the dispute settlement mechanism.⁹³ The fast-paced timetables for subsidy disputes in the SCM Agreement were not followed in aircraft subsidy disputes. For instance, in respect of the composition of the dispute settlement panel, delays were incurred as the US and the EU could not agree on panellists.⁹⁴ The panel procedure of the Airbus-Boeing disputes took about five years, which was far longer than the normal time limit set forth in the DSU. In both of the Airbus-Boeing cases, the panel informed the DSB several times that it was not able to complete its work due to the substantive and procedural complexities involved in the dispute.⁹⁵ The Appellate Body also informed the DSB that it could not issue its report within the general time limit of 60 days due to the considerable size and the complexity of the appeal.⁹⁶ The long-lasting

⁹¹ See, for instance, Wolff (n 87), at 422.

⁹² Davey (n 86), at 17.

⁹³ Lee (n 44), at 138.

⁹⁴ Ibid, at 138. In an interesting twist, the then WTO Director-General Pascal Lamy rescued himself from appointing the panellists due to his previous position as the EU trade commissioner. One of the WTO Deputy Direct-General made the selections to appoint the panel members. Panel Report, *EC - Aircraft*, WT/DS316/R, para. 1.5; Panel Report, *US - Aircraft*, WT/DS353/R, para. 1.5. See also Alan Beattie, 'Lamy Waives Right to Name WTO Panel' *Financial Times* (8 October 2005).

⁹⁵ As regards *EC - Aircraft*, see Communication from the Chairman of the Panel, *EC - Aircraft*, WT/DS316/7; Communication from the Chairman of the Panel, *EC - Aircraft*, WT/DS316/9; Communication from the Chairman of the Panel, *EC - Aircraft*, WT/DS316/10; Communication from the Chairman of the Panel, *EC - Aircraft*, WT/DS316/11. As regards *US - Aircraft*, see Communication from the Chairman of the Panel, *US - Aircraft*, WT/DS353/4; Communication from the Chairman of the Panel, *US - Aircraft*, WT/DS353/5; Communication from the Chairman of the Panel, *US - Aircraft*, WT/DS353/6; Communication from the Chairman of the Panel, *US - Aircraft*, WT/DS353/7.

⁹⁶ Communication from the Appellate Body, *EC - Aircraft*, WT/DS316/14; Communication from the Appellate Body,

process raised some doubt as to the effectiveness of the WTO dispute settlement mechanism.⁹⁷

5.5 Implementation and Compliance

After panel or Appellate Body reports are adopted by the DSB, the next and also the last major step under the WTO dispute settlement mechanism is to implement the DSB rulings and recommendations. Prompt compliance with the rulings and recommendations of the DSB is essential in order to ensure effective resolution of disputes to the benefit of all WTO members.⁹⁸

According to the DSU, within 30 days of the adoption of panel or Appellate Body reports, the member concerned should inform the DSB of its intentions to implement the recommendations and rulings.⁹⁹ However, if immediate implementation is impracticable, the member concerned will be given a 'reasonable period of time' for the implementation.¹⁰⁰ This reasonable period of time should be mutually agreed on by the parties to the dispute. If such agreement cannot be reached, the original complaining party can refer the matter to arbitration.¹⁰¹ Before the expiry of the reasonable period of time, the respondent must bring the non-conforming measures into conformity with the agreement at

US - Aircraft, WT/DS353/11.

⁹⁷ For instance, see William J. Davey, 'WTO Dispute Settlement: Promise Fulfilled?' in Inge Govaere, Reinhard Quick and Marco Bronckers (eds), *Trade and Competition Law in the EU and Beyond* (Edward Elgar Publishing Limited 2011), at 201.

⁹⁸ Article 21:1 of the DSU.

⁹⁹ Article 21:3 of the DSU.

¹⁰⁰ Article 21:3 of the DSU.

¹⁰¹ Article 21:3 of the DSU. The reasonable period of time should not exceed 15 months, which may be shorter or longer depending on the specific circumstances. A range of 8 to 10 months of the reasonable period of time is average. Jackson, Davey and Sykes (n 3), at 266.

issue.¹⁰²

In the event that the losing party fails to implement the recommendations within the reasonable period of time, the prevailing party could seek compensation from it.¹⁰³ If mutually acceptable compensation is not agreed upon within 20 days after the expiry of the reasonable period of time, the prevailing party may request authorisation from the DSB to suspend concessions or other obligations previously made to the losing party.¹⁰⁴ Upon request, the DSB should grant the authorisation unless it decides by consensus not to do so.¹⁰⁵ The authorisation of suspension of concessions is thus quasi-automatic due to this reverse consensus approach. This is different from the GATT practice, where the losing party could block the authorisation unilaterally.¹⁰⁶

In disputes over the use of subsidies, the adjudicating bodies will recommend the subsidising member to withdraw the subsidies at issue or remove their adverse effects. As regards prohibited subsidies, the subsidising member should withdraw the subsidy without delay. According to the SCM Agreement, the panel must specify the time-period within which the measure must be withdrawn.¹⁰⁷ Therefore, the subsidising member is not given 'a reasonable period of time' to bring its measure in consistency with the WTO rules, as is the case under the DSU.¹⁰⁸ Moreover, the subsidising member has no option other than to withdraw the prohibited subsidies, while the DSU allows the losing party to determine how

¹⁰² Bossche (n 2), at 300.

¹⁰³ Article 22:2 of the DSU. The compensation is not a cash pay-off but a benefit such as a tariff reduction offered to the prevailing member. WTO Secretariat, *A Handbook on the WTO Dispute Settlement System* (Cambridge University Press 2004), at 80.

¹⁰⁴ Article 22:2 of the DSU.

¹⁰⁵ The DSB should grant the authorisation within 30 days of the expiry of the reasonable period of time. Article 22:6 of the DSU.

¹⁰⁶ Jackson, Davey and Sykes (n 3), at 266.

¹⁰⁷ Article 4.7 of the SCM Agreement.

¹⁰⁸ Dominic Coppens, *WTO Disciplines on Subsidies and Countervailing Measures: Balancing Policy Space and Legal Constraints* (Cambridge University Press 2014), at 201.

to bring its measures into conformity with WTO rules.¹⁰⁹ If the recommendation made by the DSB to withdraw the prohibited subsidies is not followed within the time-period specified by the panel, which commences from the date of adoption of the panel or appellate report, the DSB should grant authorisation to the complaining member to take countermeasures, unless it decides by consensus to reject the request.¹¹⁰

With respect to actionable subsidies, the subsidising member must take appropriate steps to withdraw the subsidies or remove the adverse effects of the subsidies. Therefore, the subsidising member does not have to withdraw the subsidy as long as it removes its adverse effects.¹¹¹ According to the SCM Agreement, this must be done within six months from the date of adoption of the panel or appellate report.¹¹² Instead of withdrawing the actionable subsidy at issue or removing its adverse effects, the complaining member could seek compensation with the subsidising member.¹¹³ If the subsidy is not withdrawn or its adverse effects are not removed, and if no agreement on compensation is reached within six months, the DSB should grant authorisation to the complaining member to take countermeasures upon request.¹¹⁴

According to the SCM Agreement, the level of the countermeasures should be appropriate, or commensurate with the degree and nature of the adverse effects of the subsidies.¹¹⁵ If the non-complying member objects to the level of the proposed countermeasures, the matter could be referred to arbitration pursuant to Article 22 of the

¹⁰⁹ According to Article 19:1 of the DSU, the panel or Appellate Body may suggest ways in which the Member concerned could implement the recommendations. *Ibid.*, at 201.

¹¹⁰ Article 4.10 of the SCM Agreement.

¹¹¹ Dominic Coppens (n 108), at 211.

¹¹² Article 7.9 of the SCM Agreement.

¹¹³ Article 7.9 of the SCM Agreement. As mentioned above, in the case of prohibited subsidies, the subsidising member is not allowed to choose compensation. It must withdraw the prohibited subsidies.

¹¹⁴ Article 7.9 of the SCM Agreement.

¹¹⁵ Article 4.10, 7.9 of the SCM Agreement.

DSU.¹¹⁶ The arbitrator will then determine whether the countermeasures are appropriate.

According to the DSU, full implementation of a recommendation to bring a measure into conformity with the covered agreements, namely withdrawal of the nonconforming measures, is preferred over compensation or suspension of concessions.¹¹⁷ The authorised suspension should be temporary and only be applied until nonconforming measures have been removed, or a mutually satisfactory solution is reached.¹¹⁸ The WTO Agreement also confirms the preference for the withdrawal of nonconforming measures, providing that each member should ensure the conformity of its laws, regulations and administrative procedures with its obligations under the WTO agreements.¹¹⁹ If there is disagreement regarding whether any implementing measures have been taken or whether the implementing measures satisfy the recommendations and rulings, the matter should be decided through recourse to a compliance panel.¹²⁰ Whenever possible, this compliance panel should be made up of the persons on the original dispute settlement panel.¹²¹ As the implementation procedure is vital to the WTO dispute settlement mechanism, the DSB will continue to monitor the implementation of its recommendations and rulings.¹²² The issue of implementation may be raised at the DSB at any time.¹²³

Under the WTO dispute settlement mechanism, there is no institutional machinery to enforce the DSB rulings and recommendations, for which the mechanism has been criticised.¹²⁴ Prompt implementation and compliance cannot always be guaranteed in the

¹¹⁶ Article 4.11 of the SCM Agreement.

¹¹⁷ Article 22:1 of the DSU.

¹¹⁸ Article 22:8 of the DSU.

¹¹⁹ Jackson, Davey and Sykes (n 3), at 267.

¹²⁰ Article 21:5 of the DSU.

¹²¹ Article 21:5 of the DSU.

¹²² Article 21 of the DSU.

¹²³ Article 21:6 of the DSU.

¹²⁴ Elimma C. Ezeani, *The WTO and Its Development Obligation: Prospects for Global Trade* (Anthem Press 2011),

WTO. The problems with implementation are even more serious in subsidy disputes concerning the civil aircraft industry.¹²⁵ This was clearly reflected by the earlier WTO disputes between Brazil and Canada regarding subsidies to the regional civil aircraft industry.

In *Brazil - Export Financing Programme for Aircraft (Brazil - Aircraft)*, Canada claimed that Brazil provided export subsidies for an indigenous manufacturer, Embraer under the Brazilian Programa de Financiamento às Exportações (PROEX) scheme.¹²⁶ The Brazilian government established the PROEX scheme in 1991 as an export-financing programme to reduce the interest rate paid by Embraer's foreign purchasers.¹²⁷ Payments were made under PROEX to the lending bank in the form of non-interest bearing national treasury bonds.¹²⁸ The lending bank then passed on the payment to the aircraft purchaser with reduced interest, and the payments never had to be repaid to the Brazilian government.¹²⁹ It was estimated that the PROEX scheme reduced the interest rate in the range of 3.5 to 3.8 percent per year over a 15-year period.¹³⁰ Consequently, the interest rate for purchasing Embraer aircraft was lower than the interest rate that the purchaser could obtain from commercial lenders to produce competing aircraft.¹³¹ According to an industry report, the PROEX scheme allowed airline customers to save up to \$3.5 million per aircraft.¹³² Brazil provided export financing of \$122 million in total for the regional

at 131.

¹²⁵ Lee (n 44), 152.

¹²⁶ Panel Report, *Brazil - Aircraft*, WT/DS46/R, para. 2.1.

¹²⁷ Oliver Stehmann, 'Export Subsidies in the Regional Aircraft Sector' (1999) 33 *Journal of World Trade* 97, at 104.

¹²⁸ Panel Report, *Brazil - Aircraft*, WT/DS46/R, para. 2.6. See also Stehmann (n 127), at 104.

¹²⁹ Stehmann (n 127), at 104.

¹³⁰ *Ibid.*, at 104.

¹³¹ *Ibid.*

¹³² Warburg Dillon Read, 'Regional Jets: Making Props Passe' (1998), at 17-18. See also Stehmann (n 127), at 105.

aircraft industry in 1997.¹³³

The Appellate Body upheld the panel's finding that the PROEX payments constituted prohibited export subsidies under Article 3.1(a) of the SCM Agreement.¹³⁴ As Brazil failed to implement the recommendations of the DSB, Canada was authorised to suspend tariff concessions or other obligations to Brazil under the GATT 1994 and other WTO agreements covering trade in a maximum amount of CAD 344.2 million per year.¹³⁵ This was one of the highest retaliatory awards ever authorised by the WTO.¹³⁶ However, these sanctions were never imposed by Canada because of Brazil's subsequent successful WTO litigation against it.¹³⁷

In *Canada - Measures Affecting the Export of Civilian Aircraft (Canada - Aircraft)*, Brazil fought back by claiming that Canada provided export subsidies to the Canadian regional aircraft manufacturer Bombardier.¹³⁸ Unlike Canada who only challenged one single export subsidy measure (the PROEX scheme), Brazil challenged a variety of measures taken by the Canadian government.¹³⁹ According to a study carried out for the Brazilian government, the present value of all subsidies granted by the Canadian government to Bombardier amounted to between \$1.9 billion and \$2.4 billion.¹⁴⁰

The panel in this case found that the financial assistance provided by the Canadian government to Bombardier under the Technology Partnership Canada (TPC) programme

¹³³ Stehmann (n 127), at 104.

¹³⁴ Appellate Body Report, *Brazil - Aircraft*, WT/DS46/ABR, para. 196; Appellate Body Report, *Brazil - Aircraft (Article 21.5 - Canada)*, WT/DS46/AB/RW, para. 82(b).

¹³⁵ These agreements included the Agreement on Textiles and Clothing and the Agreement on Import Licensing Procedures. See Arbitration Report, *Brazil - Export Financing Programme for Aircraft - Recourse to Arbitration by Brazil under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement*, WT/DS46/ARB, para. 4.1.

¹³⁶ Kern Alexander and Mads Andenæs (eds), *The World Trade Organisation and Trade in Services* (Martinus Nijhoff Publishers 2008), at 501.

¹³⁷ Lee (n 44), at 147.

¹³⁸ *Canada - Aircraft*, WT/DS70.

¹³⁹ Stehmann (n 127), at 110.

¹⁴⁰ These figures were highly disputed by Canada. Horst, Frisch, Clowery & Finan Inc, *Evaluation of Export Subsidies Received by Bombardier Inc. and Certain Suppliers* (1998).

and the Canada Account scheme constituted export subsidies that were prohibited under the SCM Agreement.¹⁴¹ The findings were upheld by the Appellate Body.¹⁴² Brazil was not able to request authorisation to take countermeasures because Canada implemented the DSB's recommendations.¹⁴³ However, this was not the end to Brazil's fight. It filed another case, namely *Canada - Export Credits and Loan Guarantees for Regional Aircraft* (*Canada - Aircraft Credits and Guarantees*), against Canada's financial support for the regional aircraft industry.¹⁴⁴ This provided Brazil with a counterweight for the sanctions in *Brazil - Aircraft*.¹⁴⁵ In this case, the panel found that certain loans to some Canadian aircraft companies, including Air Wisconsin, Air Nostrum and Comair, constituted prohibited export subsidies within the meaning of the SCM Agreement.¹⁴⁶ As Canada failed to implement the DSB's recommendations and rulings to withdraw the prohibited subsidies, Brazil was authorised to suspend concessions or other obligations covering trade in a total amount of approximately \$248 million.¹⁴⁷

The Canada-Brazil aircraft subsidy dispute exposed definitive violations of the SCM Agreement, yet yielded no results.¹⁴⁸ The recommendations and rulings to withdraw the export subsidies in *Brazil - Aircraft* and *Canada - Aircraft Credits and Guarantees* were not implemented by either side. Both Canada and Brazil continued to subsidise their civil aircraft industry after the WTO rulings. Moreover, although both sides were authorised by

¹⁴¹ Panel Report, *Canada - Aircraft*, WT/DS70/R, para. 10.1.

¹⁴² Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 220.

¹⁴³ Appellate Body Report, *Canada - Aircraft (Article 21.5 - Brazil)*, WT/DS70/AB/RW, para. 53.

¹⁴⁴ *Canada - Aircraft Credits and Guarantees*, WT/DS222.

¹⁴⁵ Lee (n 44), at 148.

¹⁴⁶ Panel Report, *Canada - Aircraft Credits and Guarantees*, WT/DS222/R, para. 8.1.

¹⁴⁷ Arbitration Report, *Canada - Export Credits and Loan Guarantees for Regional Aircraft - Recourse by Canada to Article 22.6 of the DSU and Article 4.11 of the SCM Agreement*, WT/DS222/ARB, para. 4.1.

¹⁴⁸ Lee (n 44), at 148; Deutsche Bank Research, 'Boeing v Airbus: The WTO Dispute That Nither Can Win' (2007), at 8.

the DSB to take countermeasures, neither of them implemented the retaliation.¹⁴⁹ This was mainly because neither side was interested in sparking an outright trade war. They were aware that the retaliation was impractical because the parties, the claims and the industry groups involved in these cases were the same.¹⁵⁰ If one party took retaliatory measures, it would probably face reciprocal sanctions from the other side.¹⁵¹ As a result, they opted for further negotiations and tried to settle the problem outside the WTO framework.¹⁵²

The disputes were eventually resolved outside the WTO framework after Brazil joined the Sectoral Understanding on Civil Aircraft of the Arrangement on Guidelines for Officially Supported Export Credits (OECD Arrangement).¹⁵³ The OECD Agreement sets standards for the use of officially supported export credits, and aims to foster a level playing field for official government support.¹⁵⁴ Canada was an original contracting party of the OECD Arrangement. According to the 'safe haven' clause of the SCM Agreement, government interest rates that are consistent with the OECD Arrangement should not be considered as export subsidies by the SCM Agreement.¹⁵⁵

The Bombardier-Embraer disputes reflected to a certain extent the ineffectiveness of the WTO dispute settlement mechanism in dealing with aircraft subsidy disputes. Although the scale and level of subsidisation involved in the Bombardier-Embraer subsidy disputes

¹⁴⁹ Juan He, 'WTO-plus Commitments and Emerging Implications for China's Large Civil Aircraft Manufacturing' (2014) 13 World Trade Review 517, at 536. See also Helena D Sullivan, 'Regional Jet Trade Wars: Politics and Compliance in WTO Dispute Resolution' (2003) 12 Minnesota Journal of Global Trade 71, at 95; Raphael Minder and Edward Alden, 'War of Aircraft Titans Gives WTO Biggest Case' *Financial Times* (1 June 2005); Lee (n 44), at 148.

¹⁵⁰ Kern Alexander and Mads Andenæs (n 136), at 502.

¹⁵¹ Ibid, at 502.

¹⁵² Ibid, at 502.

¹⁵³ He (n 149), at 536; Deutsche Bank Research (n 148), at 8.

¹⁵⁴ OECD, *The Export Credit Arrangement: Achievements and Challenges* (OECD Publishing 1998), at 9; OECD Arrangement on Guidelines for Officially Supported Export Credits, available at <<http://www.oecd.org/tad/xcrced/theexportcreditsarrangementtext.htm>> accessed 17 May 2015. The Sector Understanding on Export Credits for Civil Aircraft (Aircraft Sector Understanding) was annexed to the OECD Arrangement in 1986, amended in 2007, effective as of 1 July 2007.

¹⁵⁵ Item (k), Annex I of the SCM Agreement.

were smaller compared with the Airbus-Boeing disputes, there were clear similarities between the two series of disputes.

First, the Airbus-Boeing disputes and the Bombardier-Embraer disputes are both concerned with subsidies in the civil aircraft industry. The regional civil aircraft industry has many characteristics that are similar with the LCA industry. For instance, the entry barriers to the regional aircraft sector are also very high. Like the LCA industry, it demands huge R&D costs and capital investment. In addition, the regional aircraft industry is also highly concentrated. Bombardier occupies approximately half of the global market for 20 to 90 seat regional jets.¹⁵⁶ Founded as a state-owned company,¹⁵⁷ Embraer has gradually become the second largest regional aircraft manufacturer worldwide after its privatisation in 1994.¹⁵⁸ With the certification of the ERJ-145 and the ERJ-135, Embraer has secured its leading position in the global regional aircraft market.¹⁵⁹

Secondly, the regional aircraft industry is also a key industry and of great importance for the countries involved. The regional aircraft manufacturers were main earners of export revenue and large national employers in Canada and Brazil.¹⁶⁰ They were considered a symbol of national pride due to their significance in economic and social development,¹⁶¹ like Airbus in the EU and Boeing in the US. As a result, the industry is also subject to great government subsidisation. In view of the foregoing, the Bombardier-Embraer subsidy disputes could provide some clues for how the Airbus-Boeing disputes and possible future aircraft subsidy disputes will be resolved. In light of the Canada-Brazil dispute and the

¹⁵⁶ Stehmann (n 127), at 99.

¹⁵⁷ Ibid, at 99.

¹⁵⁸ Ibid, at 100.

¹⁵⁹ Lael Brainard and Leonardo Martinez-Diaz, *Brazil As an Economic Superpower? Understanding Brazil's Changing Role in the Global Economy* (Brookings Institution Press 2009), at 168.

¹⁶⁰ Stehmann (n 127), at 97.

¹⁶¹ Ibid, at 97.

uniqueness of the large civil aircraft industry, it is unlikely that the WTO will be able to fully implement the rulings and recommendations in the Airbus-Boeing disputes.¹⁶²

5.6 Rethinking the WTO Dispute Settlement Mechanism in the Context of Disputes over Subsidies in the Civil Aircraft Industry

There is no doubt that the WTO dispute settlement mechanism achieved great improvements compared with its predecessor in the GATT period. Compared with the fragmented GATT dispute settlement system, the WTO dispute settlement mechanism is an integrated system.¹⁶³ The DSU regulates dispute settlement under all covered WTO agreements and provides consistent dispute settlement rules and procedures.¹⁶⁴ Thus, ‘forum shopping’ during the GATT period is no longer a problem under the WTO dispute settlement mechanism.¹⁶⁵

Moreover, due to the ‘negative consensus’ approach discussed above, the WTO dispute settlement mechanism embodies some compulsory and quasi-automatic components by nature.¹⁶⁶ The establishment of panels, the adoption of panel and Appellate Body reports, and the authorisation to take countermeasures are in fact quasi-automatic.¹⁶⁷ This is an important improvement compared with the GATT dispute settlement system, where a losing party would block the dispute settlement process.¹⁶⁸

¹⁶² Lee (n 44), at 148.

¹⁶³ Petersmann (n 4), at 55.

¹⁶⁴ Article 1:1 of the DSU. According to the DSU, the applicability of the DSU to the Plurilateral Trade Agreements shall be subject to the adoption of a decision by the parties to each agreement setting out the terms for the application of the DSU to the individual agreement.

¹⁶⁵ Petersmann (n 4), at 55.

¹⁶⁶ Ibid, at 63.

¹⁶⁷ Article 6:1, Article 16:4, Article 17:4, Article 22:6 of the DSU.

¹⁶⁸ Petersmann (n 4), at 61.

In addition, the fundamental notion of dispute settlement in the WTO has developed from a largely diplomatic, power-based system to a more adjudicative, rule-based system.¹⁶⁹ The previous GATT dispute settlement system had already begun to evolve from a power-oriented system to a rule-oriented one, and the WTO has advanced this even further. In this regard, the DSU stipulates that all solutions to dispute settlement matters should be consistent with the covered agreements, and should not nullify or impair benefits accruing to any member under those agreements, nor impede the attainment of any objective of those agreements.¹⁷⁰

Due to the foregoing reasons, the WTO dispute settlement mechanism has generally been regarded as effective in resolving disputes between WTO members. However, problems still exist. First, although the WTO dispute settlement mechanism demonstrates more judicial characteristics, the diplomatic nature of the mechanism still remains.¹⁷¹ This could be reflected by the dispute settlement methods such as consultation, good offices, conciliation, and mediation. These methods feature the flexibility of the procedures, the control over the dispute by the parties, and their freedom to accept or reject a proposed settlement.¹⁷² As a result, the effectiveness of such methods may be limited.

Secondly, the WTO dispute settlement process is considered too long. For instance, from the establishment of the panel, the complaining member may wait more than 30 months or even longer for implementation. Moreover, the losing party could thwart compliance through continual recourse to Article 21.5 and Article 22.6 of the DSU. This would happen when the losing party firmly resists the WTO rulings, thus severely

¹⁶⁹ Jackson, Davey and Sykes (n 3), at 246.

¹⁷⁰ Article 3:5 of the DSU.

¹⁷¹ Petersmann (n 4), at 32.

¹⁷² *Ibid.*, at 33.

prolonging the dispute settlement process. Resolving disputes in a timely and structured manner is at the heart of the WTO dispute settlement mechanism.¹⁷³ In this way, the WTO dispute settlement system can assist in preventing the detrimental effects of unresolved international trade conflicts.¹⁷⁴ The delays in the dispute settlement procedure may negatively affect the effectiveness of the WTO dispute settlement mechanism in dealing with subsidy disputes concerning the civil aircraft industry. For instance, it has even been argued that governments should make use of all possible subsidies in the short term even though they are illicit under WTO rules.¹⁷⁵ This is because, even if a WTO member gets an unfavourable ruling, it will take a long time to finish a lawsuit before the member is required to withdraw these subsidies.

The Canada-Brazil aircraft disputes had undergone all the procedures of the WTO dispute settlement mechanism, from consultation to implementation, compliance and arbitration procedures. Similarly to what happened in the Canada-Brazil cases, both the EU and the US disagreed as to whether the other side had implemented the recommendations and rulings of the DSB. As a result, compliance panels were established in both *EC - Aircraft* and *US - Aircraft*.¹⁷⁶ Not surprisingly, due to the substantive and procedural complexities of the dispute, the panel in *EC - Aircraft* informed the DSB that it was not able to complete its work in 2014. The panel expected to complete its work by the end of 2014.¹⁷⁷ In October 2014, the panel informed the DSB again that it expected to complete

¹⁷³ Yonov Frederick Agah, 'WTO Dispute Settlement Body Developments in 2010: An Analysis' (2012) 4 Trade, Law and Development 241, at 250.

¹⁷⁴ Ibid, at 250.

¹⁷⁵ He (n 149), at 537.

¹⁷⁶ Note by the Secretariat, *EC - Aircraft - Recourse to Article 21.5 of the DSU by the US - Constitution of the Panel*, WT/DS316/24; Note by the Secretariat, *US - Aircraft - Recourse to Article 21.5 of the DSU by the EU - Constitution of the Panel*, WT/DS353/21.

¹⁷⁷ Communication from the Panel, *EC - Aircraft - Recourse to Article 21.5 of the DSU by the US*, WT/DS316/26.

its work by the end of 2015.¹⁷⁸ Likewise, the panel in *US - Aircraft* first informed the DSB that, due to the scale and complexity of the dispute, it expected to finish its work within the first half of 2014.¹⁷⁹ On 27 May 2014, the panel again informed the DSB that it could not complete its work before the middle of 2015.¹⁸⁰ On the latest notice to the DSB, the panel stated that it will not be in a position to complete its work before the mid of 2016.¹⁸¹ The Airbus-Boeing cases have been in the WTO for more than ten years, and will likely linger some more.

Thirdly, the WTO dispute settlement mechanism may lead to no result when dealing with subsidy disputes concerning the civil aircraft industry.¹⁸² In the Airbus-Boeing disputes, the US and the EU have both requested authorisation by the DSB to take countermeasures under the DSU and the SCM Agreement, as they believed that the other side failed to implement the DSB recommendations and rulings.¹⁸³ However, because they disagreed with the level of suspension of concessions, in both cases the matter has been referred to arbitration according to Article 22.6 of the DSU. As the compliance panel has not issued its report, the Arbitrator was requested to suspend the arbitration proceedings.¹⁸⁴ According to the agreement between the EU and the US, if the DSB rules that the implementation measures are not consistent with the recommendations and rulings, either party may request the Arbitrator to resume its work.

In view of the above, it is likely that the Airbus-Boeing disputes will develop along

¹⁷⁸ Communication from the Panel, *EC - Aircraft - Recourse to Article 21.5 of the DSU by the US*, WT/DS316/27.

¹⁷⁹ Communication from the Panel, *US - Aircraft - Recourse to Article 21.5 of the DSU by the EU*, WT/DS353/23.

¹⁸⁰ Communication from the Panel, *US - Aircraft - Recourse to Article 21.5 of the DSU by the EU*, WT/DS353/24.

¹⁸¹ Communication from the Panel, *US - Aircraft - Recourse to Article 21.5 of the DSU by the EU*, WT/DS353/25.

¹⁸² Lee (n 44), at 156.

¹⁸³ Note by the Secretariat, *EC - Aircraft - Recourse to Article 22.6 of the DSU by the EU*, WT/DS316/20; Note by the Secretariat, *US - Aircraft - Recourse to Article 22.6 of the DSU by the US*, WT/DS353/20.

¹⁸⁴ Communication from the Arbitrator, *EC - Aircraft - Recourse to Article 22.6 of the DSU by the US*, WT/DS316/22; Communication from the Arbitrator, *US - Aircraft - Recourse to Article 22.6 of the DSU by the EU*, WT/DS353/22.

the same route with the previous disputes between Canada and Brazil: the two sides disagree with the compliance and the level of suspension of concessions, and the disputes would undergo all the procedures of the WTO dispute settlement mechanism.¹⁸⁵ Moreover, it is unlikely that the DSB rulings and the countermeasures will be implemented by any party in the Airbus-Boeing disputes.¹⁸⁶ As mentioned above, there is no institutional machinery under the WTO to enforce the DSB rulings and recommendations. There are also no direct sanctions imposed on a WTO member who defaults on implementing the DSB recommendations and rulings.¹⁸⁷ When a losing member resists a ruling, the DSB can only authorise the complaining party to suspend concessions. Therefore, the multilateral remedies for non-compliance under the WTO dispute settlement mechanism in fact rely on the individual complainant to act as an enforcer.¹⁸⁸ However, in disputes over aircraft subsidies, both sides were equal in terms of having subsidised the industry illegally, so they will both be authorised to suspend concessions. In that situation, compliance of the violating party is supposed to be enforced by a party who is also guilty of the same violation.¹⁸⁹ The result is thus probably non-compliance, as neither side would be interested in starting a severe trade war.¹⁹⁰ In consequence, the WTO dispute settlement mechanism would fail. The utility of the multilateral remedies under the WTO dispute settlement mechanism is thus dubious when dealing with subsidies in the civil aircraft industry.¹⁹¹

As outlined in chapter two, there are two kinds of remedies to illicit foreign subsidies,

¹⁸⁵ This has been discussed by Lee (n 44), at 156.

¹⁸⁶ Ibid, at 157.

¹⁸⁷ Elimma C. Ezeani (n 124), at 131.

¹⁸⁸ Lee (n 44), at 153.

¹⁸⁹ Ibid, at 153.

¹⁹⁰ Ibid, at 157.

¹⁹¹ Ibid, 153.

including multilateral remedies and unilateral remedies. The rules for taking unilateral countervailing duties measures are set out in the SCM Agreement. As an important kind of remedy to illegal subsidies, a WTO member is allowed to impose countervailing duties to offset the injuries caused by subsidised imports to its domestic industry.¹⁹² However, this unilateral method has never been utilised by any party in subsidy disputes concerning the civil aircraft industry. This is unusual because the unilateral remedies have been generally preferred by WTO members.¹⁹³ The reason for this was probably the same as why authorised countermeasures were never taken in these disputes. If any member took unilateral countervailing duty measures, a vicious trade war might be triggered, considering the huge amount of subsidisation involved in the disputes. As a result, unilateral remedies prescribed in the SCM Agreement would not work in aircraft subsidy disputes.

Finally, the DSU does not provide retroactive remedies; it only provides remedies for non-compliance with the rulings and recommendations of the DSB.¹⁹⁴ In accordance with the DSU, retaliatory measures will not be authorised if the losing party implement the DSB rulings and recommendations.¹⁹⁵ According to the panel in *US - Import Measures on Certain Products from the EU*, 'retroactive remedies are alien to the long established GATT/WTO practice where remedies have traditionally been prospective'.¹⁹⁶ Therefore, the WTO dispute settlement mechanism cannot provide remedies for past and consummated violations. If a WTO member brings its subsidy measures into conformity

¹⁹² Dominic Coppens (n 108), at 197.

¹⁹³ Michael Trebilcock, Robert Howse and Antonia Eliason, *The Regulation of International Trade* (4th edn, Routledge 2012), at 873.

¹⁹⁴ Xiaowen Zhang, 'Settling Trade Disputes under the Shadow of WTO Adjudication' (PhD Thesis, University of Southern California 2007), at 191.

¹⁹⁵ Patricio Grané, 'Remedies Under WTO Law' (2001) 4 *Journal of International Economic Law* 755, at 766.

¹⁹⁶ Panel Report, *US - Certain EC Products*, WT/DS165/R, para. 6.106. See also Grané (n 195), at 766.

with the SCM Agreement, the inconsistent measures it had previously taken will not be sanctioned. The problem may become more serious due to the defending party's arbitrary delay of the dispute settlement process, during which the inconsistent measures continues hurting the interests of the complaining party.¹⁹⁷ This also affected the effective resolution of subsidy disputes concerning the civil aircraft industry, considering the long-lasting dispute settlement process in these disputes.

On the basis of the foregoing, the WTO dispute settlement mechanism, which is generally regarded as successful, has not proved its effectiveness in dealing with aircraft subsidy disputes despite full litigation. The reason for the ineffectiveness lies fundamentally in the significance and the uniqueness of the civil aircraft industry. The civil aircraft manufacturers in both the EU and the US have received government subsidies that are inconsistent with WTO subsidy rules, and the situation is probably the same for the other civil aircraft manufacturing countries. This thus limits the role that the mechanism can play in dealing with aircraft subsidy disputes. As major trading countries in the WTO, the failure of the US and the EU to comply with the DSB recommendations and their (likely) reluctance to take authorised countermeasures in the Airbus-Boeing disputes would undermine the WTO dispute settlement system. This may even damage the overall reputation of the WTO as a credible forum for international trade regulation.

5.7 Conclusion

The WTO dispute settlement mechanism has played a significant role in resolving

¹⁹⁷ Xiaowen Zhang (n 194), at 191.

trade disputes between WTO members. As a whole, the mechanism is considered effective and successful. There is a good record of implementation and compliance of DSB rulings and recommendations under the mechanism. However, the WTO dispute settlement mechanism has not proved its effectiveness in dealing with subsidy disputes concerning the civil aircraft industry. The consultations under the mechanism did not work for reaching a mutually accepted solution. The lengthiness of the panel and appellate procedures further impacts upon the effectiveness of the dispute settlement mechanism in dealing with such disputes. More importantly, the implementation of DSB rulings and recommendations in disputes over aircraft subsidies is problematic.¹⁹⁸ Under the dispute settlement mechanism, the WTO cannot enforce compliance.¹⁹⁹ When a losing member resists a ruling, it relies on the individual complainant to serve as an enforcer, namely to take the authorised countermeasures.²⁰⁰ However, in disputes over aircraft subsidies, the disputing parties are equal in terms of having subsidised the industry illegally. As a result, compliance under the dispute settlement mechanism is supposed to be enforced by a party who is also guilty of the same violation.²⁰¹ In such cases, the result is more likely to be noncompliance, as it is in the best interest of each side to refrain from engaging in a trade war. Similarly, the unilateral route of imposing countervailing duties under the SCM Agreement is also not practical in dealing with subsidies in the civil aircraft industry.

It has been more than one decade since the Airbus-Boeing disputes were brought to the WTO dispute settlement mechanism. Although the final outcome of the disputes is yet

¹⁹⁸ Lee (n 44).

¹⁹⁹ Marc L. Busch and Krzysztof J. Pelc, 'Dispute Settlement in the WTO' in Lisa L. Martin (ed), *The Oxford Handbook of the Political Economy of International Trade* (Oxford University Press 2015), at 402.

²⁰⁰ Lee (n 44), at 153.

²⁰¹ *Ibid.*, at 153.

to be seen at the time of the writing of this thesis, it is likely that the disputes will go along the same route as the previous Brazil-Canada aircraft disputes. In that case, neither the DSB rulings in the disputes will be implemented by the two sides nor will the authorised countermeasures be taken. In sum, for the reasons identified, it is here concluded that the WTO dispute settlement mechanism is not fully effective in resolving disputes over the use of subsidies in the civil aircraft industry.

Chapter 6 - Subsidies in the Civil Aircraft Industry in China

6.1 Introduction

The previous chapters demonstrated that the historical and ongoing subsidy issues in the civil aircraft industry are complex and difficult to deal with. However, these issues may become more intractable as additional countries join the market. A number of countries have entered or expect to enter the LCA market. China, among others, is expected to become a major civil aircraft manufacturer in the years ahead.¹ Compared with the US and the EU, China's civil aircraft industry remains relatively underdeveloped. However, China has commenced efforts to build up an indigenous large civil aircraft industry. The establishment of the state-owned Commercial Aircraft Corporation of China (COMAC) indicated the official launch of China's large aircraft project, and reflected China's resolution to nurture its own LCA manufacturer.

The development of China's civil aircraft industry will almost certainly have an impact on the market of the incumbent players. Like Airbus and Boeing, COMAC has received various kinds of subsidies from the government. The industry has been listed as a strategic emerging industry by the Chinese government. However, the subsidy schemes and measures concerning the industry involve great legal uncertainties under WTO subsidy rules. The incumbent players may challenge China's aircraft subsidies for the purpose of keeping their dominant positions in the market. However, even so, it is unlikely that the

¹ Keith Crane and others, *The Effectiveness of China's Industrial Policies in Commercial Aviation Manufacturing* (Rand Corporation 2014), at 66.

government will stop subsidising the industry due to its significance for China. A government regulation concerning the development of the civil aircraft industry has been listed in the legislative plan of the State Council, and will be the main legal basis for government support in the industry once finished.

This chapter first provides an introduction to the civil aircraft industry in China, including its development history, the significance of the industry and the basis for its further development in China. After that, this chapter investigates the subsidy regime and the main subsidy measures regarding the industry in China. In particular, their compatibility with WTO subsidy rules will be analysed from a legal perspective. Finally, this chapter discusses the Regulation on the Development of the Civil Aircraft Industry, which is being enacted by the State Council, and its possible legal consequences under WTO subsidy rules.

6.2 Overview of the Civil Aircraft Industry in China

6.2.1 Development of China's Civil Aircraft Industry

As discussed in chapter three of this thesis, the global civil aircraft market has been dominated by the US and the EU for a long time. However, with the recognition of the significance of the industry, as well as the development of air transport, it is likely that more countries will compete in the global large civil aircraft market.² China is one of them.

² Derek A. Levine, *The Dragon Takes Flight: China's Aviation Policy, Achievements, and International Implications* (Brill 2015), at 59.

China's civil aircraft manufacturing started from the beginning of 1950s. The industry was firstly geared toward producing mainly military aircraft, but civil aircraft manufacturing also receive some limited attention. The first types of civil aircraft built in China were used for limited passenger transport on short routes, as well as agriculture, forestry and other primary industries.³ By 1978, civil aircraft only accounted for 6.5 percent of total aviation production in China.⁴ Since the late 1970s, China attempted to build its indigenous aviation capabilities, including those of making large civil aircraft.⁵ However, the first attempts were not so successful. The birth of a successful indigenous LCA was plagued by a variety of policy and technological problems.⁶ Although China did make its first LCA Y-10, a Boeing-707 style aircraft, it was not commercially viable for competing in the global LCA market.⁷ The Y-10 project was suspended after only two Y-10 airplanes were produced, and the project proved to be a major commercial failure with safety concerns.⁸

The reasons for the frustration in the industry were complicated. Among others, an important one was the lack of consistency in China's regulatory and industrial policies concerning the civil aircraft industry.⁹ There used to be multiple government authorities that could affect policy decision-making regarding the industry.¹⁰ Frictions between these

³ The aircraft, such as the Yun-5, Yun-7, were based on Soviet aircraft types. They had limited transport capability and could only serve regional flight. Mark Dougan, *A Political Economy Analysis of China's Civil Aviation Industry* (Routledge 2002), at 50.

⁴ Ibid, at 50.

⁵ Peter Andersen, 'China's Growing Market for Large Civil Aircraft' (Office of Industries Working Paper, United States International Trade Commission 2008), at 7.

⁶ Juan He, 'WTO-plus Commitments and Emerging Implications for China's Large Civil Aircraft Manufacturing' (2014) 13 *World Trade Review* 517, at 519.

⁷ Peter Andersen (n 5), at 7.

⁸ Andrea Goldstein, 'The Political Economy of Industrial Policy in China: The Case of Aircraft Manufacturing' (2006) 4 *Journal of Chinese Economic and Business Studies* 259, at 260.

⁹ Ibid, at 271.

¹⁰ These government departments including the Commission of Science, Technology, and Industry for National Defence (COSTIND), which was merged into the Ministry of Industry and Information Technology in March 2008 and renamed as the State Administration for Science, Technology and Industry for National Defence (SASTIND), the State Asset Supervision and Administration Commission (SASAC), and the National Development and Reform Commission (NDRC) of China and so on. See *ibid*, at 261.

government authorities were rife.¹¹ As a result, the development of the industry lacked clear strategic guidelines. The regulatory inconsistency also pushed aircraft companies into pursuing short-term returns and excessive diversification, rather than developing strong corporate competencies and building inter-firm relationships.¹² As a result, the potential of China to build a promising LCA industry was largely discounted.¹³

However, with the development of China's economy and air transport market, the significance of the civil aircraft industry, especially the LCA industry, has been fully recognised in China.¹⁴ China is determined to promote the industry and become a top player in the industry with global competitiveness. In 2007, a State Council Executive Committee meeting approved the proposal regarding a new jumbo aircraft programme and urged all concerned parties to start their endeavours as soon as possible.¹⁵ In 2008, the state-owned Commercial Aircraft Corporation of China (COMAC) was formed.¹⁶ The establishment of COMAC indicated the official launch of China's LCA project and reflected well the ambition of China.¹⁷ The company functions as the main vehicle in operating the LCA programme, including aircraft research and development, key parts production, final assembly, marketing, customer services, airworthiness certification and financial leasing.¹⁸ The LCA produced by COMAC, namely the C919, is scheduled to

¹¹ Ibid, at 261.

¹² Ibid, at 271.

¹³ Ibid, at 261.

¹⁴ Peter Nolan and Jin Zhang, 'The Challenge of Globalization for Large Chinese Firms' (2002) 30 *World Development* 2089, at 2099.

¹⁵ 'State Council Gives Go-Ahead to Develop Large Passenger Jets' *China Daily* (18 March 2007). See also Juan He, *The WTO and Infant Industry Promotion in Developing Countries: Perspectives on the Chinese Large Civil Aircraft* (Routledge 2014), at 193.

¹⁶ COMAC is jointly invested by the State-Owned Assets Supervision and Administration Commission (SASAC) of the State Council, as well as several state-owned enterprises including Shanghai Guo Sheng (Group) Company Limited, Aviation Industry Corporation of China (AVIC), Aluminum Corporation of China Limited, Baosteel Group Corporation, and Sinochem Corporation. The company headquartered in Shanghai. See Keith Crane and others (n 1), at 25.

¹⁷ Royal Aeronautical Society, 'The Chinese Aerospace Industry: A Background Paper' (2013), at 7.

¹⁸ Besides COMAC, there are also other aircraft manufacturers in China, such as AVIC Xi'an Aircraft Industry (Group) Company Limited, AVIC Chengdu Aircraft Industrial (Group) Company Limited. Most of the other aircraft firms are

make its first flight in 2015 and will be available for delivery in 2020.¹⁹ The C919 was intended to compete with Boeing and Airbus' similar aircraft models, such as Boeing 737 and Airbus A320.²⁰

6.2.2 Significance of the Civil Aircraft Industry in China

The foregoing demonstrates that the significance of the industry has been fully realised in China. The Chinese President Xi Jinping stressed in his visit to COMAC that China must develop its own large civil aircraft no matter how difficult it is.²¹ The civil aircraft industry has been described as a national strategic industry, which is of great importance in terms of national economy, technology innovation and national defence.²²

First, a successful civil aircraft industry, in particular the LCA industry, is considered to be a reflection of national prestige in China. The LCA project was even regarded as being as significant as the development of China's first satellite or atomic bomb.²³ This could be reflected to some extent by the name of the large civil aircraft C919. According to COMAC, the first letter of 'C919' is the first letter of both 'COMAC' and 'China', which indicates that this large civil aircraft program is the will of China and its people.²⁴

manufacturers of regional aircraft or military aircraft.

¹⁹ Richard A. Bitzinger, 'China's Commercial Aircraft Industry: Not So Fast' (2012) RSIS commentaries, at 2; John Olienyk and Robert J. Carbaugh, 'Boeing and Airbus: Duopoly in Jeopardy?' (2011) 11 *Global Economy Journal*, at 7. See also COMAC, 'COMAC Determines C919 Launch Customers and Obtains 100 Orders', available at <<http://english.comac.cc/news/latest>> accessed 8 March 2015.

²⁰ Daniel Vertesy, 'The Contours of the Global Commercial Aircraft Manufacturing Industry' in Sören Eriksson and Harm-Jan Steenhuis (eds), *The Global Commercial Aviation Industry* (Routledge 2015), at 1.

²¹ Zhao Lei, 'Xi Calls for Large Aircraft to Boost Power' *China Daily* (25 May 2014).

²² 'Large Airplane of Great Significance' *People's Daily* (21 March 2007), available at <http://english.peopledaily.com.cn/200703/21/eng20070321_359747.html> accessed 12 August 2014. See also He (n 6), at 520-21.

²³ Royal Aeronautical Society (n 17), at 7; COMAC (n 22).

²⁴ Phillip C. Saunders and Joshua K. Wiseman, 'China's Quest for Advanced Aviation Technologies' in Richard P. Hallion, Roger Cliff and Phillip C. Saunders (eds), *The Chinese Air Force: Evolving Concepts, Roles, and Capabilities* (National Defense University Press 2012), at 262.

Secondly, the civil aircraft industry is of great economic significance for China. This is the main reason why China is determined to develop an indigenous large civil aircraft industry.²⁵ The overall economic development in China provides the basis for the development of the indigenous large civil industry. As will be discussed below, the domestic aircraft market in China and the global market for civil aircraft both grow rapidly. There is a great market demand for civil aircraft, in particular single-aisle large civil aircraft.²⁶ The C919 has received around 400 orders from both Chinese and overseas airline clients.²⁷ The sales of civil aircraft would be an important economic growth point for China. Apart from the sales of aircraft, the development of an indigenous civil aircraft industry can also boost the growth of relevant industries in China, such as materials, information technologies, electronic and chemical engineering, due to the strong economic and technological spill-over effects of the industry. According to Boeing's research, every 1% increase in civil aircraft sales can simulate the national economic growth by 0.714%.²⁸ Therefore, the economic consideration is an important factor for developing the industry in China.

Thirdly, the significance of the civil aircraft industry also lies in its ability to boost science and technology advancement, thus helping China to upgrade the structure of the industrial sectors of its economy. Although the Chinese economy has made great progress since the 1980s, there are a variety of deep-rooted problems with regard to China's domestic industrial structure, such as shortage of investment in R&D activities, weakness

²⁵ He (n 6), at 521.

²⁶ Boeing, *Current Market Outlook (2014-2033)*, available at <http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing_Current_Market_Outlook_2014.pdf> accessed 15 August 2014.

²⁷ Derek A. Levine (n 2), at 7; Yan Meng and Yao Chun, 'China's C919 Large Airplane Schedule to Take First Flight in 2015' *People's Daily* (18 February 2014).

²⁸ Shanghai Municipal Commission of Economy and Informatisation, Shanghai Action Plan of the High-Tech Industrialisation of Civil Aviation Manufacturing Industry (8 September 2009).

in science and technology innovation and over-dependence on processing industry.²⁹ Therefore, a majority of Chinese companies and products are still at the lower end of the global industrial value chain. The growth of the Chinese economy has long been over-dependent on low-end manufacturing, assembly production and processing trade.³⁰ This problem is common for many developing countries.³¹ The Chinese government has fully realised this and has made efforts to cultivate modern high-tech industries with a more optimal structure, advanced technology and high-value products.³² In this regard, the development of the civil aircraft industry is of great importance.³³ The industry has high technology diffusion rate, and could thus promote the technological progress of many other relevant industries.³⁴ A successful indigenous civil aircraft industry is significant in terms of promoting technological progress, upgrading industrial structure in China, and enhancing China's position in the global value chain.³⁵

Fourthly, the development of the civil aircraft industry in China has been closely related to the national defence sector. Like in the US and the EU, there is a close connection between the civil and military aircraft sectors in China. As mentioned above, the development of China's aircraft industry was at first largely for military purposes.³⁶ There was no clear distinction between the civil and military aircraft sectors. Due to the close connection and the technological synergies between the two sectors, the capability of

²⁹ Rajah Rasiah, Thiruchelvam Kanagasundram and Keun Lee (eds), *Innovation and Learning Experiences in Rapidly Developing East Asia* (Routledge 2013), at 27.

³⁰ Tianran Wang and others, *Advanced Manufacturing Technology in China: A Roadmap to 2050* (Science Press Beijing 2012), at 91; Juan He (n 15), at 10.

³¹ He (n 6), at 518.

³² Ibid, at 518.

³³ Ibid, at 521.

³⁴ Aerospace Industries Association, *Technology Diffusion: The Movement of Technology between Aerospace and Other Industries* (AIA 1985).

³⁵ COMAC (n 22).

³⁶ Keith Crane and others (n 1).

building a large civil aircraft is regarded as important for strengthening China's national defence capabilities.³⁷

Finally, the significance of the civil aircraft industry in China is also embodied in its social value, such as creating job opportunities, enlarging employment and promoting higher education. Nowadays, the aircraft industry in China is already quite large-scale.³⁸ For instance, the Aviation Industry Corporation of China (AVIC) employs around 400,000 employees in more than 200 member companies and research institutes.³⁹ Employment in the civil aircraft industry and other relevant industries may continue to expand with the development of the industry.

6.2.3 Basis for Further Development of the Civil Aircraft Industry in China

As discussed in chapter three of this thesis, due to the extremely high entry barriers in the civil aircraft industry and the dominance of Airbus and Boeing, it will be very difficult and time-consuming for new players to achieve success in the industry. Some conditions, such as sufficient financial resources, technological capabilities, good infrastructure and talented human resources, are prerequisites for the smooth development of the industry. Although the significance of the civil aircraft industry has been fully recognised in China, the government would not be so determined to cultivate an indigenous LCA industry were it not for the following factors.

³⁷ Ministry of Industry and Information Technology of the PRC, Mid- and Long-Term Development Plan for the Civil Aviation Industry (2013-2020) (23 May 2013).

³⁸ Mark Dougan (n 3), at 100.

³⁹ Keith Crane and others (n 1), at 8. See also AVIC, 'Brief Introduction of the Aviation Industry Corporation of China', available at <<http://www.avic.com.cn/cn/EnglishVersion/Introduction/>> accessed 28 May 2015.

6.2.3.1 Growth of China's Economy

The first reason why China is so determined to develop the large civil aircraft industry is the overall growth of China's economy. As discussed in chapter three, the unique economic and competitive nature of the civil aircraft industry demands intensive capital investment, such as great up-front R&D spending. For its part, the government must be able to provide good infrastructure and upgrade its facilities and equipment continuously, such as roads, airports, electric supply, etc. Moreover, education and training system for highly skilled scientists and engineers is also of great importance. Such large capital requirement is usually beyond the capability of most private entities. Government investment is thus necessary for the development of the civil aircraft industry. However, only a strong economy could enable a government to mobilise various resources so as to promote the civil aircraft industry.

From the 1980s, China's economy has experienced fast development, with an average GDP growth rate of about 10 percent per year.⁴⁰ China has become the second largest economy in GDP terms and the largest goods exporter in the world.⁴¹ The national fiscal revenue of China reached RMB 14.035 trillion in 2014, an increase of 8.6 percent.⁴² The rapid growth of China's economy has led many analysts to speculate about when China

⁴⁰ World Bank, 'China Overview', available at <<http://www.worldbank.org/en/country/china/overview>> accessed 5 August 2014.

⁴¹ Ibid. China is also the second largest goods importer and the second most attractive destination for foreign direct investment. See WTO, 'Trade Profile of China', available at <<http://stat.wto.org/CountryProfile/WSDBCountryPFView.aspx?Country=CN&>> accessed 10 August 2015; Ding Lu, *China's Path to the World's Largest Economy: Limits of Extrapolations* (East Asian Institute, National University of Singapore 2010), at 71; He (n 6), at 518.

⁴² Most of the government revenue came from tax revenue, which was RMB 11.9158 trillion in the same year. Center for Macroeconomic Research of Xiamen University, *China's Macroeconomic Outlook: Quarterly Forecast and Analysis Report* (Springer 2015), at 36. The data is available at the website of the Ministry of Finance of the PRC <<http://gks.mof.gov.cn/zhengfuxinxi/tongjishuju/>>.

will overtake the US as the world's largest economy.⁴³ The growing economic power of China has made it a critical and influential player on the global stage, and lays the foundation for the further development of the civil aircraft industry. From 2005 to 2010, there were 33 new airports built and 33 airports upgraded in China, valued at RMB 250 billion.⁴⁴ According to the Civil Aviation Administration of China, the number of airports in China will increase to 230 by 2015.⁴⁵ These investments are critical for the development of the civil aircraft industry in China and could hardly be done without the strong financial capability of government.

6.2.3.2 Great Demand in the Chinese Civil Aircraft Market

China's determination to build a competitive indigenous civil aircraft industry is greatly motivated by the large civil aircraft market in China.⁴⁶ Due to the rapid economic growth and the increase of people's income in China, there has been a significant increase in demand for air transportation within the country.⁴⁷ China is the second largest national air travel market in the world and is still expanding rapidly.⁴⁸ In 2012, air traffic to, from, and within China increased by 10.6 percent.⁴⁹ Chinese airlines continue to expand their

⁴³ Wayne M. Morrison, 'China's Economic Rise: History, Trends, Challenges, and Implications for the United States' (Congressional Research Service 2015), at 8; 'China's Future' *The Economist*, available at <<http://www.economist.com/news/essays>> accessed 18 April 2015. It is even reported that China has already overtaken the US and become the largest economy in the world in terms of purchasing-power adjusted GDP, according to the figures from the International Monetary Fund. Mike Bird, 'China Just Overtaken the US as the World's Largest Economy' (*Business Insider*) available at <<http://uk.businessinsider.com>> accessed 24 June 2015.

⁴⁴ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce, 'Flight Plan 2011: Analysis of the US Aerospace Industry' (2011), at 50.

⁴⁵ *Ibid.*, at 50.

⁴⁶ *Ibid.*, at 47.

⁴⁷ John Olienyk and Robert J. Carbaugh (n 19), at 6.

⁴⁸ Royal Aeronautical Society (n 17), at 7.

⁴⁹ Domestic traffic accounted for 78 percent of the total, international for 20 percent, and the remaining 2 percent was to Hong Kong, Macau, and Taiwan. Boeing, *Current Market Outlook (2013-2032)*, available at <http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing_Current_Market_Outlook_2013.pdf> accessed 15 August 2014.

market as international air transport increases in many small or medium-sized cities such as Chengdu, Chongqing and Hangzhou, apart from those big cities such as Beijing, Shanghai and Guangzhou.⁵⁰ According to Boeing's forecasts, over the next 20 years, international air travel in China will increase at an annual rate of 7.2 percent, and domestic air travel in China will increase at the rate of 6.8 percent.⁵¹ The Chinese market will become the largest air travel market in the world.⁵² The rapid growth of air transport market has led to the growing market demand for aircraft in China.

In addition, considering that there are only around 2,000 commercial aircraft operating in China, compared with more than 6,000 operating in the US, the potential of the Chinese aircraft market cannot be underestimated.⁵³ In fact, airlines in China purchase around 200 new passenger aircraft every year, about one eighth of the world's total demand.⁵⁴ According to Boeing's forecasts, Chinese airlines will need around 6,000 new commercial aircraft with a value of \$780 billion over the 20 years to meet the market demand.⁵⁵ It is expected that China's market for new large civil aircraft will surpass those of the US and the EU in the future.⁵⁶ Boeing and Airbus both consider China to be the most important civil aircraft market in the next 20 years, and both are making efforts to gain the market share in China.⁵⁷ The large and quickly growing domestic civil aircraft market has been a major driving factor in the development of China's civil aircraft industry.

⁵⁰ Ibid, at 20.

⁵¹ Ibid, at 20.

⁵² Boeing, *Current Market Outlook (2014-2033)* (n 26), at 15.

⁵³ Ibid, at 15.

⁵⁴ Royal Aeronautical Society (n 17), at 7.

⁵⁵ Boeing, *Current Market Outlook (2013-2032)* (n 49), at 20.

⁵⁶ Peter Andersen (n 5), at 1.

⁵⁷ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 48.

It is worth mentioning that the growth of the civil aircraft market in China is in line with that of the global civil aircraft market. As mentioned in chapter three, Boeing predicted in 2015 that the world's commercial aircraft fleet will grow fast over the next 20 years, driving a need for more than 38,050 new airplanes with a value of approximately \$5.6 trillion.⁵⁸ As China is building a civil aircraft industry with global competitiveness, the increasing global market demand for civil aircraft also confirms China's resolution to develop an indigenous large civil aircraft industry.

6.2.3.3 Previous Progress of China's Civil Aircraft Industry

Apart from the overall economic growth and the great market demand, the previous progress that China has made in the industry also benefits the further development of the industry. As mentioned above, the civil aircraft industry in China has had some false starts in part due to regulatory inconsistency and lack of clear strategic guidelines from government. Nevertheless, it has indeed made some progress. For instance, although China has not managed to make a successful indigenous large civil aircraft, there have been several successful regional aircraft models in China, such as the Y-12, MA-60. After developing for many years, the civil aircraft industry in China now consists of many manufacturing enterprises of different size, research institutes, national key laboratories and test bases. The infrastructure relating to the industry in China has also been greatly improved.⁵⁹

⁵⁸ Boeing, *Current Market Outlook (2015-2034)*, available at < <http://goo.gl/NEhyKK> > accessed 20 June 2015.

⁵⁹ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 50.

Moreover, China has benefited from previous collaboration with foreign aircraft firms.⁶⁰ In fact, foreign aircraft companies have played an important role in the development of China's civil aircraft industry.⁶¹ Chinese aircraft manufacturers have partnered with a number of American and European aerospace companies since 1980s, such as McDonnell Douglas, Rolls-Royce, Boeing and Airbus, mainly in the form of joint ventures.⁶² For instance, under a joint venture with McDonnell Douglas in 1985, thirty five MD-82 jetliners were produced in China.⁶³ Another joint venture with McDonnell Douglas in 1992 finally failed, partly due to McDonnell Douglas' merger with Boeing.⁶⁴ Although results of the collaboration were mixed, China did benefit from such collaboration in terms of, for instance, industrial management, manufacturing expertise, building complete large civil aircraft and promoting workforce quality.⁶⁵

Despite some setbacks, collaboration between Chinese and foreign aircraft firms is still ongoing. For instance, the Aviation Industry Corporation of China (AVIC) has been cooperating with Airbus since 2006 under the joint venture of Airbus (Tianjin) Final Assembly Company Limited, which was established to assemble Airbus A320 in China.⁶⁶ Collaboration with foreign aircraft companies has also been extended to include the COMAC C919, as a new agreement was reached to explore commonality between

⁶⁰ U.S. International Trade Commission, 'The Changing Structure of the Global Large Civil Aircraft Industry and Market: Implications for the Competitiveness of the U.S. Industry' (1998), at 5-9.

⁶¹ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 48.

⁶² Royal Aeronautical Society (n 17), at 7.

⁶³ U.S. International Trade Commission (n 60), at 5-9; Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 49; Peter Andersen (n 5), at 8.

⁶⁴ Only three of the planned 40 aircraft were assembled under this joint adventure. See also U.S. International Trade Commission (n 60); Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 49.

⁶⁵ Tom Mitchell, 'China's COMAC Accelerates Passenger Aircraft Project' *Financial Times* (11 November 2014).

⁶⁶ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 49; The Netherlands Business Support Offices (Tianjin), *China - Aerospace and Aviation Industry in Tianjin and Hebei* (2011), at 11.

Canada's Bombardier C-Series and the C919 in 2011.⁶⁷ In addition to the foregoing, Chinese producers have also supplied aircraft parts and components for foreign aerospace manufacturers. This helped to improve the standard of aircraft manufacturing in China.⁶⁸ In short, there is already a general basis for further development of China's civil aircraft industry. This allows China to focus on the development of the more technologically sophisticated large civil aircraft industry.⁶⁹

6.3 Aircraft Subsidy Regime in China

Since the significance of the industry has been fully realised, and the conditions for developing an indigenous large civil aircraft industry are mature, China is determined to promote the sector. This is important in terms of understanding the subsidy regime concerning the civil aircraft industry in China. Like in the US and the EU, the development of the civil aircraft industry in China has been subject to great support from government.

6.3.1 Subsidy Regime concerning the Civil Aircraft Industry in China

Generally speaking, there is no systematic subsidy regime in China. Subsidy regimes are mainly embodied in government policies, which can be found in relevant laws, regulations and government regulatory documents of different levels. This is the same as

⁶⁷ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 50.

⁶⁸ Ibid, at 48; U.S. International Trade Commission (n 60), at 5-9.

⁶⁹ Keith Crane and others (n 1).

regards the civil aircraft industry.⁷⁰

First, some relevant Chinese laws provide the principles and guidelines for promoting the development of science and technology in China more generally. For instance, the Civil Aviation Law of China provides that the state supports the development of the civil aircraft manufacturing industry, so as to provide safe, advanced, economical and suitable civil aircraft and civil aviation activities.⁷¹ Other relevant statutes include but are not limited to the Promotion of Transformation of Scientific and Technological Achievements Law, the Scientific and Technological Progress Law. The specific policy arrangements for the aircraft industry discussed below have to be read with these general laws or regulations.

Although there have not been specific statutes or regulations concerning the civil aircraft industry, at the top level of governance in China great attention has been paid to the promotion of the industry. The 11th National Five-Year Plan for National Economic and Social Development of the People's Republic of China (2006-2010), which was approved by the National People's Congress, listed the civil aircraft industry as one of the seven 'major national high-tech programmes'.⁷² It confirmed that China would concentrate national efforts on building an indigenous LCA industry.⁷³ In the 12th National Five-Year Plan (2011-2015), the large civil industry was listed as one of the seven 'strategic emerging

⁷⁰ He (n 6), at 522.

⁷¹ Article 4, Civil Aviation Law of the PRC (as Amended 2015), approved by the Standing Committee of the National People's Congress on 24 April 2015.

⁷² Every five years since the 1950s, the Central Government of China has adopted a master plan for its economic and social development. The National Five-Year Plan is to be the fundamental blueprint of China's socio-economic development for the next five years. See Peilin Li, 'China on the Brink of a New Era: An Analysis of the Social Situation in China' in Xin Ru, Xueyi Lu and Peilin Li (eds), *The China Society Yearbook (2006): China's Social Development* (Brill 2007), at 1; Mohamed Osman Suliman, *China's Transition to a Socialist Market Economy* (Greenwood Publishing Group 1998), at 127-28.

⁷³ Section 3, Outline of the Eleventh Five-Year Plan for National Economic and Social Development of the PRC (2006-2010), approved by the 4th Session of the 10th National People's Congress of the PRC on 14 March 2006, hereinafter National Five-Year Plan.

industries’.⁷⁴ It was stressed in the Plan that the government will provide strong support for the development of China’s indigenous LCA industry.

In order to implement the 12th National Five-Year Plan, the State Council issued the National Development Plan of Strategic Emerging Industries during the 12th Five-Year-Plan Period.⁷⁵ In this Plan, ‘strategic emerging industries’ are defined as knowledge-intensive industries based on major technological breakthroughs and major development needs, and which must have long-term impacts on economic and social development and great growth-potential.⁷⁶ The Plan also specifies the strategies and policies which are aimed at nurturing and promoting the strategic emerging industries during the 12th National Five-Year Plan period. It sets the aim of increasing their contribution to GDP to 8 percent by 2015 and 15 percent by 2020.⁷⁷ In terms of the civil aircraft industry, the Plan sets out development goals, significant actions to be undertaken and major policies to be established for the industry, such as ensuring that the C919 will take its first flight in 2015 and enter the market in 2020; increasing input into the research and development of the civil aviation industry; and accelerating the formulation of relevant laws and regulations regarding the support of the civil aircraft industry. Moreover, the Plan states explicitly that government will strengthen support to strategic emerging industries in terms of tax measures and financial support, such as by granting tax incentives and establishing the Strategic Emerging Industry Development Special Fund. It has been

⁷⁴ Outline of the Twelfth Five-Year Plan for National Economic and Social Development (2011-2015), approved by the 4th Session of the 11th National People’s Congress on 14 March 2011. The seven strategic emerging industries include energy-efficient and environmental technologies, next-generation information technology, biotechnology, high-end equipment manufacturing, new energy, new materials, and new-energy vehicles. Aircraft manufacturing is an important branch of the high-end equipment manufacturing industry.

⁷⁵ State Council of the PRC, National Development Plan of Strategic Emerging Industries during the 12th Five-Year-Plan Period (7 July 2012).

⁷⁶ Ibid.

⁷⁷ Lisa Toohey, Colin Picker and Jonathan Greenacre, *China in the International Economic Order: New Directions and Changing Paradigms* (Cambridge University Press 2015), at 130-31.

reported that China will provide preferential policies, incentives and funds of over RMB 10 trillion for these strategic emerging industries.⁷⁸ In addition, the State Council has also issued the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020) in 2006, which is more relevant to the civil aircraft industry.⁷⁹ The Outline lists the LCA project (C919) as one of the sixteen ‘national science and technology major projects’, which are the first priorities of the Chinese government in terms of promoting science and technology development.⁸⁰

At a lower level of governance, the Ministry of Industry and Information Technology issued the Mid- and Long-Term Development Plan for the Civil Aviation Industry (2013-2020) in 2013.⁸¹ This is a departmental regulatory document concerning the development of, and government support for, the civil aircraft industry. The Plan sets out the development goal for China’s civil aircraft industry that the industry should make great progress and that a series of major products, including C919, should achieve industrialisation by 2020.⁸²

The foregoing are mainly general development plans that only provide guidelines or principles for promoting the civil aircraft industry in China. They do not contain many details on the policy arrangements regarding the industry. More detailed and specific support schemes have to be found in a variety of government by-laws or regulatory documents, usually in the form of government decisions, notices or interim rules. Compared with statutes or government regulations, they are at a quite low rank in the

⁷⁸ Ping Gong and Jessica Wang, ‘China’s 12th Five-Year Plan: An Overview’ (*Stewart and Stewart*, 18 May 2011).

⁷⁹ State Council of the PRC, Notice of the State Council on Issuing the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020).

⁸⁰ Section 4, Outline of National Medium- and Longer-Term Programme for Science and Technology Development (2006–2020), approved by the State Council of the PRC on 9 February 2006.

⁸¹ Ministry of Industry and Information Technology of the PRC (n 37).

⁸² *Ibid.*

Chinese legal system and only have limited regulatory capacity.⁸³ However, they are more flexible and can be modified more easily when necessary. These regulatory documents have to be read in relation to the relevant statute laws or government regulations and their actual operation, so as to ascertain the precise policy environment in which the LCA industry grows.⁸⁴

In this regard, the Supporting Policies for Implementing the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020) issued by the State Council⁸⁵ incorporate a coordinated set of more detailed policies formulated by different departments of the State Council.⁸⁶ These policies cover ten coordinated categories of supporting measures that governments of different levels in China are required to undertake in order to promote the civil aircraft industry, including: (1) Scientific and technological investment; (2) Tax incentives; (3) Financial support; (4) Government procurement; (5) Technology import, adaptation, absorption and innovation; (6) Creation and protection of intellectual property rights; (7) Talent building; (8) Education and popularization of science; (9) Scientific innovative centres and platforms; (10) Consolidated overall coordination.⁸⁷ Under each category of this basic framework, a variety of government by-laws specify the supporting schemes and measures.⁸⁸

⁸³ He (n 6), at 522.

⁸⁴ Ibid.

⁸⁵ State Council of the PRC, Notice of the State Council on Issuing Several Supporting Policies for Implementing the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020). The Supporting Policies function as an umbrella regulatory document, under which a coordinated set of more detailed policies were formulated by different departments of the State Council. He (n 6), at 521.

⁸⁶ He (n 6), at 521-522. These government departments include, for instance, the Ministry of Finance of the PRC, the Ministry of Science and Technology of the PRC, the State Administration of Taxation, the Banking Regulatory Commission of China. The supporting policies in the civil aircraft industry in China are summarised by Juan He.

⁸⁷ State Council of the PRC, Notice of the State Council on Issuing Several Supporting Policies for Implementing the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020). There policies have been summarised by He (n 6), at 521.

⁸⁸ For instance, Ministry of Finance, National Development and Reform Commission of the PRC issued the Interim Measures for the Administration of Special Funds for the Development of Strategic Emerging Industries in 2012; Ministry of Finance, Ministry of Science and Technology, National Development and Reform Commission, General

The above describes the general framework of the subsidy regime concerning the civil aircraft industry in China. Under this general framework, many local governments in China have set out additional policies to institutionalise preferential treatments for the industry.⁸⁹ The industry is thus able to receive substantial subsidies from both the central and local governments.⁹⁰ It has been estimated that industrial subsidies in key Chinese manufacturing industries may exceed thirty percent of the industrial output.⁹¹ The following section discusses the main subsidy measures in China that may be subject to the regulation of WTO subsidy rules. These measures include science and technology investment, tax incentives, financial support and other support measures.

6.3.2 Subsidy Measures concerning the Civil Aircraft Industry in China

6.3.2.1 Science and Technology Investment

Science and technology investment is an important way in which government supports the civil aircraft industry in China. It usually takes the form of government grants, R&D funding or other special funds. Under the SCM Agreement, this kind of subsidy measures may constitute financial contributions in the form of direct transfer of funds

Administration of Customs, State Administration of Taxation of the PRC issued the Interim Rules on the Import Duty Policies of National Science and Technology Major Projects in 2010; Ministry of Finance, Ministry of Science and Technology, National Development and Reform Commission of the PRC issued the Interim Rules on the Financial Management of National Science and Technology Major Projects for Civilian Service in 2009; Ministry of Finance, General Administration of Customs, State Administration of Taxation of the PRC issued the Interim Provisions on the Exemption of Import Duties from the Articles Used for Scientific and Technological Development in 2007.

⁸⁹ He (n 15), at 195.

⁹⁰ Lingna Yan, 'China Takes Further Steps to Boost Strategic Emerging Industries' (*King and Spalding Trade and Manufacturing Alert 2012*), available at <<http://www.kslaw.com>>. Keith Crane and others (n 1), at 72; He (n 6), at 521.

⁹¹ Usha CV Haley and George T Haley, *Subsidies to Chinese Industry: State Capitalism, Business Strategy and Trade Policy* (Oxford University Press 2013).

under Article 1.1(a)(1)(i). The State Council has emphasised that government will greatly increase science and technology investment, establish a diversified and multi-channel science and technology investment mechanism, and steadily increase the share of R&D investment in GDP.⁹² Governments of different levels in China are required to prioritise science and technology investment in their budgets. In the *Several Opinions on Improving and Strengthening Major Technical Equipment Research Fund Management* issued jointly by the Ministry of Finance and the National Development and Reform Commission, it is provided that government should make use of different input methods, such as grants, venture capital or subsidies for loan interest, to support the research and development of key technologies.⁹³ The *Mid- and Long-Term Development Plan for the Civil Aviation Industry* also emphasises that government will increase science and technology R&D investment in the industry.

In this regard, special funds have been set up for the civil aircraft industry and other strategic emerging industries.⁹⁴ These funds can be used to support the development of the civil aircraft industry through various ways such as grants or equity infusions.⁹⁵ For instance, the Civil Aviation Development Fund has been set up to facilitate R&D and application of essential and new technologies, improve industry infrastructure and so on.⁹⁶ There are also funds that have been specifically set up for the operation of the national

⁹² State Council of the PRC, Notice of the State Council on Issuing Several Supporting Policies for Implementing the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020).

⁹³ Ministry of Finance and the National Development and Reform Commission of the PRC, *Several Opinions on Improving and Strengthening Major Technical Equipment Research Fund Management* (9 January 2007).

⁹⁴ Ministry of Finance, National Development and Reform Commission of the PRC, *Interim Measures for the Administration of Special Funds for the Development of Strategic Emerging Industries* (31 December 2012).

⁹⁵ *Ibid.*

⁹⁶ Ministry of Finance of the PRC, Notice of the Ministry of Finance on Issuing Interim Measures for the Collection, Use and Management of the Civil Aviation Development Fund (2012).

science and technology major projects.⁹⁷ In addition, some local governments in China have also made policy arrangements to promote the civil aircraft industry. For instance, the government of Shanghai, where COMAC is based, has promised to raise RMB 10 billion for the Civil Aviation Industry Development Fund so as to support civil aircraft manufacturing projects in Shanghai.⁹⁸ COMAC has also sourced substantial development funds from its shareholders, in addition to its limited registered capital of RMB 19 billion.⁹⁹

6.3.2.2 Tax Incentives

Tax incentives have been frequently utilised as a way to promote the civil aircraft industry in China. These mainly involve foregoing government revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement. For instance, the National Development Plan of Strategic Emerging Industries during the 12th Five-Year-Plan Period and the Decision to Accelerate the Fostering and Development of Strategic Emerging Industries both stress that government should make use of tax incentives according to the characteristics of different industries.

More specifically, there are some preferential tax policies that will benefit the civil aircraft industry in China. For instance, according to the Corporate Income Tax Law of China, the income tax rate applicable to officially recognised high-tech and

⁹⁷ Ministry of Science and Technology, National Development and Reform Commission, Ministry of Finance of the PRC, 'Interim Rules on the Management of National Science and Technology Major Projects' (16 April 2009). These special funds consist of funds from the central government budget, local government budget, as well as investment from financial institutes and private enterprises.

⁹⁸ Shanghai Municipal Commission of Economy and Informatisation (n 28).

⁹⁹ He (n 6), at 537.

new-technology enterprises that need to be supported by the state is reduced to 15 percent from the normal corporate income tax rate of 25 percent.¹⁰⁰ Civil aircraft technologies belong to the high-tech and new-technology fields under the key support of the State.¹⁰¹ Moreover, for high-tech enterprises in special economic zones in China and Pudong New District of Shanghai that finished registration after 1 January 2008, the income tax is remitted for the first two years from the time when they begin making profits, and the income tax will be reduced by half from the third to the fifth year.¹⁰² COMAC has been registered in Shanghai Pudong New District in March 2008, so it is eligible to enjoy such tax preference.¹⁰³ In addition, large civil aircraft manufacturers and other companies undertaking the national science and technology major projects in China are exempted from import custom duties and value-added taxes for importation of key equipment or technologies, components and raw materials that cannot be produced in China.¹⁰⁴

Apart from the above, a number of local governments in China have implemented tax measures to promote the civil aircraft industry. For instance, the Shanghai government has applied preferential tax policies to promote civil aircraft manufacturing in Shanghai, including but not limited to tax preferences concerning value-added tax, sales tax and corporate income taxes.¹⁰⁵

¹⁰⁰ Article 28, Corporate Income Tax Law of the PRC, adopted by the National People's Congress on 16 March 2007

¹⁰¹ Ministry of Science and Technology, Ministry of Finance and State Administration of Taxation, 'Administrative Measures for Determination of High- and New- Tech Enterprises' (14 April 2008). It has an annex entitled High and New Tech Fields under the Key Support of the State, which has a list of such technology fields.

¹⁰² State Council of the PRC, Notice of the State Council on Providing Transitional Preferential Tax Treatments to High-Tech Enterprises Newly Established in Special Economic Zones and in Pudong New District of Shanghai (2007).

¹⁰³ See Zhou Yan, 'Pudong Gets C919 Final Assembly Line' *China Daily* (19 November 2009).

¹⁰⁴ The Ministry of Finance, the Ministry of Science and Technology, the National Development and Reform Commission, the General Administration of Customs, the State Administration of Taxation of the PRC, Notice on Import Duty Policies for National Science and Technology Major Projects (2010).

¹⁰⁵ Shanghai Municipal Commission of Economy and Informatisation (n 28).

6.3.2.3 Financial Support

The principal kind of financial support to the civil aircraft industry in China takes the form of preferential loans. Many government policy documents in China, at both central and local level, mention preferential loans as a way to support the civil aircraft industry. In this regard, the government usually directs state policy-based banks and financial institutions to provide preferential loans for the LCA programme.¹⁰⁶ For instance, the China Development Bank has been directed to provide soft loans for civil aircraft companies and other high-tech enterprises.¹⁰⁷ The Export-Import Bank of China has been required to set up special financing account, so as to provide financing support for the import and export of key technologies and equipment in those industries.¹⁰⁸ Apart from the policy-based banks, other state-owned commercial banks and financial institutions have also been directed to increase support to the civil aircraft industry and other strategic high-tech industries through credit loans.¹⁰⁹ Such loans are regarded as priorities of the relevant state-owned banks and financial institutions. Governments have also set up other preferential financial policies, such as subsidies for loan interest, risk compensation and loan guarantees, with the aim of encouraging support from commercial banks and financial institutions.¹¹⁰

In addition, financial support has also been provided to the civil aircraft industry in the form of financial services, such as aircraft leasing, cash management and financial

¹⁰⁶ He (n 6), at 538.

¹⁰⁷ State Council of the PRC, Notice of the State Council on Issuing Several Supporting Policies for Implementing the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020).

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ State Council of the PRC, Decision of the State Council to Accelerate the Fostering and Development of Strategic Emerging Industries (10 October 2010).

advice.¹¹¹ As the main LCA manufacturer in China, COMAC has entered into long-term cooperative partnerships with several state-owned banks, such as the Bank of China, the Construction Bank of China and the Export-Import Bank of China.¹¹² These partnerships have enabled COMAC to obtain an additional RMB 50 billion from each bank through preferential loans as well as other financial services.¹¹³

6.3.2.4 Other Support Measures

In addition to the above support measures, there are also some other kinds of support for the industry, such as measures involving government procurement, lands provision, infrastructure construction and talent building. For example, in terms of government procurement, the State Council has stressed that the share of indigenous equipment should be larger than 60 percent when the government procures for key high-tech projects which are supported by the State.¹¹⁴ Governments at different levels are required to give priority in terms of purchasing indigenous innovation products.¹¹⁵ Besides preferential policies involving government procurement, some local governments in China have reduced land use fees for key civil aircraft manufacturing projects or exempted them from such fees.¹¹⁶ In terms of talent building, the Shanghai Government lists professionals in the civil aircraft industry as one kind of urgently needed personnel, and set up preferential policies for the

¹¹¹ He (n 6), at 538.

¹¹² Ibid, at 538.

¹¹³ Ibid, at 538.

¹¹⁴ State Council of the PRC, Notice of the State Council on Issuing Several Supporting Policies for Implementing the Outline of National Medium- and Long- Term Programme for Science and Technology Development (2006-2020).

¹¹⁵ For instance, governments are encouraged to procure identified key products that are developed or produced domestically, if the products are based on major technological breakthroughs and major development need.

¹¹⁶ Guizhou Provincial Government, Guiding Opinions of Guizhou Provincial Government on Promoting the Development of National High-Tech Industry Base for Civil Aviation Industry in Anshun City (15 July 2010).

talent building in the industry.¹¹⁷

6.3.3 Legal Uncertainties surrounding China's Aircraft Subsidies

In view of the above, it is clear that the Chinese government intends to promote production in, and the trade potential of, the indigenous civil aircraft industry through government support. Therefore, important questions that arise are whether these measures are consistent with WTO subsidy rules, and what legal consequences these measures may lead to under WTO rules. These questions are of great importance as they could give a clue as to whether there will be more disputes over the use of aircraft subsidies in the future. They may also have an impact on the development of the civil aircraft industry in, not only China, but also other emerging countries in the market.

6.3.3.1 Consistency of China's Aircraft Subsidies with WTO Subsidy Rules

In view of the previous WTO adjudications and case-law, especially those in the Bombardier-Embraer and the Airbus-Boeing subsidy disputes, the WTO has a strict attitude towards government subsidisation. This attitude reached its peak when the non-actionable subsidy provisions in the SCM Agreement expired, even though economists have been exploring 'good' types of subsidies, or at least trying to determine the circumstances in which the use of subsidies might be 'good'.¹¹⁸ In addition to this general

¹¹⁷ Shanghai Municipal Commission of Economy and Informatisation (n 28).

¹¹⁸ Alan O. Sykes, *The Economics of WTO Rules on Subsidies and Countervailing Measures* (John M Olin Program in Law and Economics Working Paper 2003), at 6; He (n 6), at 539.

strict attitude towards subsidies, the ‘WTO-plus’ obligations in China’s Accession Protocol, which will be discussed below, also increase the legal uncertainties of the subsidy measures in China under WTO rules. This section will try to make a preliminary analysis as to whether the subsidy measures are consistent with the WTO subsidy rules.¹¹⁹

First, in terms of prohibited subsidies, it is fair to say that the subsidies to China’s large civil aircraft industry are not to be viewed as export-contingent or import-substitution subsidies. As the SCM Agreement imposes very stringent disciplines on this class of subsidies and China has foregone its rights of delaying the elimination of export subsidies as a developing country member, the government has not made apparent use of export subsidies or import-substitution subsidies.¹²⁰ The government did not set any export performance target as a condition for COMAC to receive government subsidies.¹²¹ As COMAC has been established just for a short time, its near-term goal was to capture a part of the home market and thus it would not have been a genuine threat to Boeing and Airbus in the global aircraft market.¹²² Moreover, most government promotional efforts focus on improving the pre-competitive research and development and upgrading the technological capacity in the industry.¹²³

As none of the support measures of the government seems to be prohibited subsidies, the real legitimacy issue is thus whether these domestic measures are specific subsidies and whether they will cause any adverse effects within the meaning of the SCM Agreement in the global aircraft market. As mentioned in chapter two of this thesis, for a support

¹¹⁹ The consistency of the aircraft subsidy measures in China with WTO subsidy rules was discussed by He (n 6), at 538-539.

¹²⁰ Ibid, at 539.

¹²¹ He (n 15), at 202.

¹²² Ibid, at 202.

¹²³ He (n 6), at 539.

measure to be legally challengeable, it must be proven to be specific subsidy within the meaning of the SCM Agreement. The analysis of the legitimacy of the support measures or schemes in China thus first requires an examination of whether the measures constitute subsidies. In this regard, science and technology investment, tax incentives and financial support are likely to be captured by the subsidy definition under the SCM Agreement.

As mentioned above, science and technology investment in the civil aircraft industry, which mostly takes the form of government grants or R&D funds, generally involve direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement. Various tax incentives as mentioned above, may constitute foregone government revenue that is otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement. The Appellate Body has explained that the normative benchmark for determining whether government revenue foregone is otherwise due is to compare the 'fiscal treatment of legitimately comparable income' and the measure at issue.¹²⁴ LCA manufacturers in China are exempted from import custom duties and value-added taxes for importation of key equipment or technologies and their components or raw materials that cannot be produced in China.¹²⁵ As such tax incentives are not provided to other manufacturing enterprises in China, the tax incentives are likely to constitute foregone government revenue that is otherwise due. In terms of whether the measures confer a benefit, as mentioned in chapter four, it has been well established in WTO case-law that a benefit will exist if a firm receives financial contributions on terms more favourable than those available in the market.¹²⁶ The science and technology

¹²⁴ Appellate Body Report, *US - FSC (Article 21.5 - EC)*, WT/DS108/AB/RW, para. 98.

¹²⁵ The Ministry of Finance, the Ministry of Science and Technology, the National Development and Reform Commission, the General Administration of Customs, the State Administration of Taxation of the PRC, Notice on Import Duty Policies for National Science and Technology Major Projects.

¹²⁶ For instance, see Appellate Body Report, *Canada - Aircraft*, WT/DS70/AB/R, para. 158; Appellate Body Report, *Japan - DRAMs (Korea)*, WT/DS336/AB/R, para. 225; Appellate Body Report, *EC - Aircraft*, WT/DS316/AB/R, para.

investment, tax incentives and financial support provided to the LCA industry in China are usually more favourable than those available in the market. Therefore, these support measures are likely to constitute subsidies within the meaning of the SCM Agreement. Other support measures, such as infrastructure construction, talent building, are unlikely to be deemed as subsidies within the meaning of the SCM Agreement because they belong to broad-based infrastructure support.

Secondly, a determination of the legitimacy of these support measures also requires examining the specificity of the measures. As provided in the SCM Agreement, a subsidy will not be specific if objective criteria or conditions for its grant are established and adhered to.¹²⁷ In this regard, the Chinese government has established objective and automatic criteria and conditions for eligibility for various tax incentives.¹²⁸ For instance, the government has set up strict standards for the recognition of ‘official’ high-tech enterprises that enjoy the preferential income tax rate.¹²⁹ Therefore, most aircraft subsidies appear to be non-specific. However, according to the Accession Protocol of China, subsidies for state-owned enterprises will be regarded automatically as specific, if the state-owned enterprises concerned are the predominant recipients or receive a disproportionately large amount of such subsidies.¹³⁰ Other WTO members may take advantage of this specificity presumption for challenging the subsidies if disputes concerning aircraft subsidies in China arise in the future. Therefore, China may encounter

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¹²⁷ Article 2.1(b) of the SCM Agreement.

¹²⁸ He (n 6), at 538.

¹²⁹ The income tax rate applicable to officially recognised high-tech enterprises is reduced to 15 percent compared with the normal corporate income tax rate of 25 percent. See Article 28, Corporate Income Tax Law of the PRC. See also Ministry of Science and Technology, Ministry of Finance and State Administration of Taxation (n 101). Ministry of Science and Technology, Ministry of Finance and State Administration of Taxation, Guidelines for the Administration of the Recognition of High-Tech Enterprises (8 July 2008); State Council of the PRC, Regulation on the Implementation of the Corporate Income Tax Law of the PRC (2007), Article 93.

¹³⁰ Article 10.2, Protocol on the Accession of the People's Republic of China, WT/L/432.

more difficulty in establishing that the subsidies to COMAC are not specific.¹³¹

Finally, with regard to the adverse effects of the LCA subsidies, although the government may intend to avoid such effects, it is to some extent inevitable that these subsidies will result in certain adverse effects within the meaning of the SCM Agreement. The development of China's LCA industry will certainly have an impact on the market of the incumbent players in the future. Airbus and Boeing together capture the great majority of the aircraft market in China. While Airbus aircraft account for about 49 percent of commercial fleets in China, Boeing aircraft account for over 50 percent.¹³² With the development of the indigenous aircraft manufacturer, the situation in the market may change. The market positions of Airbus and Boeing may be affected even if COMAC is able to satisfy a part of the aircraft market demand in China with indigenously produced aircraft.¹³³

As mentioned, COMAC has received a great number of orders for the C919 from both domestic and foreign airlines.¹³⁴ COMAC has announced that its near-term goal is to account for one-third of the domestic market, so it will concentrate C919 sales on the rapidly growing domestic market.¹³⁵ It targets an annual production of 150 C919 airplanes,¹³⁶ with expected annual sales of RMB 100 billion by 2020.¹³⁷ Moreover, the decision of the main Chinese airlines to purchase airplanes in China is usually made under

¹³¹ Nearly all other main aircraft manufacturing enterprises in China belong to AVIC and are state-owned as well, such as AVIC Xi'an Aircraft Industry (Group) Company Limited, AVIC Chengdu Aircraft Industrial (Group) Company Limited, AVIC Shangxi Aircraft Industry (Group) Corporation Limited.

¹³² Keith Crane and others (n 1), at 40.

¹³³ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 51.

¹³⁴ Zhao Lei (n 21).

¹³⁵ He (n 6), at 529.

¹³⁶ Juan He (n 15), at 207.

¹³⁷ Ministry of Industry and Information Technology of the PRC, Mid- and Long-Term Development Plan for the Civil Aviation Industry (2013-2020).

the direction of government. The Chinese government has set the goal of increasing the share of indigenous aircraft in the domestic market. It has been proposed that indigenously produced trunk-route aircraft should capture more than 5 percent of the newly-increased domestic market share by 2020, so as to break the duopoly of Boeing and Airbus.¹³⁸ Thus, the government may affect the purchase decisions of domestic airlines by encouraging or directing them to purchase indigenously produced large civil aircraft. Moreover, although COMAC will focus on developing the domestic market in a short-term, its ambitions extend to expanding its market outside China as a long-term goal.¹³⁹ The US and the EU may face challenges in their non-Chinese markets in the future.

The likely impact on the sales of Airbus and Boeing both in the global market, and in particular in the Chinese market, may lead to adverse effect claims if a dispute arises. The WTO holds a somewhat extreme attitude that most types of government subsidies delay the establishment of genuine competition and distorts fair pricing.¹⁴⁰ Considering the relevant rulings and WTO case-law regarding the determination of adverse effects, it is possible that the future sales of C919 will be connected with the volume or price effects under Article 6 of the SCM Agreement.

6.3.3.2 China's WTO-Plus Commitments

Although the foregoing is only a preliminary analysis,¹⁴¹ it is enough to demonstrate

¹³⁸ Ibid.

¹³⁹ Office of Aerospace and Automotive Industries, International Trade Administration, US Department of Commerce (n 44), at 51.

¹⁴⁰ He (n 6), at 539.

¹⁴¹ A detailed analysis in this regard would be fact-intensive and much more complex. For instance, it will be very difficult to determine the causation between the subsidies in China and the volume or price effects in the aircraft market.

that it would be difficult for China to justify the subsidy schemes under WTO rules. In this regard, it is notable that China's WTO commitments in its Accession Protocol are particularly relevant. Since China acceded to the WTO in 2001, it has to abide by both existing WTO multilateral agreements and the Accession Protocol of China.¹⁴² Unlike previous WTO protocols of accession, the Accession Protocol of China is not a standardised document.¹⁴³ It contains a set of rules specifically applicable to China.¹⁴⁴

Some commitments in the Protocol are within the scope of existing WTO rules on specific areas.¹⁴⁵ For instance, the Protocol provides that China should notify the WTO of any subsidy within the meaning of Article 1 of the SCM Agreement, granted or maintained in its territory, organised by specific product, including prohibited subsidies.¹⁴⁶ The information provided should be as specific as possible. Annex 5A of the Protocol lists various types of subsidy programmes pursuant to the notification requirement of the SCM Agreement, most of which were subsidies to state-owned enterprises. The first type of subsidies to be phased out, listed in Annex 5B, are also those provided to certain state-owned enterprises.¹⁴⁷ This to some extent demonstrated that subsidies to state-owned enterprises in China are a major concern for other WTO members.¹⁴⁸ Therefore, it would be more difficult and sensitive for COMAC, as a state-owned enterprise, to clarify its

This requires much more information on China's subsidy schemes and relevant aircraft market.

¹⁴² According to the WTO Agreement, accession protocol of WTO members is an integral part of the WTO Agreement. See Article XII of the WTO Agreement.

¹⁴³ Julia Ya Qin, "WTO-Plus" Obligations and Their Implications for the World Trade Organisation Legal System - An Appraisal of the China Accession Protocol' (2003) 37 *Journal of World Trade* 483, at 489.

¹⁴⁴ The Accession Protocol of China contains 17 main sections of substantive provisions, 9 annexes (including China's Goods and Services Schedules) and 143 paragraphs incorporated from the Working Party Report containing commitments on rules.

¹⁴⁵ Qin (n 143), at 489.

¹⁴⁶ Article 10.1, Protocol on the Accession of the People's Republic of China, WT/L/432.

¹⁴⁷ Annex 5B, Protocol on the Accession of the People's Republic of China, WT/L/432. Annex 5 of the Accession Protocol also listed the main types of subsidies in China, including but not limited to grants, R&D funds, preferential loans and tax incentives.

¹⁴⁸ The first two types of subsidy programme listed in Annex 5A are subsidies from central budget and local budget to certain state-owned enterprises running at loss respectively.

relationship with government.¹⁴⁹

In addition to the commitments within the scope of existing WTO rules, however, a variety of provisions in the Accession Protocol involve more stringent and extensive obligations for China than the requirements of existing WTO rules, and are thus called ‘WTO-plus’ commitments.¹⁵⁰ First, China is forbidden from enjoying certain preferential treatments accorded to developing country members of the WTO. For instance, according to the Accession Protocol and the Report of the Working Party on the Accession of China (Working Party Report), China should eliminate all prohibited subsidy programmes under the SCM Agreement upon its accession to the WTO.¹⁵¹ China thus gave up such right as it may otherwise have had under the SCM Agreement, namely to delay such elimination until a later stage.¹⁵² Moreover, according to the SCM Agreement, a developing country member is allowed to implement a privatisation programme with certain exemptions for subsidies to state-owned enterprises.¹⁵³ However, China is forbidden from invoking the privatisation and transition economy exceptions for subsidies granted to state-owned enterprises.¹⁵⁴ As a result, COMAC cannot employ any kind of prohibited or actionable subsidies to accelerate its market-orientation process.¹⁵⁵

Secondly, according to the Accession Protocol, subsidies provided to Chinese state-owned enterprises will be deemed as specific, if the concerned enterprises are the predominant recipients of such subsidies or receive disproportionately large amounts of

¹⁴⁹ He (n 6), at 540.

¹⁵⁰ Ibid, at 519.

¹⁵¹ Article 10.3, Protocol on the Accession of the People’s Republic of China, WT/L/432; Report of the Working Party on the Accession of China, WT/ACC/CHN/49, para. 167, 168.

¹⁵² Article 27.2(b) of the SCM Agreement.

¹⁵³ Article 27.13 of the SCM Agreement.

¹⁵⁴ Report of the Working Party on the Accession of China, para. 171-174.

¹⁵⁵ He (n 6), at 540.

such subsidies.¹⁵⁶ As COMAC is a state-owned enterprise, this provision is thus of particular relevance with regard to the legitimacy of subsidies to COMAC. The negative presumption that those subsidies are specific will make it easier for subsidies to COMAC to be legally challenged, even if COMAC happens to be just one beneficiary under an overall stimulus package.¹⁵⁷

Finally, another WTO-plus obligation of China in the Accession Protocol is concerned with the determination of the market conditions that prevail in China.¹⁵⁸ All other WTO members are allowed to use alternative benchmarks for identifying and measuring the benefits of subsidies if there are ‘special difficulties’ in determining the market conditions prevailing in China.¹⁵⁹ As there is no clear explanation of the meaning of the term ‘special difficulties’, an importing WTO member is thus able to make any kind of adjustment to the market conditions at issue.¹⁶⁰ This special provision has permanent standing, although some countries have already recognised that China and its specific economic sectors have a mature market status.¹⁶¹

The foregoing ‘WTO-Plus’ obligations of China in the Accession Protocol impose more stringent disciplines on the use of subsidies by China. This thus increases the legal uncertainties surrounding the subsidy measures in China under the WTO legal framework. Moreover, the US and the EU are somewhat suspicious of the legitimacy of the subsidy schemes and whether China has fulfilled its obligations under WTO rules.¹⁶² The US has

¹⁵⁶ Article 10.2, Protocol on the Accession of the People’s Republic of China, WT/L/432.

¹⁵⁷ He (n 6), at 540.

¹⁵⁸ Article 15(b), Protocol on the Accession of the People’s Republic of China, WT/L/432.

¹⁵⁹ Article 15(b), Protocol on the Accession of the People’s Republic of China, WT/L/432.

¹⁶⁰ He (n 6), at 541.

¹⁶¹ Juan He (n 15), at 205.

¹⁶² For instance, China did not file its first subsidy notification until 2006, five years after acceding to the WTO, and China submitted the second notification five years later in 2011. The two subsidy notification only covered the time period from 2001 to 2004 and 2005 to 2008 respectively. The US considered both of the notifications significantly

explicitly expressed its dissatisfaction in this regard. It claimed that China has a poor record of conforming to the rules on the use of subsidies.¹⁶³ The US further stressed that China maintains quite an opaque subsidy regime, and has employed numerous illicit subsidies to support domestic industries and state-owned enterprises.¹⁶⁴ As local governments in China play a key part in implementing industrial policies, including subsidy policy, the US has particular concerns over the lack of transparency in provincial and municipal subsidy programmes and their legitimacy under WTO rules.¹⁶⁵ The US Department of Commerce closely monitors the government subsidisation of the industry in China.¹⁶⁶ It has requested China to provide detailed information on supporting policies for the aircraft industry through the WTO trade policy review mechanism.¹⁶⁷ This suspicious attitude is likely to bring about more difficulties for China in justifying its aircraft support measures. Moreover, in view of the historical and ongoing conflicts over aircraft subsidies, it is fair to believe that China's subsidy measures would be challenged and there may be more WTO disputes over the use of aircraft subsidies in the future.

6.4 Regulation on the Development of Civil Aircraft Industry: the Way Forward

With the great legal uncertainties surrounding LCA subsidisation, a question that arises for China is how to reconcile the need to support the LCA sector with China's

incomplete.

¹⁶³ The Office of the US Trade Representative and US Department of Commerce, 'Subsidies Enforcement: Annual Report to the Congress' (2013), at 14.

¹⁶⁴ *Ibid.*, at 14.

¹⁶⁵ *Ibid.*, at 14.

¹⁶⁶ *He* (n 6), at 519.

¹⁶⁷ Statement of Mary Saunders, the Deputy Assistant Secretary for Manufacturing, International Trade Administration before the US-China Economic and Security Review Commission, Hearing on 'China's Emergent Military Aerospace and Commercial Aviation Capabilities' (20 May 2014), at 8. See also *He* (n 6), at 519.

obligations to follow WTO rules. Due to that industry's unique economic and competitive nature, government support is essential for its development. Boeing and Airbus both grow up with large amount of subsidisation from government, although in different forms. The successful stories of Boeing and Airbus indicate that governments usually think of themselves as better candidates than private investors to commence and sustain ground-breaking aircraft projects.¹⁶⁸ However, the Chinese government has fully realised the difficulties to develop a successful indigenous LCA industry in China.

As mentioned above, compared with Boeing and Airbus, China's LCA sector is in the initial stage and remains relatively underdeveloped. The two companies have already controlled the global LCA market for a long time. Airbus was the only aircraft company that entered the market and successfully challenged the dominance of US aircraft firms since the 1970s.¹⁶⁹ After that, Boeing and Airbus in fact monopolised the market and there has been no formidable competitor for them. However, with the growth of large civil aircraft manufacturers in countries such as China, Canada, Brazil, Japan, and the better realisation of the significance of the industry, the global civil aircraft industry and market may face a major change in the future.¹⁷⁰ The US and the EU are both aware of this.¹⁷¹ As a result, it is likely that they will take advantage of their position as forerunners and guard their dominance in the market.¹⁷² For instance, they may take strong control of aircraft knowhow embodied in their products.¹⁷³ The inaccessibility of key technologies and experience in aircraft manufacturing may become a major obstacle for the newcomers to

¹⁶⁸ He (n 6), at 540.

¹⁶⁹ Josh Cable, 'Learning to Fly' (2011) *Industry Week*, at 34.

¹⁷⁰ Goldstein (n 8), at 271.

¹⁷¹ Opening Statement of Commissioner Peter Videnieks, Hearing on China's Emergent Military Aerospace and Commercial Aviation Capabilities in the US-China Economic and Security Review Commission (20 May 2010).

¹⁷² He (n 6), at 540.

¹⁷³ Juan He (n 15), at 204.

catch up. As Friedrich List pointed out in an argument concerning infant industry protection:

It is a very common clever device that when anyone has attained the summit of greatness, he kicks away the ladder by which he has climbed up, in order to deprive others of the means of climbing up after him.¹⁷⁴

In addition, as discussed in chapter five, the US and EU subsidies for Boeing and Airbus are likely to be retained, even after the DSB has ruled that such subsidies are inconsistent with the SCM Agreement.¹⁷⁵ This will make it even more difficult for the newcomers to compete with the established firms.

The Chinese government is also fully aware of the legal uncertainties surrounding its LCA subsidy schemes. If the indigenous aircraft manufacturers keep growing, it is likely that the incumbent players will challenge these subsidies, as the US challenged the EU subsidies to Airbus. This may affect the ability of the government to support the industry in China. As a result, the government has emphasised the importance of keeping the support measures consistent with WTO rules. In fact, while China aims to maximise the support to its civil aircraft industry, it also expects to avoid violating the WTO subsidy rules. China has become more aware of the challenging but inevitable task of fulfilling its WTO

¹⁷⁴ Friedrich List, *The National System of Political Economy* (Sampson S Lloyd tr, Longmans, Green 1904). See also Ha-Joon Chang, 'Kicking Away the Ladder: Infant Industry Promotion in Historical Perspective' (2003) 31 *Oxford Development Studies* 21, at 24.

¹⁷⁵ Ryan E Lee, 'Dogfight: Criticizing the Agreement on Subsidies and Countervailing Measures Amidst the Largest Dispute in World Trade Organisation History' (2006) 32 *North Carolina Journal of International Law and Commercial Regulation* 115.

obligations.¹⁷⁶ This can be reflected in the provisions of many government regulatory documents, which stress the importance of keeping support measures consistent with WTO rules.¹⁷⁷

Despite the above-mentioned difficulties and legal uncertainties, the determination of China to develop an indigenous LCA industry is unlikely to change. This is mainly due to the significance that the LCA industry has for China. The government will probably continue to support its development. The enactment of the Regulation on the Development of Civil Aircraft Industry (Aircraft Regulation) in China might well reflect this.

As revealed above, aircraft subsidy schemes in China are mainly embodied in various government by-laws or interim rules, which rank low in the Chinese legal system and only have preliminary regulatory capacity. The Aircraft Regulation is to be an administrative regulation that ranks much higher in the legal system.¹⁷⁸ The Regulation has been listed in the legislative plan of the State Council.¹⁷⁹ The Ministry of Industry and Information Technology is in charge of the drafting work for the Regulation. The Aircraft Regulation will be more stable and effective in terms of regulating government support in the industry. According to a drafter of the Aircraft Regulation, the aim of introducing the Aircraft Regulation is to provide a clear guidance and legal basis for supporting the civil aircraft industry consistently.¹⁸⁰ It will be the most important regulation concerning the promotion of civil aircraft industry in China.

¹⁷⁶ Juan He (n 15), at 216.

¹⁷⁷ For instance, see Ministry of Finance and the National Development and Reform Commission of the PRC (n 93).

¹⁷⁸ Under the Chinese legal system, the authority of administrative regulations is only lower to the Constitution and laws that are enacted by the Nation People's Congress or its Standing Committee.

¹⁷⁹ The State Council of PRC, Legislative Plan of the State Council (2010), issued by the General Office of the State Council in 1 January 2010.

¹⁸⁰ The main contents of this part regarding the Regulation on the Development of Civil Aircraft Industry are based on interview or telephone interview with drafters of the Aircraft Regulation.

At the time of the writing of this thesis, the first draft of the Aircraft Regulation has been finished, and advice from industrial and legal professionals is being sought. The Aircraft Regulation involves many important regulatory issues relevant to the development of the industry in China, such as the development goals of the industry, government regulatory mechanisms, international collaboration, talent building, market promotion, and qualification licensing. The main contents of the Aircraft Regulation include as follows.

First, the Aircraft Regulation recognises the significance of the civil aircraft industry, and makes it clear that the government will make an effort to create a favourable development environment for the industry. The legislative purpose of the Aircraft Regulation is to facilitate scientific and technological progress in, and the industrial development of, the civil aircraft industry, ensure the consistent and stable development of the industry, and promote the core competitiveness of China's civil aircraft industry. The long-term goal is to build an indigenous and commercially viable civil aircraft industry with global competitiveness. It is also hoped that the industry could facilitate national economic development and industrial structure upgrading in China. The Aircraft Regulation confirms the position of the industry as a national strategic high-tech industry, in line with the National 12th Five-Year Plan and the National Medium- and Longer-Term Programme for Science and Technology Development (2006-2020).

However, it is unlikely that the Aircraft Regulation will explicitly mention subsidies as a way to support the civil aircraft industry. As mentioned above, the government has realised the legal uncertainties and would like to reconcile its support policies with WTO subsidy rules. It is in the best interest of China to promote the industry in a way consistent

with WTO rules. This is also one of the main reasons why it has taken a long time for the government to start to enact the Aircraft Regulation. The concern over such legal uncertainties has intensified as the subsidies provided to Airbus and Boeing were ruled illicit by WTO adjudicating bodies. The rulings in the disputes could provide some guidance on how China should support the industry. In this regard, WTO scholars in China have made suggestions on how to support the civil aircraft industry without violating the SCM Agreement. For instance, it has been suggested that the government should make wider use of non-specific subsidies. The government may also support the industry through rewarding research institutions or individuals that contribute to its development. Moreover, the government should focus its support on promoting the R&D and technological capability of aircraft manufacturers and enabling them to be independently viable.¹⁸¹ Subsidies for pre-competitive R&D activities used to be non-actionable subsidies, and are less distortive compared with other kinds of subsidies. Some of these suggestions have been incorporated into the draft of the Aircraft Regulation

In addition, the Aircraft Regulation also emphasises the importance of diversifying the methods of supporting the industry. It is stressed that civil aircraft manufacturers should broaden their financing channels. Private investment and venture capital are encouraged to enter the industry and to help discipline the commercial operations of aircraft firms in their development. Besides financial support, government will increase its input into relevant infrastructure and major equipment in the civil aircraft industry, and encourage the utilisation of state-owned assets and facilities through leasing. In view of the above, the Aircraft Regulation clearly reflects China's resolution to build an indigenous LCA industry.

¹⁸¹ He (n 6), at 538.

Moreover, it also demonstrates that China is making efforts to support the industry in a way that is more compatible with WTO rules.

6.5 Conclusion

This chapter has demonstrated that China is determined to support an indigenous large civil aircraft industry. The significance of the civil aircraft industry has been fully realised; the economic development and big market in China provide the basis for the development of the LCA industry. However, there is no consistent subsidy regime in China; the support schemes for the civil aircraft industry have to be found in a variety of laws, regulations and regulatory documents. The relevant national development plans and industrial outlines at the top governance level also provide general guidelines for supporting the industry. Like Airbus and Boeing, COMAC has received various kinds of subsidies from the government.

In view of the findings of the WTO adjudicating bodies in the Airbus-Boeing disputes and relevant case-law, the WTO holds a strict attitude towards government subsidisation in the civil aircraft sector. This brings about vast legal uncertainties as to China's LCA subsidisation.¹⁸² Moreover, the WTO-plus commitments that China made in its Accession Protocol add to the legal uncertainties. With the development of the civil aircraft industry in China, the incumbent players in the industry have become more concerned about China's compliance with its WTO obligations, so they are keeping an eye on the government's LCA subsidisation.¹⁸³ It is likely that China's LCA subsidies will be

¹⁸² Ibid, at 519.

¹⁸³ Ping Gong and Jessica Wang (n 78).

challenged if a dispute arises in the future. The incumbent players may bring a suit to the WTO in order to guard their dominant positions in the aircraft market. However, even so, it is unlikely that China will stop supporting the industry. Compared with the US and the EU, the industry in China is still in the initial stage and remains relatively underdeveloped. The support to the industry may probably continue until the industry achieves core competitiveness. The enactment of the Aircraft Regulation reflects the determination of China to nurture an indigenous LCA industry. It will provide a clear guidance and legal basis for supporting the civil aircraft industry consistently. The tension between China's need to support the civil aircraft industry and the stringent WTO disciplines on the use of subsidies thus needs to be dealt with carefully. A wise solution of this problem is critical for the future development of the global civil aircraft industry, especially for the new players in the industry.

Chapter 7 - Rethinking the Application of WTO Subsidy Rules to the Civil Aircraft Industry

7.1 Introduction

Conflict over subsidies in the civil aircraft industry has lingered as a source of contention in the GATT and WTO for decades. Although a number of lawsuits have been filed and adjudicated on, the problem remains unresolved. Moreover, it could become more intractable as more countries join the aircraft market. Failure to deal with the subsidy problem in a proper manner may hinder the smooth development of the civil aircraft industry. The credibility of the WTO as a main forum for international trade regulation may also be affected. As demonstrated in the previous chapters, the WTO subsidy rules and dispute settlement mechanism are not fully effective in dealing with the subsidy problem in the civil aircraft sector. In 2014, the EU filed a new case in the WTO against the conditional tax incentives provided by Washington State in relation to the development, manufacture, and sale of large civil aircraft.¹ This further highlights the fact that the conflict over subsidies in the industry is far from ending, thus indicating the need to rethink WTO rules on the use of subsidies from a more fundamental perspective.

This chapter first examines subsidies in the civil aircraft industry from an economic perspective. This mainly includes a discussion of the strategic trade policy argument and the infant industry protection argument. Next, this chapter reflects on the application of subsidy rules to the aircraft sector. This includes a discussion of the practical problems

¹ Request for Consultations by the EU, United States - *Conditional Tax Incentives for Large Civil Aircraft (US - Tax Incentives)*, WT/DS487/1.

resulting from the application of stringent subsidy rules, the substantive fairness of the WTO subsidy rules, and the objectives of the WTO in terms of subsidy regulation. Finally, as the existing WTO subsidy rules and dispute settlement mechanism are not fully effective in dealing with the subsidy problem, this chapter provides some tentative suggestions on how the historical and ongoing international legal disputes may be resolved.

7.2 Aircraft Subsidies from an Economic Perspective

As discussed in chapter four, in view of the adjudications in the Airbus-Boeing disputes and relevant WTO case-law, it is clear that the WTO holds a strict attitude towards subsidies in the civil aircraft sector. In accordance with the way in which the SCM Agreement is applied in the industry, government support for aircraft manufacturing companies is very likely to be defined as subsidies within the meaning of the SCM Agreement and result in adverse effects.² However, the application of stringent subsidy disciplines did not cease the conflicts in the civil aircraft industry. As regards the aforesaid latest case filed by the EU in 2014, consultations were held between the EU and the US. However, like in the previous Airbus-Boeing cases, the consultations failed.³ In 2015, a panel was established by the DSB; the WTO Director-General composed the panel according to the request of the EU.⁴ The continuing disputes make it necessary to rethink the WTO subsidy rules in the context of the civil aircraft industry from a more fundamental perspective.

² For more discussion on this, see Chapter four of this thesis.

³ Request for the Establishment of a Panel by the EU, *US - Tax Incentives*, WT/DS487/2, at 1.

⁴ Note by the Secretariat, *US - Tax Incentives*, WT/DS487/3, at 1.

As outlined in chapter two, the rationale for disciplining the use of subsidies are mainly from an economic perspective, as government subsidisation is inconsistent with the theory of comparative advantage, and could reduce the efficiency of resource allocation, thus distorting the market and harming competition.⁵ Therefore, reconsideration of the WTO subsidy rules as applied in the civil aircraft industry should also start from an economic perspective. In fact, numerous criticisms about the WTO subsidy rules were raised by economic commentators. For instance, Bagwell and Staiger questioned the utility of disciplines on the use of domestic subsidies.⁶ It has been argued that WTO members may be pushed to use an inferior substitute such as tariff protection if such a domestic policy instrument with potentially constructive uses is constrained.⁷ Sykes argued that it is impossible as a practical matter to identify the net impact of governments on the competitive position of business through the myriad of tax and regulatory policies in place.⁸ Generally speaking, it is very difficult for rules on the use of subsidies to distinguish between welfare-enhancing and welfare-reducing subsidies from either a national or global perspective. Moreover, there are other problems in terms of international subsidy rules, such as the fact that the benchmarks for identifying subsidies are either arbitrary or incoherent.⁹

Apart from criticising disciplines that limit the use of subsidies in general, economists have persistently been exploring 'good' types of subsidies, or at least 'good' use of

⁵ Michael Trebilcock, Robert Howse and Antonia Eliason, *The Regulation of International Trade* (4th edn, Routledge 2012), at 389.

⁶ Kyle Bagwell and Robert W. Staiger, 'Will International Rules on Subsidies Disrupt the World Trading System?' (2006) 96 *American Economic Review* 877, at 889; Damien Neven and Alan Sykes, 'United States - Measures Affecting Trade in Large Civil Aircraft (Second Complaint): Some Comments' (2014) 13 *World Trade Review* 281, at 282.

⁷ Kyle Bagwell and Robert W. Staiger (n 6), at 889; Damien Neven and Alan Sykes (n 6), at 282.

⁸ Alan O. Sykes, 'The Questionable Case for Subsidies Regulation: A Comparative Perspective' (2010) *Journal of Legal Analysis* 473, at 473; Damien Neven and Alan Sykes (n 6), at 283.

⁹ Damien Neven and Alan Sykes (n 6), at 283.

subsidies.¹⁰ As mentioned in chapter two, even though subsidies are generally regarded as trade-distorting, they are also considered to be an important government instrument for pursuing important and fully legitimate economic and social policy objectives.¹¹ In this regard, there are several rationales that are notable for justifying government subsidisation.¹² For instance, the market failure rationale suggests that subsidies might be employed to correct market failures.¹³ In a perfectly competitive market, where mere interaction between supply and demand results in efficient allocation of resources, welfare is maximised under market forces. Government interventions will distort efficient resource allocation by creating a wedge between the marginal cost price and the socially optimal price.¹⁴ However, in the presence of market failures, there could be externalities resulting from consumer or producer actions that are not reflected in the market price. The Pareto-efficient outcome cannot result from market forces but requires government intervention.¹⁵ In this situation, governments should intervene and tackle the market failure as directly as possible by taking appropriate measures, such as certain types of subsidy or tax.¹⁶ Apart from the market failure rationale, other rationales for offering subsidies include the redistribution rationale, the job-safeguarding rationale, etc.¹⁷ Amongst others, two economic arguments are particularly relevant to the civil aircraft

¹⁰ Alan O. Sykes, *The Economics of WTO Rules on Subsidies and Countervailing Measures* (John M Olin Program in Law and Economics Working Paper 2003), at 6; Juan He, 'WTO-plus Commitments and Emerging Implications for China's Large Civil Aircraft Manufacturing' (2014) 13 *World Trade Review* 517, at 539.

¹¹ Michael Trebilcock, Robert Howse and Antonia Eliason (n 5), at 364.

¹² Coppens summarised four rationales for offering subsidies. Dominic Coppens, *WTO Disciplines on Subsidies and Countervailing Measures: Balancing Policy Space and Legal Constraints* (Cambridge University Press 2014), at 6-17.

¹³ *Ibid.*, at 8-9.

¹⁴ *Ibid.*, at 7.

¹⁵ *Ibid.*, at 8.

¹⁶ Jagdish N. Bhagwati, 'The Generalised Theory of Distortions and Welfare' in J. N. Bhagwati (ed), *International Trade: Selected Reading* (2nd edn, Cambridge, MA: MIT Press 1987), at 265-86.

¹⁷ Dominic Coppens (n 12), at 16.

industry, namely the strategic trade argument and the infant industry argument.¹⁸

7.2.1 Strategic Trade Policy Argument

The 'strategic trade policy' argument is one of the main trade theories justifying subsidies in the civil aircraft industry.¹⁹ Strategic trade policy describes the policy that is adopted in order to affect the outcome of strategic interactions between firms in an international oligopoly, namely where an industry is dominated by a small number of firms.²⁰ It is notable that the term 'strategic' has been subject to some misunderstanding.²¹ It does not mean that an industry is a key industry or has military importance and therefore should be supported or protected by government.²² Rather, it refers to the strategic interaction between firms. That is, in an oligopolistic market dominated by a few suppliers, the firms are well aware of their strategic interdependence.²³ Individual firms in the market make business decisions, such as setting output or price levels, taking into account the output and price decisions by competitors.²⁴ The strategic trade policy argument correctly stipulates that the assumptions of 'perfect competition' in the comparative advantages and factor endowment theorem are not fulfilled in most real-world markets.²⁵ Under oligopolistic market with high entry barriers, incumbents are effectively shielded from

¹⁸ The strategic trade policy argument and its application have been discussed briefly by Andreas Knorr, Jorg Bellmann and Rahel Schomaker, 'Subsidies in Civil Aircraft Manufacturing: The World Trade Organisation (WTO) and the Boeing-Airbus Dispute' (2012) 11 *European State Aid Law Quarterly* 585, at 588-590.

¹⁹ *Ibid.*, at 588.

²⁰ Bijit Bora, P. J Lloyd and Mari Pangestu, 'Industrial Policy and the WTO', *United Nations Conference on Trade and Development* (United Nations 2000), at 548.

²¹ Knorr, Bellmann and Schomaker (n 18), at 590.

²² *Ibid.*, at 590.

²³ *Ibid.*, at 591; Bijit Bora, P. J Lloyd and Mari Pangestu (n 20), at 548.

²⁴ Dominic Coppens (n 12), at 10.

²⁵ Knorr, Bellmann and Schomaker (n 18), at 589.

newcomers, and are able to charge higher price than marginal costs, or gain extra profits or other 'rents'.²⁶

Therefore, in contrast to traditional trade theories, the strategic trade policy theory concludes that free trade cannot always be welfare-enhancing and create positive sum result. In an imperfectly competitive market, which is a combination of structural elements of oligopoly, high barriers to market entry and substantial economies of scale, governments should support domestic firms to become or remain incumbents by implementing protectionist measures such as subsidies.²⁷ Governments' trade policy can alter the strategic interaction between firms in a way that shifts profit from foreign competitors to domestic firms by subsidising domestic firms.²⁸

Brander and Spenser elaborated a strategic trade policy standard model with two duopolists.²⁹ The duopolists are from different countries and only export to a third country market. The model assumes that the firms choose their best output taking into consideration the output of the other.³⁰ The model demonstrates that a government can increase its domestic firm's profits as well as its national welfare by granting production subsidies.³¹ Moreover, through such subsidies, the profits earned by the competing foreign firm are transferred to the domestic firm, since the subsidies allow the domestic firm to commit to a higher level of output.³²

²⁶ Ibid, at 589.

²⁷ Ibid, at 589. See also Paul R. Krugman, 'Is Free Trade Passé?' (1987) 1 *Journal of Economic Perspectives* 131; James A. Brander and Barbara J. Spencer, 'Export Subsidies and International Market Share Rivalry' (1985) 18 *Journal of International Economics* 83.

²⁸ James A. Brander and Barbara J. Spencer (n 27); Dominic Coppens (n 12), at 10.

²⁹ James A. Brander and Barbara J. Spencer (n 27). For further discussion, see Bijit Bora, P. J Lloyd and Mari Pangestu (n 20), at 548.

³⁰ World Trade Organisation, 'World Trade Report 2009: Trade Policy Commitments and Contingency Measures' (2009), at 87.

³¹ Conflicting changes in consumer surplus are assumed away so that in order to maximise national welfare, governments only need to maximise the domestic firm's profits. Ibid, at 87.

³² Ibid, at 88.

The civil aircraft production almost perfectly matches the crucial model assumptions of strategic trade policy.³³ The theory thus has been applied to the industry. Krugman illustrated a duopoly model in which two manufacturers (Boeing and Airbus) produce similar aircraft in terms of technical specifications and operating performance and are equally efficient in doing so.³⁴ Under such conditions, a government can enhance national welfare at another country's expense by subsidising its aircraft firm in the international competition.³⁵ In particular, when there is a significant domestic market for a good, protection of this market will raise the profits of the domestic firm and lower the profits of the foreign competitor.³⁶ In another model developed by Carbaugh in which Boeing and Airbus compete for monopoly profits in a third market, subsidies can increase the world welfare to the extent that the consumer surplus in a third country resulting from the availability of civil aircraft exceeds the costs of subsidies.³⁷

The strategic trade policy argument provides an attractive case for government subsidisation. However, whether strategic trade policies can enhance welfare depends on a number of empirical issues.³⁸ The outcome of the strategic trade policy model could be changed by the conditions of entry, the presence of economies of scale or other features of the model, leading to a change in the nature of the optimal intervention.³⁹ For instance, there may be problem of insufficient information, as the information requirements for selecting the optimal level of the instrument are substantial and can hardly be met in

³³ Paul R. Krugman, *International Economics: Theory and Policy* (6th ed, Addison-Wesley 2003), at 281; Knorr, Bellmann and Schomaker (n 18), at 589.

³⁴ Krugman (n 33), at 279; Knorr, Bellmann and Schomaker (n 18), at 589.

³⁵ Krugman (n 33), at 279; Paul R. Krugman (n 27), at 136.

³⁶ Paul R. Krugman (n 27), at 137.

³⁷ Robert J. Carbaugh, 'Strategic Trade Policy and Commercial Jet Aircraft' (1993) 7 *The International Trade Journal* 393, at 401.

³⁸ Damien Neven and Alan Sykes (n 6), at 283; see also Bijit Bora, P. J. Lloyd and Mari Pangestu (n 20), at 548; Krugman (n 33), at 280.

³⁹ Bijit Bora, P. J. Lloyd and Mari Pangestu (n 20), at 548.

practice.⁴⁰ Governments tend to rely on partial or asymmetric information provided by domestic producers, from whom strong rent-seeking incentives exist, namely to provide false information to secure government support.⁴¹ Moreover, the possibility of retaliation or even cross-retaliation from other countries also renders the strategic trade policy argument not so convincing.⁴² Subsidies provided to one domestic industry may thus lead to rising costs and strategic disadvantages in another.⁴³

Although there is doubt regarding the plausibility of applying strategic trade policy, it should be noted that the main argument behind the strategic trade policy theory, namely the imperfection of free trade and competition, has generally been acknowledged by economists.⁴⁴ Economists have identified a number of instances where governments may use subsidies to help national firms earn extra profits under imperfect market competition.⁴⁵ For instance, subsidies in the context of environmental policies and R&D support may be justified due to their externalities; government may use subsidies to change the market outcome in order to redistribute income for social development and so on.⁴⁶ The EU subsidy policy concerning the civil aircraft industry has been considered a clear example of strategic trade policy. Although it is still an open question whether the EU subsidy policy is welfare-enhancing,⁴⁷ it was generally considered to be a good case as it has increased competition in the highly concentrated civil aircraft market.⁴⁸ From the perspective of strategic trade theory, the competitiveness of Airbus in the world civil

⁴⁰ Ibid, at 548.

⁴¹ Knorr, Bellmann and Schomaker (n 18), at 590.

⁴² Bijit Bora, P. J Lloyd and Mari Pangestu (n 20), at 548; Krugman (n 33), at 280.

⁴³ Knorr, Bellmann and Schomaker (n 18), at 590.

⁴⁴ Ibid, at 589.

⁴⁵ World Trade Organisation (n 30), at 86.

⁴⁶ Ibid, at 88.

⁴⁷ Bernard M. Hoekman and Michel M. Kostecki, *The Political Economy of the World Trading System: The WTO and Beyond* (3rd ed, Oxford University Press 2009), at 529.

⁴⁸ Ibid, at 528.

aircraft industry has also been enhanced by EU subsidies.⁴⁹

7.2.2 Infant Industry Argument

Besides the strategic trade policy argument, another economic theory which has been used to justify subsidies in the civil aircraft industry is the infant industry argument.⁵⁰ The infant industry argument is one of the oldest arguments used to justify protection of domestic infant industries from international competition.⁵¹ It was initially articulated by Alexander Hamilton in 1791, later popularised by Friedrich List in 1841 and John Stuart Mill in 1848, and has been invoked many times since.⁵²

According to this argument, if newly established industries are not protected from established foreign firms, they will not be able to develop to enjoy the comparative advantage and survive international competition.⁵³ Therefore, they can be protected by providing subsidies or through other instruments. The main rationale behind this theory is that industries in their infancy will experience 'learning by doing' effects.⁵⁴ Higher costs are incurred during the infant phase due to the lack of experience in terms of production technology, management, marketing and other entrepreneurial expertise.⁵⁵ Therefore,

⁴⁹ Robert J. Carbaugh (n 37), at 404.

⁵⁰ Knorr, Bellmann and Schomaker (n 18), at 588.

⁵¹ See, for instance, Van den Berg Hendrik and Joshua J. Lewer, *International Trade and Economic Growth* (Routledge 2015), at 217; Marc J. Melitz, 'When and How Should Infant Industries Be Protected?' (2005) 66 *Journal of International Economics* 177, at 178.

⁵² Peter van den Bossche, *The Law and Policy of the World Trade Organisation: Text, Cases and Materials* (2nd ed, Cambridge University Press 2008), at 22.

⁵³ Anne O. Krueger and Baran Tuncer, 'An Empirical Test of the Infant Industry Argument' (1982) 72 *The American Economic Review* 1142, at 1142-43; T. R. Jain and V. K. Ohri, *Principles of Economics* (VK Global Publications 2010), at 345.

⁵⁴ Dermot Leahy and J. Peter Neary, 'Learning by Doing, Precommitment and Infant-Industry Promotion' (1999) 66 *The Review of Economic Studies* 447, at 448.

⁵⁵ Rokiah Alavi, *Industrialisation in Malaysia: Import Substitution and Infant Industry Performance* (Routledge 1996), at 101.

infant domestic producers are often not able to compete with mature and efficient foreign firms, and thus need government protection or assistance.⁵⁶ The justification of infant industry protection is precisely that the industry protected will gain a comparative advantage after temporary protection.⁵⁷

However, it is difficult to decide which industry needs protection, as every industry begins from infancy. In fact, this is one of the reasons why the infant industry argument has been criticised by economists.⁵⁸ In this regard, it is generally recognised that several conditions must be met to justify the protection.⁵⁹ First, the industry must be able to achieve international competitiveness after a period of protection.⁶⁰ As mentioned above, the protection is temporary and the protected infant industry must be able to mature and become viable after protection ceases.⁶¹ Moreover, the long-run benefits of establishing the industry must be sufficient to recoup the costs incurred during the learning period. In other words, the cumulative net benefits from trade and growth of the protected industry must exceed the initial costs of protection.⁶² Infant industry protection can take the form of import duties on foreign goods or other border barriers. Subsidies have also traditionally been considered the instrument of choice for implementing infant industry protection.⁶³ In fact, economists have suggested that production subsidies targeted at certain industries are a preferred policy instrument in general.⁶⁴

When being applied to the civil aircraft industry, it may be difficult to determine

⁵⁶ Ibid, at 101; Anne O. Krueger and Baran Tuncer (n 53), at 1143.

⁵⁷ Van den Berg Hendrik and Joshua J. Lewer (n 51), at 218.

⁵⁸ T. R. Jain and V. K. Ohri (n 53), at 345.

⁵⁹ For more detailed discussion on these conditions or propositions to justify infant industry protection, see Alavi (n 55), at 100.

⁶⁰ Van den Berg Hendrik and Joshua J. Lewer (n 51), at 218.

⁶¹ Marc J. Melitz (n 51), at 178.

⁶² Anne O. Krueger and Baran Tuncer (n 53), at 1143; Marc J. Melitz (n 51), at 178.

⁶³ Kim Kaivanto, 'Premise and Practice of UK Launch Aid' (2006) 40 *Journal of World Trade* 495, at 497.

⁶⁴ World Trade Organisation (n 30), at 33.

whether the industry should be protected in line with the infant industry argument. As mentioned above, the challenging part of the argument is to identify the industries that merit protection in an objective manner.⁶⁵ Therefore, elaborate economic analysis may be necessary to determine whether the civil aircraft industry in the emerging countries can be protected pursuant to the infant industry argument. However, some preliminary analysis may be useful in this regard.

On the one hand, as discussed in chapter two, due to the high entry barriers to the aircraft market, it is very difficult for newcomers in the industry to survive the competition. The industry is regarded as a clear example of industry with large economies of scale and learning economies.⁶⁶ Each doubling of production generally yields a reduction of one-fifth in unit cost per aircraft.⁶⁷ As a result of the large economies of scale, there is a learning-by-doing process that relates aircraft production costs to accumulated output. Moreover, as the industry is R&D-intensive, it requires huge R&D input and up-front development costs. These all make it very difficult for newcomers in the sector to compete with established foreign firms, such as Airbus and Boeing.

On the other hand, the civil aircraft industry is very lucrative and has a quite promising prospect. According to Boeing's forecast, there is a need for 38,050 airplanes valued at more than \$5.6 trillion over the next 20 years.⁶⁸ The development of the air transport market globally will further boost the civil aircraft industry. The huge aircraft market potential provides the basis for the prosperity of the industry. The successful story

⁶⁵ Bossche (n 52), at 22.

⁶⁶ Damien Neven and Alan Sykes (n 6), at 283.

⁶⁷ Boeing v Airbus: Nose to Nose (2005) *The Economist*, available at <www.economist.com/node/4102185> accessed 30 July 2012.

⁶⁸ Boeing, *Current Market Outlook (2015-2034)*, available at <<http://goo.gl/NEhyKK>> accessed 20 June 2015.

of Airbus has demonstrated that the sector is able to grow fast, obtain international competitiveness and generate enough benefit to recoup the initial costs of protection.

Although the foregoing analysis is only preliminary, it could provide some insights as to whether the infant industry argument could be applied to the civil aircraft industry. In fact, both the US and European countries have protected their own infant manufacturing industries against foreign competition on the basis of this argument.⁶⁹ In particular, the EU has utilised the argument in order to support the civil aircraft industry.⁷⁰ European policy-makers have admitted that they have supported Airbus from its outset and have justified the subsidies to Airbus on the ground of the infant industry argument.⁷¹

Due to the sufficient theoretical basis for the protection of infant industry, the argument has generally been accepted by economists, despite also criticised by some.⁷² The infant industry argument could find some support in the WTO legal framework.⁷³ Article XVIII of the GATT 1994, entitled 'Government Assistance to Economic Development', is particularly relevant to the infant industry argument.⁷⁴ This article provides special and differential treatment for developing country members in the WTO and functions as an exception to the principle of liberal trade.⁷⁵ It allows developing

⁶⁹ Bossche (n 52), at 725.

⁷⁰ Kaivanto (n 63), at 497.

⁷¹ In 2004, the US Trade Representative Robert Zoellnick stated that: 'since its creation 35 years ago, some Europeans have justified subsidies to Airbus as necessary to support an infant industry...' See *ibid*, at 496; He (n 10), at 543; Robert Carbaugh and John Olienyk, 'Boeing-Airbus Subsidy Dispute: An Economic and Trade Perspective' (2001) 2 *Global Economy Quarterly* 261.

⁷² Besides the above-mentioned difficulty to decide which industry needs protection, there are some other reasons why the argument is criticised. For instance, it is difficult to decide when the protected industry will become mature and competitive due to the lack of reliable criteria. Moreover, it is argued that once protection is granted, the protected industry would not want the removal of protection. See, for instance, Aiko Ikeo, 'Negishi's General Equilibrium Approach to Trade Theory: Trade between Similar Countries and Infant Industry Protection' in Aiko Ikeo and Heinz D. Kurz (eds), *A History of Economic Theory: Essays in Honour of Takashi Negishi* (Routledge 2009), at 56; Marc J. Melitz (n 51), at 178.

⁷³ Amrita Narlikar, 'Fairness in International Trade Negotiations: Developing Countries in the GATT and WTO' (2006) 29 *The World Economy* 1005, at 1016.

⁷⁴ Bossche (n 52), at 725.

⁷⁵ *Ibid*, at 725.

country members, under certain conditions, to take measures which are otherwise inconsistent with the GATT 1994 to protect their infant industries against import competition.⁷⁶

According to this Article, in order to implement programmes and policies of economic development designed to raise the general standard of living of their people, it may be necessary for member whose economies 'can only support low standards of living and are in the early stages of development', namely developing country members, to 'take protective or other measures affecting imports, and that such measures are justified in so far as they facilitate the attainment of the objectives of this Agreement'.⁷⁷ These members should 'enjoy additional facilities to enable them...to maintain sufficient flexibility in their tariff structure to be able to grant the tariff protection required for the establishment of a particular industry...'.⁷⁸ In particular, according to Article XVIII, a developing country member can modify or withdraw a tariff concession annexed to the GATT 1994 if it considers this desirable, in order to promote the establishment of a particular industry.⁷⁹

The reference to the establishment of particular industries in Article XVIII applies not only to the establishment of a new industry, but also to the establishment of a new branch of production in an existing industry, the substantial transformation of an existing industry, and the substantial expansion of an existing industry supplying a relatively small proportion of the domestic demand.⁸⁰ It also covers the reconstruction of an industry destroyed or substantially damaged as a result of hostilities or natural disasters.⁸¹

⁷⁶ Ibid, at 725.

⁷⁷ Article XVIII:2 of the GATT 1994.

⁷⁸ Article XVIII:2 of the GATT 1994.

⁷⁹ Article XVIII:7 of the GATT 1994.

⁸⁰ Annex I of the GATT 1994, notes to Article XVIII of the GATT 1994.

⁸¹ Annex I of the GATT 1994, notes to Article XVIII of the GATT 1994.

According to Article XVIII, the developing country member concerned must enter into negotiations with any other members that have a substantial interest in the tariff concession modification or withdrawal, in order to reach an agreement on compensatory adjustment.⁸² If such an agreement is reached, the developing country members are free to modify or withdraw tariff concessions. If not, the developing country members may refer the matter to the General Council, which will then decide whether the compensatory adjustment is adequate.⁸³ Article XVIII also provides that there may be circumstances where no measure consistent with the aforesaid provisions is practicable to permit a developing country member to grant the governmental assistance required in order to promote the establishment of a particular industry.⁸⁴ In such situations, the developing country member may have recourse to Section C and Section D of Article XVIII, which sets forth special procedures to deal with such cases.⁸⁵ Moreover, according to Article XVIII, a WTO member whose economy is in the process of development may also apply to the General Council for approval of measures under Article XVIII:13 with respect to the establishment of a particular industry.⁸⁶

The articles mentioned above allow developing country members to take measures which are otherwise GATT-inconsistent to protect their infant industries.⁸⁷ This provides to some extent the legal basis for the protection of infant industry.⁸⁸ During the GATT period,

⁸² Article XVIII:7 of the GATT 1994.

⁸³ The developing country member concerned should be free to modify or withdraw the concession if the General Council finds that the compensation is adequate or every reasonable effort has been made to offer adequate compensation. If the modification or withdrawal is taken, any other member affected by the modification or withdrawal is then free to modify or withdraw substantially equivalent concessions regarding the developing country member which has taken the action. See Article XVIII:7 of the GATT 1994.

⁸⁴ Article XVIII:3 of the GATT 1994.

⁸⁵ Article XVIII:13 of the GATT 1994.

⁸⁶ Article XVIII:22 of the GATT 1994.

⁸⁷ Article XVIII:4 of the GATT 1994. See also Bossche (n 52), at 725.

⁸⁸ *Ibid*, at 725.

the GATT Council was generous in allowing developing country members to modify or withdraw tariff concessions under the GATT 1947.⁸⁹ However, the infant industry exception under Article XVIII has not been invoked by any developing country member since the establishment of the WTO.⁹⁰

As discussed in chapter six, a number of countries have just entered or expect to enter the large civil aircraft market. Compared with the US and the EU, the civil aircraft industry of these countries remains relatively underdeveloped. Based on the infant industry argument, it may be economically viable for these countries to subsidise their aircraft firms so as to help them survive international competition. Therefore, the infant industry argument is of particular relevance in terms of the future development of the civil aircraft industry.

The strategic trade policy and infant industry arguments provide some economic rationales for using subsidies in the civil aircraft industry. This deviates from the traditional attitude that subsidies are generally trade-distorting and government should avoid using them. As mentioned above, subsidies in the aircraft industry could enhance welfare, depending on empirical issues.⁹¹ This thus demonstrates that subsidies in the industry are not always undesirable from the economic perspective and could in fact be an appropriate policy instrument.⁹² However, the SCM Agreement, which takes a stringent attitude towards subsidies, does not allow for much policy space for using subsidies in the civil aircraft industry. The economic rationales and their application to the civil aircraft industry

⁸⁹ Ibid, at 726.

⁹⁰ Committee on Trade and Development, Implementation of Special and Differential Treatment Provisions in WTO Agreements and Decisions, Note by the WTO Secretariat, Addendum 4, WTO/COMTD/W/77/Rev.1/Add.4 (7 February 2002), at 2.

⁹¹ Damien Neven and Alan Sykes (n 6), at 283.

⁹² Ibid, at 283.

discussed above could provide some ideas for the future development of existing legal arrangements in this area.

7.3 Rethinking the Application of Subsidy Rules to the Aircraft Sector

Having discussed the economic rationales for the use of subsidies in the civil aircraft industry, it is thus proper to reflect on the application of WTO subsidy rules to the sector. As noted in chapter four, the way in which the SCM Agreement is applied in the civil aircraft industry demonstrates that the WTO takes a stringent attitude towards the use of subsidies in the sector. In fact, this applies not only in the civil aircraft industry; the somewhat extreme view of the WTO is that most types of government subsidisation will distort the market and delay the establishment of genuine international competition.⁹³ It was even argued that the SCM Agreement presupposes that government subsidies are inherently trade-distorting.⁹⁴ This attitude reached its peak with the expiration of the non-actionable subsidy provisions in the SCM Agreement, despite the fact that economists persistently explore ‘good’ types of subsidies, or at least ‘good’ use of them.⁹⁵

7.3.1 Identifying the Need for a Re-evaluation in the Aircraft Sector

Generally speaking, when being applied to most industries, the SCM Agreement can

⁹³ He (n 10), at 539.

⁹⁴ Ryan E Lee, ‘Dogfight: Criticizing the Agreement on Subsidies and Countervailing Measures Amidst the Largest Dispute in World Trade Organisation History’ (2006) 32 North Carolina Journal of International Law and Commercial Regulation 115, at 149.

⁹⁵ Alan O. Sykes (n 10), at 6; He (n 10), at 539.

help create a fair international competition and trading environment.⁹⁶ However, this may not be the case when the SCM Agreement is applied to the civil aircraft industry. The reasons lie fundamentally in the unique economic and competitive nature of the civil aircraft industry and the market thereof. As a result of the sector's distinctive characteristics such as extremely high barriers to entry, immense technological risk, strong learning effects and unique duopolistic market structure, the traditional attitude and the paradigm for viewing subsidies need to be adjusted.⁹⁷ As noticed by Lee, applying the SCM Agreement to the civil aircraft industry will cause a number of practical problems.⁹⁸

First, applying the SCM Agreement could discourage competition in the civil aircraft market.⁹⁹ As discussed in chapter two, the entry barriers in the civil aircraft industry are extremely high. The market has been dominated by Airbus and Boeing for a long time. It is thus very difficult to introduce new competitors into the global aircraft market. The example of Airbus clearly reflects the fact that government subsidisation is necessary for promoting competition in the aircraft market.¹⁰⁰ Without direct and enormous support from government, it was unlikely that Airbus would be able to survive competition with Boeing, achieve fast growth and finally become mature. It was said that if Airbus had not competed strongly with Boeing, there would have been recurrence of monopoly pricing for certain Boeing aircraft models.¹⁰¹ The global civil aircraft market today may also be in a different shape. Therefore, applying strict disciplines over subsidy use to the civil aircraft industry will discourage potential competitors from entering the market, thus restricting competition

⁹⁶ Lee (n 94), at 149.

⁹⁷ Ibid, at 149.

⁹⁸ The problems caused by applying the SCM Agreement to the civil aircraft industry have been discussed briefly by Lee. Ibid, at 149-151.

⁹⁹ Ibid, at 150.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

in the industry.¹⁰²

Secondly, applying the SCM Agreement could stifle technological innovation in the civil aircraft market. As the civil aircraft industry is one of the most R&D-intensive and technologically dynamic industries, consistent R&D input and technological innovation are essential for the development of the industry.¹⁰³ Due to the huge and usually up-front R&D costs, technological innovation in the civil aircraft industry relies heavily on government support. For instance, the European Launch Aid subsidies have allowed Airbus to develop five new aircraft models over a ten year period.¹⁰⁴ When applied to the civil aircraft sector, the SCM Agreement may prohibit government funding that is necessary for aircraft R&D, and therefore stifle innovation in the industry.¹⁰⁵ Considering the significance of the civil aircraft industry in national economies, in particular its technological spill-over effects to other sectors, this may also affect the government's ability to achieve important economic and social objectives overall.

Finally, it has been argued that applying stringent rules on the use of subsidies in the civil aircraft industry is unrealistic in practice.¹⁰⁶ Due to the significance of the industry in national economies, it is unlikely that governments will stop subsidising the industry. This could be demonstrated by the history of the transatlantic conflicts over aircraft subsidies. Although the US continued to challenge European subsidies to Airbus since the GATT period, European governments never stopped subsidisation even after Airbus became a formidable competitor of Boeing. Moreover, in view of the aircraft disputes between Brazil

¹⁰² Ibid, at 151.

¹⁰³ Damien Neven and Alan Sykes (n 6), at 283.

¹⁰⁴ Boeing v Airbus: Nose to Nose (n 67).

¹⁰⁵ Lee (n 94), at 149.

¹⁰⁶ Ibid, at 151.

and Canada, it is clear that even though subsidies are determined to be illicit, governments are not willing to cease subsidisation. Although the panel in the Airbus-Boeing cases have not decided whether the US and the EU have brought the subsidy measures at issue into conformity with the SCM Agreement, it is reasonable to predict that neither the US nor the EU will remove aircraft subsidies in a complete manner. The above-mentioned newly filed WTO case has reflected well this point.

7.3.2 Substantive Fairness regarding WTO Subsidy Rules

As demonstrated in the previous WTO adjudications, the incumbent countries in the civil aircraft industry have enormously subsidised their civil aircraft industries. Although many of these subsidies have been deemed illicit by the WTO adjudicating bodies, the reality is that aircraft firms in these countries have already grown up with government subsidisation and have dominated the global civil aircraft market. The situation is unlikely to change soon. Therefore, a question arises as to whether it is fair to discipline the use of subsidies by the newcomers to the industry.

One of the aims of the WTO is to promote fair competition among its members.¹⁰⁷ However, the concept of fairness remains contentious in the international trade context.¹⁰⁸ According to Thomas Franck, fairness is a composite of two independent variables: legitimacy and distributive justice, which are associated with procedural fairness

¹⁰⁷ See, for instance, Graham Dunkley, *Free Trade: Myths, Realities and Alternatives* (Zed Books 2004), at 193; Jae Wan Chung, *The Political Economy of International Trade: U.S. Trade Law, Policy, and Social Cost* (Lexington Books 2006), at 73; Simon Lester, Bryan Mercurio and Arwel Davies, *World Trade Law: Text, Materials and Commentary* (2nd edn, Hart Publishing 2012).

¹⁰⁸ Narlikar (n 73), at 1007.

(legitimacy) and substantive fairness (equity of outcomes) respectively.¹⁰⁹ Fairness discourse is the process by which the law, and those who make law, seek to integrate those variables.¹¹⁰

It has been noted that the evolution of the fairness discourse in the WTO has led to the marginalisation of the equity-based fairness agenda.¹¹¹ As a result, the WTO pays more attention to the legitimacy-based or procedural fairness, rather than substantive fairness.¹¹² With respect to the regulation of subsidies, if the WTO subsidy rules are applied to the civil aircraft industry in a way that focuses on procedural fairness, the forerunners and the newcomers will thus be subject to the same disciplines. The new emerging countries in the industry are thus to be strictly restricted from subsidising aircraft firms. However, the forerunners in the civil aircraft industry were not effectively restricted by the GATT or WTO subsidy rules before they achieved the dominant position in the aircraft market. Moreover, when the SCM Agreement was agreed on, it was expected that there would be specific multilateral rules for civil aircraft subsidy.¹¹³ However, there have not been such arrangements after about twenty years. As a result, it would be difficult to argue that the current legal arrangements in this area are fair for the newcomers in the industry.

7.3.3 Objective and Purpose of the WTO in Relation to Subsidy Use

The regulation of subsidies is part of the WTO trade rules, and thus should conform to

¹⁰⁹ Thomas M. Franck, *Fairness in International Law and Institutions* (Clarendon Press 1995), at 26; Narlikar (n 73), at 1008.

¹¹⁰ Thomas M. Franck (n 109), at 26-27; Narlikar (n 73), at 1007.

¹¹¹ Narlikar (n 73), at 1027.

¹¹² *Ibid.*, at 1027.

¹¹³ Footnote 15 of the SCM Agreement.

the general objectives and purpose of the trading system. According to the WTO Agreement, one important objective of the WTO is to expand production and trade, and also to build the trade capacity of members.¹¹⁴ However, applying the SCM Agreement to the civil aircraft industry may go against these objectives.

As mentioned in chapter two, due to the unique economic and competitive nature of the civil aircraft industry, subsidies play an essential role for the development of the industry. In view of the history of the civil aircraft industry, it is to a large extent reasonable to say that government subsidies have built this industry.¹¹⁵ Therefore, applying strict disciplines on the use of subsidies would greatly impact the development of the industry. It has been argued that this could even threaten the survival of civil aircraft manufacturers.¹¹⁶ As discussed above, when being applied to the civil aircraft sector, the SCM Agreement may discourage competition in the market. With only two dominant players in the global aircraft market and new competitors excluded from the market, it is not convincing to say that the SCM Agreement is beneficial to achieving the objective of expanding production and trade in the civil aircraft industry.

7.4 Suggestions for Resolving Aircraft Subsidy Disputes

As demonstrated throughout the previous chapters, the conflicts over subsidies in the civil aircraft sector have lingered as an issue of contention since the GATT period. Although a number of disputes have been brought to the WTO and have been adjudicated

¹¹⁴ Preamble of the WTO Agreement. See also Daniel L. Bethlehem, *The Oxford Handbook of International Trade Law* (Oxford University Press 2009), at 687.

¹¹⁵ Lee (n 94), at 152.

¹¹⁶ Ibid, at 152.

on by the panels and the Appellate Body, the conflicts are still far from ending. Due to the huge amount of subsidisation in the aircraft sector, the Airbus-Boeing disputes are regarded the most expensive and influential cases in the WTO. Moreover, as discussed in chapter six, the subsidy problem in the sector may become more complex and intractable as additional countries join the aircraft industry.

The historical, ongoing and possible future conflicts render it imperative to explore workable resolutions for the issue. A successful solution in this regard is not only significant for securing the smooth development of the global civil aircraft industry, but is also critical for the general credibility of the WTO as a main forum for international trade regulation.¹¹⁷ However, as highlighted throughout this thesis, the existing WTO subsidy rules are not fully effective in dealing with the subsidy problem in the civil aircraft industry. As a result, there need to be more effective legal arrangements in terms of subsidy regulation in the sector. The new arrangements should take into account both the ongoing disputes and possible future conflicts over issues in the civil aircraft industry. While a definitive solution to the subsidy problem seems unlikely, this chapter tries to provide some tentative suggestions that new legal arrangements in this area could take into account.

7.4.1 Acknowledging the Role of Subsidies in the Civil Aircraft Industry

Although subsidies can be protectionist and trade-distorting, they are also regarded as a useful government instrument to pursue important economic and social policy objectives.

¹¹⁷ Ibid, at 157.

This is particularly obvious in the civil aircraft industry. As demonstrated throughout this thesis, subsidies play an essential role in the successful development of the industry. Neither Airbus nor Boeing could have obtained their dominant positions in the global aircraft market without immense subsidies from their respective governments.

As discussed in chapter four, the WTO holds a stringent attitude towards subsidies. The way in which the SCM Agreement is applied to the civil aircraft sector renders most kinds of government support measures illicit under WTO rules. However, the stringent subsidy rules in the WTO did not cease the conflicts over the aircraft sector. Moreover, the strategic trade policy argument and the infant industry argument provide economic rationales for subsidising the aircraft industry. Due to the significance of the civil aircraft industry, it is unrealistic to prevent countries from subsidising the industry. Countries may devise different subsidy schemes depending on their economic situations and different demands. There may be new forms of government subsidies in order to avoid the stringent rules of the SCM Agreement. It has also been recognised that subsidies have certain advantages over other protectionist instruments in terms of achieving economic purposes of the government.¹¹⁸ Subsidies represent a relatively transparent form of government intervention, and tend to have less undesirable side-effects than other trade instruments.¹¹⁹ Therefore, the first step towards establishing a constructive attitude for new arrangements regarding the civil aircraft industry is to acknowledge the essential role played by subsidies in the sector.

In this regard, the importance of R&D subsidies in the civil aircraft industry should be

¹¹⁸ World Trade Organisation (n 30), at 88.

¹¹⁹ Ibid, at 88.

fully recognised. As the civil aircraft industry is one of the most R&D-intensive and technologically dynamic industries, consistent R&D input is essential for the smooth development of the industry.¹²⁰ The uniqueness of R&D subsidies has been recognised in the SCM Agreement. As mentioned in chapter two, R&D subsidies used to be non-actionable or green light subsidies under the SCM Agreement. However, as it was anticipated that civil aircraft will be subject to specific multilateral rules, the non-actionable subsidy provisions did not apply to the SCM Agreement.¹²¹ Since the WTO failed to make such specific multilateral rules, this could be taken into consideration in the new arrangements for the regulation of subsidies in the sector. In fact, it has been argued that the non-actionable subsidy provisions in the SCM Agreement should be revalidated. The less distorting nature of R&D subsidies would make this kind of subsidy easier to be incorporated into the new aircraft subsidy arrangements.

7.4.2 Greater Transparency in Government Subsidy Programmes

To ensure greater transparency in government subsidy programme is critical in terms of dealing with disputes over aircraft subsidies.¹²² As countries may use different forms of subsidies to support the civil aircraft industry, it is important for them to exchange information of their respective subsidy programmes. This is critical in terms of building mutual trust in the regulation of subsidies, as no country would intend to overhaul its subsidy programmes unless they are fully convinced that the others will also take similar

¹²⁰ Damien Neven and Alan Sykes (n 6), at 283.

¹²¹ Footnote 24 of the SCM Agreement.

¹²² Deutsche Bank Research, 'Boeing v Airbus: The WTO Dispute That Nither Can Win' (2007), at 9.

actions.¹²³ For instance, as mentioned in chapter three, the EU subsidisation is more direct than the US subsidy programmes; if the two sides intend to reduce the government involvement and have something comparable to put on the table, the future subsidy programmes and the reduction plans must be sufficiently transparent.¹²⁴ In this regard, it is necessary to strengthen the rules on the notification requirement in the SCM Agreement. Only then can the effective regulation of subsidies in the aircraft sector be possible.

7.4.3 Long-term Reduction of Subsidies in the Civil Aircraft Industry

As discussed above in this chapter, the strategic trade policy argument and the infant industry argument provide economic rationales for government subsidisation in the civil aircraft sector under certain conditions. However, this does not mean that governments should always provide subsidies for aircraft firms. According to the infant industry argument, the subsidisation for an infant industry should end after the protected industry gains competitiveness. Therefore, while acknowledging the role of subsidies and allowing policy space for government support in the civil aircraft industry, government subsidisation and intervention in the sector should be gradually reduced as a long-term objective.¹²⁵

7.4.4 Creating a Workable US-EU Bilateral Agreement

As regards the historical and ongoing conflicts between the US and the EU, given the

¹²³ He (n 10), at 535.

¹²⁴ Deutsche Bank Research (n 122), at 9.

¹²⁵ Ibid, at 9.

outcomes of the previous aircraft disputes between Brazil and Canada, subsidies for Airbus and Boeing would likely be retained and appear in new forms.¹²⁶ Therefore, it would be for the benefit of both sides to conduct further negotiations on the use of subsidies in the aircraft sector. In this regard, a new bilateral agreement is a viable option.¹²⁷

This will lead to the question of how the new bilateral agreement could prevent the failure of the previous bilateral 1992 LCA Agreement from reoccurring. In this regard, it has been pointed out that one severe defect of the 1992 LCA Agreement was that it legitimised the main forms of aircraft subsidies used by the EU and the US, namely development support and indirect government support respectively. It did not seize the opportunity to set forth long-term reduction of subsidy use in the industry.¹²⁸ As a result, government subsidisation became standard practice in the civil aircraft industry under mutual consent.¹²⁹

The new agreement should avoid repeating the failure of the 1992 LCA Agreement. As both sides may not agree to an immediate halt to subsidies, it is important to secure a long-term, lasting reduction in the amount of subsidisation in the sector.¹³⁰ In addition, as mentioned above, due to the different ways of subsidising the civil aircraft industry, having greater transparency in government subsidy programmes is also critical for resolving the transatlantic aircraft subsidy disputes.¹³¹ As all of the previous attempts to bring the US and the EU back to the negotiating table have failed, it is thus foreseeable that there is still

¹²⁶ Lee (n 94).

¹²⁷ Deutsche Bank Research (n 122), at 8.

¹²⁸ *Ibid.*, at 6.

¹²⁹ *Ibid.*, at 6.

¹³⁰ *Ibid.*, at 1.

¹³¹ *Ibid.*, at 9.

a long way to go before the long-standing feuds can be effectively resolved.¹³²

7.5 Conclusion

The strategic trade policy argument and the infant industry argument provide some insights into the economic justifications for subsidising the civil aircraft industry. In a duopolistic market with high entry barriers, the incumbent players are effectively shielded from newcomers, so they can charge a price higher than marginal costs and gain extra profits. Accordingly, governments should support domestic firms to become or remain incumbents. In line with the infant industry argument, the civil aircraft industry of emerging countries can be protected so as to survive competition with established foreign aircraft firms. Therefore, subsidies in the civil aircraft industry are not always undesirable from an economic perspective. In addition, stringent subsidy disciplines may inhibit competition and block innovation in the industry, thus hindering its development. As discussed in this chapter, full application of such disciplines is also unworkable.

To resolve the ongoing aircraft subsidy disputes and those that may occur in the future, new arrangements concerning rules on the use of aircraft subsidies have to be made. These new arrangements should be based upon acknowledgement of the role of subsidies during the development of the civil aircraft industry. Moreover, it is important to ensure greater transparency in future subsidy programmes and the long-term reduction of government subsidisation in the industry. As regards the historical and ongoing Airbus-Boeing disputes, it would be for the benefit of both the US and the EU to conduct further negotiations on the

¹³² Ibid, at 1.

use of aircraft subsidies. In this regard, a new bilateral agreement securing the long-term reduction of subsidies would be a viable choice for both sides.

Chapter 8 - Conclusion

The regulation of subsidies has long been an intractable issue in terms of international trade regulation. Chapter two of this thesis explored the different attitudes among countries towards government subsidisation. It identified that while subsidies are generally viewed as protectionist and trade-distorting, they can also be useful government instruments for pursuing fully legitimate economic and social policy objectives. In relation to the civil aircraft industry, the subsidy problem is more complex, as it is not only a legal one, but also one with significant economic and political implications. It has lingered as an issue of contention since the GATT period. As has been demonstrated throughout this thesis, the WTO subsidy rules are not fully effective in dealing with the subsidy problem in the civil aircraft industry.

8.1 Conclusions of Each Chapter of the Thesis

As discussed in chapter two, international subsidy rules were established during the GATT period and have continued to evolve since then by way of tough negotiations and compromise. Since the International Trade Organisation was stillborn and the Havana Charter never came into effect, the GATT 1947 established only some preliminary rules regarding the use of subsidies and the imposition of countervailing duties. The Tokyo Round Subsidies Code made some progress compared with the GATT 1947.¹ However,

¹ John H Jackson, *The World Trading System: Law and Policy of International Economic Relations* (2nd edn, MIT Press 1997), at 288.

the Code still contained a number of serious defects. It thus played only a modest role in terms of subsidy regulation during the GATT period.² In the WTO period, a much more comprehensive set of subsidy rules has been established, mainly through the SCM Agreement. The Agreement reflects a compromise between the different stances of WTO members on subsidies, and aims to balance legitimate demands to use subsidies with demands to control their use.

As discussed in chapter three, subsidy issues are more complex in the civil aircraft industry because of the characteristics of that industry. First, the civil aircraft industry is of great significance in economic terms, as regards generating revenue, promoting exports and creating jobs. Besides, the industry also has great strategic and political importance due to its close connection with the national defence sector and its leading role in high-tech industries. It is usually considered to be a symbol of national pride and reflection of national strength. In addition, the civil aircraft industry has a unique commercial and competitive nature. The industry is characterised by very high market entry barriers resulting from huge up-front development costs and capital requirements, immense technological risk, large economies of scale and a steep learning curve. These barriers defeat typical market forces and thus render civil aircraft manufacturing one of the most highly concentrated industries in the world.

The results of the foregoing are twofold. As demonstrated in chapter three, on the one hand, as a result of the civil aircraft industry's unique characteristics, aircraft manufacturers depend on significant government support for success. On the other hand,

² Michael Trebilcock, Robert Howse and Antonia Eliason, *The Regulation of International Trade* (4th edn, Routledge 2012), at 367.

governments are inclined to subsidise the industry due to its economic and strategic significance. This results in the civil aircraft industry being subject to immense government intervention, and thus renders the regulation of subsidies in the industry more politically sensitive and intractable.

As identified, the drafters of the SCM Agreement realised the complexity and particularity of the subsidy problem in the civil aircraft industry.³ Therefore, the SCM Agreement made some special arrangements for aircraft subsidies. The conflicts over subsidy use in the industry lingered for decades during the GATT period. Before the establishment of the WTO, specific efforts were made to regulate subsidies in the industry. However, as discussed in chapter three of this thesis, both the plurilateral Civil Aircraft Agreement and the bilateral 1992 US-EU LCA Agreement failed to end the feuds over aircraft subsidies. The conflicts continued to deteriorate even after the establishment of the WTO.

As outlined in chapter four, the US and the EU finally brought the disputes over subsidies for large civil aircraft to the WTO for adjudication. This chapter identified how the panels and the Appellate Body in the Airbus-Boeing cases have adjudicated and clarified a number of key legal issues with respect to subsidies in the civil aircraft industry.⁴ These legal issues mainly include the identification of subsidies, specificity, adverse effects and the determination of export subsidies in the civil aircraft industry. As discussed in chapter four, the decisions of the adjudicating bodies regarding the legal

³ Ryan E Lee, 'Dogfight: Criticizing the Agreement on Subsidies and Countervailing Measures Amidst the Largest Dispute in World Trade Organisation History' (2006) 32 North Carolina Journal of International Law and Commercial Regulation 115, at 149.

⁴ Simon Lester, 'The Problem of Subsidies as a Means of Protectionism: Lessons from the WTO EC - Aircraft Case' (2011) 12 Melbourne Journal of International Law 345, at 347.

issues are of importance as they could have an impact on the regulation of subsidies in the industry. This would then affect the competition in the global civil aircraft market, and thus the future development of the industry.

As to the question of how subsidies are defined, the panels and the Appellate Body have interpreted the meaning of 'financial contribution' broadly. 'Benefits' will be deemed to exist if the government support measures are more preferential than those available in the market. Thus, most of the support measures are covered by the subsidy definition under the SCM Agreement. In terms of the question of specificity, subsidies in the civil aircraft industry are more likely to be found specific partly as a result of the high concentration of the industry. The question of adverse effects is a very complex legal issue regarding subsidies in the civil aircraft industry. Partly due to the characteristics of the civil aircraft industry and the civil aircraft market, it is more likely that there will be displacement or impedance, significant price undercutting, suppression, depression or lost sales caused by subsidies in the industry. Lastly, regarding the legal issues of export subsidies, subsidies in the civil aircraft industry are more likely to be linked with export performance because the industry is to some extent export-oriented. In sum, chapter four of the thesis concluded that subsidies in the industry are more likely to be found illegal under WTO rules, partly due to the economic and competitive nature of the industry. As a result, the policy space for WTO members to support the industry under WTO subsidy rules is quite limited.

Several disputes over aircraft subsidies have been brought to the WTO dispute settlement procedures. Therefore, whether the subsidy problem can be addressed in a satisfactory manner also depends to a large extent on the way in which the WTO dispute

settlement mechanism operates in this area. As discussed in chapter five, the consultations under the mechanism did not lead to the parties reaching a mutually acceptable solution for the subsidy disputes in the civil aircraft industry. The panel and the appellate procedures can take more than ten years, which is far longer than the normal time limit set out in the DSU. This also impacts upon the effectiveness of the dispute settlement mechanism in dealing with aircraft subsidy disputes. More importantly, the implementation of the WTO rulings in disputes over aircraft subsidies is problematic.⁵ Under the dispute settlement mechanism, there is no institutional machinery to enforce the DSB rulings and recommendations. There are also no direct sanctions imposed on a WTO member who defaults in implementing the DSB ruling.⁶ When a losing member resists a ruling, the remedy for non-compliance in fact relies on the individual complainant to act as an enforcer.⁷ However, in disputes over aircraft subsidies, both sides have equally subsidised the industry illegally. In this case, compliance of the violating party is supposed to be enforced by a party who is also guilty of the same violation.⁸ The result is probably noncompliance as it is in the best interest of both sides to refrain from engaging in a trade war. For the reasons identified, the chapter concludes that the WTO dispute settlement mechanism is not effective in resolving subsidy disputes concerning the civil aircraft industry.

Apart from the multilateral procedures under the WTO dispute settlement mechanism, the SCM Agreement also provides for a unilateral remedy, namely countervailing duty

⁵ Lee (n 3).

⁶ Elimma C. Ezeani, *The WTO and Its Development Obligation: Prospects for Global Trade* (Anthem Press 2011), at 131.

⁷ Lee (n 3), at 153.

⁸ Ibid.

measures, to deal with subsidies causing injury to the importing member's domestic industry. However, as discussed in chapter five, none of parties in the aircraft subsidy disputes has taken unilateral countervailing duty measures. It is similar to the situation under the multilateral procedures. As the disputing parties have all illegally subsidised their respective civil aircraft industries, if any party takes such action (i.e. adopts a unilateral countervailing duty measure) the other would take corresponding action. This may thus lead to a damaging trade war between the countries concerned. Therefore, the unilateral route under the SCM Agreement is not practical in dealing with subsidies in the civil aircraft industry.

For a number of reasons identified in chapter six, there is a real concern that the problem of aircraft subsidies may become even more complex when additional countries join the global civil aircraft market. As mentioned in chapter six, China, amongst others, has entered the large civil aircraft sector.⁹ Compared to those of the US and the EU, China's civil aircraft industry is still underdeveloped. However, China has begun to take steps towards building up a competitive large civil aircraft industry and nurturing its own large civil aircraft manufacturer. The establishment of the state-owned Commercial Aircraft Corporation of China (COMAC) indicated the official launch of China's large aircraft project, and reflected China's resolution to build an indigenous LCA industry. The development of China's civil aircraft industry will probably have an impact on the global civil aircraft market.

Like Airbus and Boeing, COMAC has received great support from the government.

⁹ Keith Crane and others, *The Effectiveness of China's Industrial Policies in Commercial Aviation Manufacturing* (Rand Corporation 2014), at 66.

The industry has been listed by the Chinese government as a ‘strategic emerging industry’. As analysed in chapter six, the subsidy regime and measures regarding the civil aircraft industry in China involve great legal uncertainties under WTO subsidy rules. The incumbent players in the industry may challenge China’s subsidy programmes with a view to keeping their dominant positions in the market. However, even so, it is unlikely that China will cease subsidising the industry. It is contended in this thesis that the enactment of the Regulation on the Development of the Civil Aircraft Industry, which will be the main legal basis for consistent government support for the civil aircraft industry, reflects this point.

The long-standing conflicts over aircraft subsidies make it necessary to rethink WTO subsidy rules from a more fundamental perspective. As discussed in chapter seven, the strategic trade policy argument and the infant industry argument provide some economic rationales for allowing policy space for subsidising the civil aircraft industry under certain circumstances. Moreover, applying stringent subsidy disciplines to the civil aircraft industry is unrealistic and would cause some practical problems, such as discouraging competition, and stifling innovation in the industry.¹⁰ In addition, the civil aircraft manufactures of the US and the EU have grown up with subsidies from their governments respectively. Therefore, as discussed in chapter seven, it is questionable whether applying stringent subsidy rules is fair to newcomers to the industry.

Finally, chapter seven combines the previous analysis provided throughout the thesis with a proposal for ameliorating the subsidy problem in the civil aircraft industry. Specific legal arrangements for aircraft subsidies have been expected from the outset of the

¹⁰ Lee (n 3), at 149-50.

formation of the WTO.¹¹ In this regard, new arrangements for the regulation of subsidies in the civil aircraft industry have to be based upon acknowledgement of the role of subsidies in the industry. Moreover, it is important to ensure greater transparency in future subsidy programmes and long-term reduction of government intervention in the industry. As regards the historical and ongoing Airbus-Boeing aircraft disputes, this thesis contends that it would benefit the US and the EU to further negotiations on the use of aircraft subsidies. In this regard, a new bilateral agreement securing long-term reduction of subsidies is a viable choice for both sides.

8.1 Concluding Remarks

The competition in the civil aircraft industry is not only competition among aircraft companies, but also competition among countries. The legal problems surrounding the use of subsidies in the civil aircraft industry are far from over. This persists despite a series of disputes being brought to the WTO and adjudicated upon under its dispute settlement mechanism. As stated in chapter seven, in 2014, a new WTO lawsuit was filed by the EU against the tax incentives provided by Washington State for large civil aircraft manufacturing.¹² A WTO dispute settlement panel has been established for this dispute. The constant disputes over aircraft subsidies continue to raise questions concerning the regulation of subsidies in the civil aircraft industry under the WTO legal framework.

The modern trade rules have become more limiting in every aspect under the

¹¹ Footnote 15, footnote 24 of the SCM Agreement.

¹² Request for Consultations by the EU, *US - Tax Incentives*, WT/DS487/1.

consolidated WTO legal system.¹³ As has been discussed throughout this thesis, international subsidy regulation also tends to be more stringent due to the increasing use of subsidies by governments. However, when involving the civil aircraft industry, imposing stringent rules on the use of subsidies may not be the best option for dealing with the problem. WTO subsidy disciplines are more like a tool to inhibit the development of foreign competitors, rather than a framework to create a fairer competitive environment in the industry. This will neither solve disputes over subsidy use in the industry, nor benefit the development of the global civil aircraft industry.

¹³ Juan He, 'WTO-plus Commitments and Emerging Implications for China's Large Civil Aircraft Manufacturing' (2014) 13 World Trade Review 517, at 543.

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