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Are Countries in Environmental Cooperation Concerned About Relative Gains?

Vivian Chinua Olivia Ike
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ARE COUNTRIES IN ENVIRONMENTAL COOPERATION
CONCERNED ABOUT RELATIVE GAINS?

by

Vivian Chinua Olivia Ike

A Thesis
Submitted to the Graduate School
and the Department of Political Science,
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ABSTRACT

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by Vivian Chinua Olivia Ike

August 2016

A country's decision to join or withdraw from environmental cooperation has been argued by interest based theories to be influenced by the economic cost of international agreements, national interest of countries, and the free-rider problem. However, this thesis argues that relative gains is a more decisive factor that influences the decision of countries in international arrangements. It hypothesizes that countries in environmental cooperation are concerned about relative gains. A content analysis of the statements of fifteen countries in international climate change cooperation is conducted. The countries include the United States, Russian Federation, Canada, Japan, Australia, China, Brazil, South Africa, India, Saudi Arabia, and five countries from the European Union- the United Kingdom, Germany, France, Italy, and Spain. The statements are selected from the 2012, 2013, 2014, and 2015 United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties meetings. The findings show that the fifteen countries are concerned about relative gains in international climate change cooperation and that neorealist relative gains theory of international relations is applicable to environmental cooperation. This thesis therefore suggests that further research needs to be conducted in this area, particularly, future research should test the casual relationship between relative gains and the behavior of countries in environmental cooperation.

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LIST OF ABBREVIATIONS

<i>COP</i>	Conference of the Parties
<i>NAMA</i>	Nationally Appropriate Mitigation Action
<i>NDC</i>	Nationally Determined Contribution
<i>UNFCCC</i>	United Framework Convention on Climate Change

CHAPTER I - INTRODUCTION

What factors influence the decisions of countries to join or withdraw from international agreements? This is a question that has dominated the research on international cooperation and, not surprisingly, international cooperation on environmental problems. Different theories have been used to explain why countries join or withdraw from environmental agreements, but interest based theories have been particularly persuasive. Interest based theories focus on factors that shape the preferences of countries like the economic cost of international agreements, the national interests of countries and the free rider problem (i.e. absolute gains) where countries are concerned that other countries use 'more than their fair share of a common resource, or pay less than their fair share of the cost of a common resource'. However, the idea of relative gains is somewhat missing in the literature because of its limited application in international environmental politics research. As a result, this thesis expounds on the neorealist relative gains theory which is also considered an interest-based theory of international relations. It argues that a country's decision to join or withdraw from international agreement is influenced by relative gains. This means that countries will only join an international agreement if it brings about equal benefits for all partner countries. This thesis, therefore, hypothesizes that countries are concerned about relative gains in environmental cooperation. It uses international cooperation on climate change to determine whether countries in environmental cooperation are concerned about relative gains as argued by the neorealist theory.

In the following chapter, the application of neorealist relative gains theory in research on international environmental cooperation is reviewed and the theory is

explained. Other relevant literature is then reviewed. This includes a brief background on the problem of climate change, international climate change negotiations and agreement, as well as the findings from previous research in this area. Also, a brief explanation on how the United States, Russian Federation, Canada, Japan, Australia, China, Brazil, South Africa, India, Saudi Arabia and five countries from the European Union, the United Kingdom, Germany, France, Italy and Spain have responded to climate change negotiations, is included in the next section. These fifteen countries are parties to international cooperation on climate change and are the main units of analysis. In the third chapter, the research design of this study is explained. The general assumptions of the relative gains theory is tested on the convention of the United Nations Framework Convention for Climate Change (UNFCCC) which is the institution that governs international climate change cooperation. Also, a content analysis of the statements made by the delegations of the fifteen countries during the 2015, 2014, 2013 and 2012 UNFCCC's Conference of the Parties (COP) meetings is conducted. The findings are discussed in the fourth chapter and is followed by the concluding chapter which includes the implication of the findings for future research.

CHAPTER II – LITERATURE REVIEW

The Application of Neorealist Relative Gains Theory

The use of neorealist relative gains theory to explain international cooperation on the environmental cooperation is limited. Most academic literature on the theory are theoretical and only a few are applied. The major reason for this, as argued by scholars like Paterson (2005), is because neorealist relative gains theory has little to offer in comparison with other theories like the neoliberal theory and particularly, in the field of international environmental politics. Neorealist theory has a pessimistic view about the behavior of countries and international cooperation, even in conditions where there exists influential international institutions like the United Nations, mutual interests and interdependence among countries. The establishment and durability of international environmental agreements and institutions show that neorealist theory has limited explanatory power and is not suited to the area of environmental cooperation.

However, not all scholars share this view. The explanatory power of relative gains on the behavior of countries and the outcome of international cooperation still remains influential in conditions where international cooperation is difficult. This includes but is not limited to situations where great concessions and compensations need to be met for cooperation to succeed, which is usually the case in various types of international cooperation like environmental cooperation. Grundig (2006), for instance, is one of the few and significant applied literature on relative gains theory. He argues that neorealist relative gains theory should and can be used to predict the behavior of countries, the outcome of international cooperation on trade, and environmental problems with high costs and benefits that could greatly impact the economy of countries. Using neorealist

relative gains theory, he predicted that relative gains concern will be less for excludable goods (i.e. trade) than non-excludable goods (i.e. ozone and climate change) and as a result, cooperation will be more likely in international trade than the ozone and climate change. This is because, countries can easily exclude other countries from benefiting from trade agreements (excludable goods) and thus, diminish the concern of relative gains. In his findings, as predicted, relative gains was low in international cooperation on trade and as a result, cooperation was most likely to be achieved on trade than on the ozone and climate change. Relative gains concern was, however, higher in international cooperation on climate change than on the ozone, and as a result, cooperation was more likely on the ozone than on international climate change cooperation. Conversely, Grundig (2006), only predicted the outcome of international cooperation using quantitative n-actor models but this thesis in determining whether countries are concerned about relative gains will use neorealist relative gains theory to explain in detail (i.e. qualitatively) the behavior of countries in environmental cooperation. In other words, this thesis will demonstrate exactly how countries, particularly countries with big economies, are concerned about relative gains in environmental cooperation.

Neorealist Relative Gains Theory

According to neorealist relative gains theory, relative gains is the primary factor that influences the decision of countries to join or withdraw from an international agreement. Neorealist theory, however, posits some general assumptions about countries and the international political system. According to this theory, there is no overarching authority above the nation-state and thus, the international system is anarchic (Donnelly

2000).¹ Countries are the primary actors in the international political system, they are sovereign and self-interested. They form international cooperation as a preferred means to war to resolve problems that arise in the international political system or to pursue mutual interests in a specific area of international politics.² As a result, international cooperation is often based on the self-interests of countries and it is unlikely that international institutions even the more integrative ones will become autonomous or dominant in the international political system. However, countries become concerned about relative gains when they join international cooperation.

Relative gains refers to the benefits that a country will or expects to receive from an international agreement in comparison with that of another country or other countries. Therefore, a country that is concerned about relative gains will join an international agreement if the resulting benefits will be equal for all partner countries or will withdraw from an international agreement if it believes that the resulting benefits will be unequal, with some partners gaining more benefits than it (Grieco 1988). This is because a country that achieves relative greater gains than another country or other countries can become a more formidable foe (i.e. threat) to that country or the other countries in the future. Nonetheless, countries can and do bargain (i.e. negotiate concessions and compensations)

¹ The idea that the international political system is anarchic does not necessarily mean chaos but means the absence of a global government above countries to control the action of countries and to maintain peace and order. The absence of a global government, can however lead to international conflict among countries.

² Neorealist theory argues that the anarchic nature of the international political system can lead to international conflict but nation states prefer international cooperation to conflict or war while classical realist theory argues otherwise. Classical realist theory argues that human nature is inherently flawed and conflictual. This is one of the key differences between neorealist theory and classical realist theory. Neorealist belongs to the realist school of thought but there are however key differences that sets neorealist theory apart from classical realist theory. For instance, obviously, classical realist theory existed before neorealist theory in time. Also, neorealist theory emphasises on the interests of nation states while classical realist theory focuses more on power. Last but not the least, neorealist theory uses a positivist approach in political analysis while classical realist theory adopts a subjective approach.

in order to balance the benefits from international cooperation which is why negotiation is an important characteristic of international cooperation (Morgenthau 1973).

Relative Gains and the Reasoning behind Relative Gains

Countries want the benefits of international agreements to be equal because they do not want other countries to become more prosperous and thus, more powerful than they are in the international political system. For instance, international agreements, particularly environmental agreements, usually involve countries using their financial resources to deal with present or future environmental problems. This is considered to be a threat to the financial capability of countries. The financial capability of countries signal their economic position and power in relation to other countries, and the greater the financial capability of a country the better it can protect itself against external threats from other countries (see footnote).³ Countries see each other as potential threats because they fear for their survival (i.e. security) in an anarchic international political system where there is no global authority above the nation-state to control the action of countries, and to maintain peace and order. As a result, countries depend on their financial resources to protect themselves in the international political system against external threats from other countries.

Moreover, countries are not equal in terms of their financial capability. The greater the difference among countries in terms of their financial capability, the higher

³ The financial capability of countries is related to their economic position which in turn is related to their power status in the international system; Countries that are financially well-off are usually economically well-off and have international political power.

In sum, countries want to guarantee their security or survival in the international political system, and as a result, they are concerned about their financial capability, economic position and power. Their financial capability signifies their economic position in the political system, and likewise their economic position signifies their power status, and their power status signifies their security status or ability to protect themselves from threats by other countries.

the perceived threat from other countries and the need to diminish or balance the threat. Therefore, it is important and rational for countries to try to prevent their financial differences from exacerbating. This includes preventing other countries from free-riding in international agreements. However, countries are not just rational but also positional, and this is the point where neorealist relative gains theory goes beyond other interest based theories such as the neoliberal absolute gains theory. According to neoliberal absolute gains theory, countries are rational actors in the international political system that are primarily concerned about partner Countries free-riding in a joint arrangement. Countries do not want other countries to free-ride in international agreements because they are concerned about absolute gains. Absolute gains means the benefits that a country will or expects to receive from a joint arrangement irrespective of the benefits of partner countries. In sum, neoliberal absolute gains theory, argues that countries are concerned about other countries free-riding because they want to maximize their respective benefits from a joint arrangement.

However, according to neorealist relative gains theory, countries are not only concerned about free riding (i.e. absolute gains) but are more concerned about their financial capability, economic position, power status and security in the international political system. Countries, even when assured of absolute gains and other countries not free riding, will withdraw from an international agreement because of the concern over other countries “achieving relatively greater gains.” Therefore, in international cooperation, countries try to ensure that partner countries pay their fair share of the cost of agreement, and more importantly, that any joint agreement produces “balanced” or

“equitable” achievements of benefits (Grieco 1988, 501).⁴ In sum, neorealist relative gains for the most part takes into consideration the free rider problem (i.e. absolute gains), the financial (i.e. economic) cost of international agreements and nation-state self-interest in international cooperation. However, it also recognizes, the influence of powerful countries, domestic factors and international institutions on the decision of countries to join or withdraw from international cooperation. Nonetheless, such factors merely affect the timing and style of response of countries to international cooperation (Lobell et al 2009). Countries remain autonomous in making their foreign policy decisions and relative gains is the primary factor that influences their decision to join or withdraw from an international agreement.

Climate Change

Climate change is the change in global climate patterns due to the rise in the earth’s temperature. The earth’s temperature has steadily risen since the mid-nineteenth century. This is attributed to the accumulation of greenhouse gases such as methane, nitrous oxide and particularly, carbon dioxide (CO₂) in the atmosphere. Greenhouse gases are produced by the burning of fossil fuel for economic activities. Therefore, in order to mitigate climate change, the emission of greenhouse gases has to be reduced by scaling down the use of fossil fuel for economic activities. This is important because the impact

⁴ For a more detailed analysis on the absolute gains and relative gains theory see Grieco (1998). According to Grieco (1988, 501), neorealist relative gains theory argues that countries are concerned about absolute and relative gains. “Faced with both problems—‘cheating and relative gains’—states seek to ensure that partners in common endeavours comply with their promises and that their collaboration produces “balanced” or “equitable” achievements of gains. According to realists, states define balance and equity as distributions of gains that roughly maintain pre-cooperation balances of capabilities. To attain this balanced relative achievement of gains, states (i.e. bargain) offer their partners ‘concessions’; in exchange, they expect to receive approximately equal “compensations.”

of climate change is estimated to be cataclysmic and long term. For instance, changes in the climate can lead to alteration in weather patterns, destruction of the ecosystem, loss of lives and livelihoods and environmental hazards such as deforestation and flooding etc. However, scientists are uncertain about the extent of the impact of climate change as existing models used to estimate the phenomenon are complex and not completely reliable.

Nonetheless, initiatives and activities to reduce the production of greenhouse gases have been taking place since the late 1980's when the problem was initially discovered by scientists. This led to the establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP). All 195 countries are members of the IPCC which evaluates and provides relevant up-to-date scientific, technical, and socio-economic information on climate change. Reports of the IPCC enabled countries to adopt a new treaty at the United Nations Conference on Environment and Development (UNCED) in 1992. The new treaty established the United Nations Framework Convention for Climate Change (UNFCCC). The UNFCCC convention came into force in 1994, and it currently has 197 members which include 196 countries and the European Union. The 197 members are called "Parties to the Convention." The UNFCCC aims to stabilize global temperature to below 2 degrees Celsius by committing all countries to a binding legal agreement that will require countries to reduce their respective greenhouse gas emissions according to a set quota. The UNFCCC is made up of diverse bodies and since its establishment has held several conferences and provided different initiatives for countries to reduce their emission of greenhouse gases (Fig 1). However, the Conference

of the Parties (COP) is the highest decision-making authority and it is composed of all 197 Parties to the Convention. The COP meeting is the main UNFCCC negotiation meeting and it is held annually. Since its inception, the UNFCCC has only produced two protocols or agreements⁵, the first is the Kyoto Protocol and the second is the recently concluded Paris agreement.⁶

⁵ A protocol is a legal agreement with binding force.

⁶ The UNFCCC divides countries into groups based on their differences. This includes the Annex I group which consists of industrialized countries that are members of the Organisation for Economic Co-operation and Development (OECD) in 1992, countries with economies in transition (EIT), Russian Federation, the Baltic States, and several Central and Eastern European States. The Annex II group consists of only OECD members of Annex I and the Non-Annex I group consists of mostly developing countries. UNFCCC. "Parties and Observers."

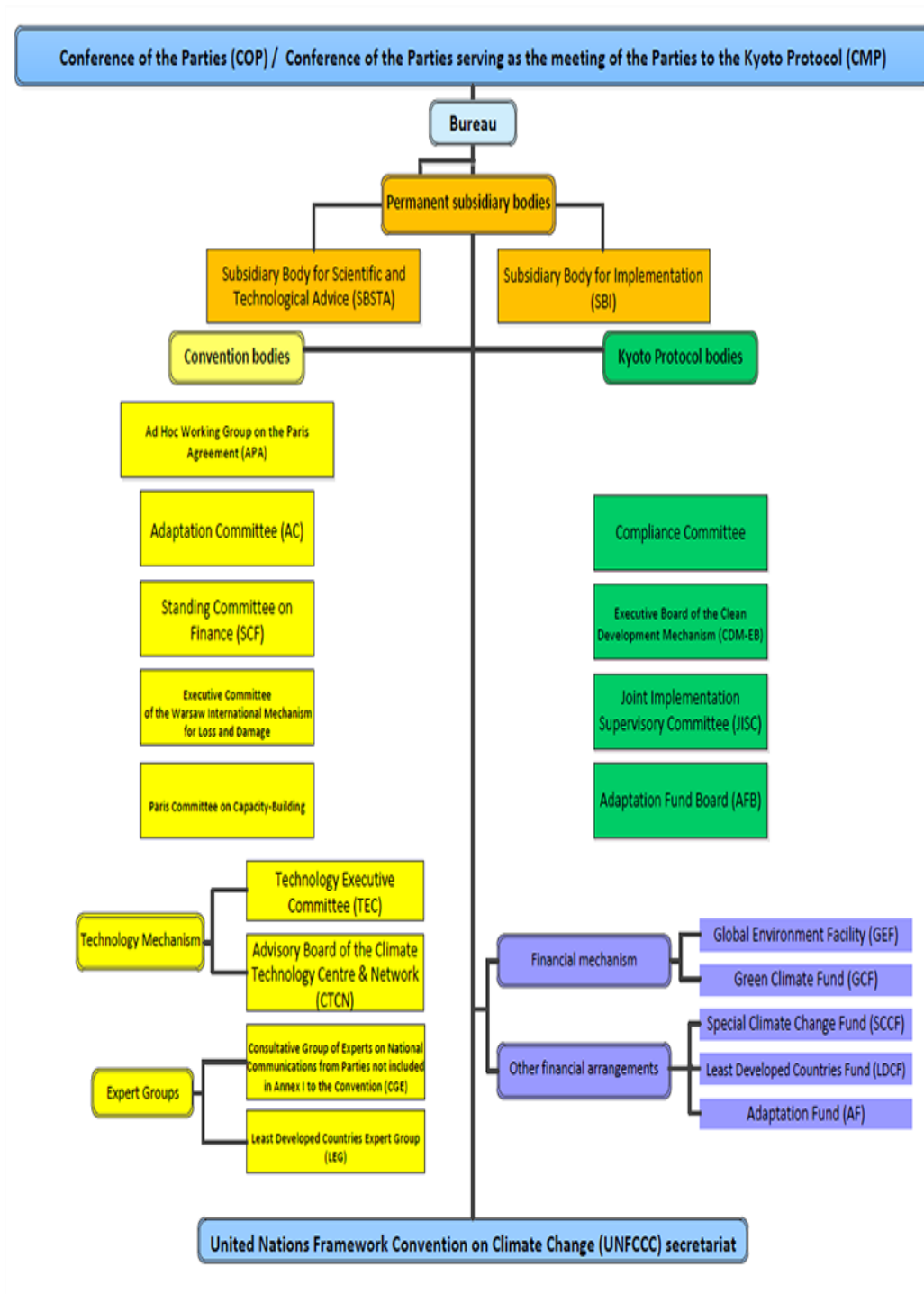


Figure 1. Bodies of the UNFCCC.

Source: UNFCCC

The Kyoto and Paris Agreements

The Kyoto agreement was adopted in 1997 but came into force in 2005. It is only binding on industrialized countries (Annex I countries). It requires them to set international binding greenhouse reduction emission targets termed as Nationally Determined Contributions (NDCs) and to achieve those targets through domestic measures. However, the agreement appeals to developing countries to set voluntary greenhouse gas emission targets known as Nationally Appropriate Mitigation Actions (NAMAs), and it provides mechanisms to assist countries to achieve their targets. Also, the agreement has two commitment periods. In the first period that was concluded in 2012, 37 industrialized countries and the European Union committed to reduce greenhouse gas emissions to an average of five percent against 1990 levels. In the second commitment period, countries are committed to reduce greenhouse gas emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020.

The Paris agreement, on the other hand, was recently adopted in 2015 and will come into force in 2020 “on the thirtieth day after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary” (UNFCCC 2016). The agreement is identical to the Kyoto agreement but is binding on all countries. It requires all countries to reduce their respective greenhouse gas emissions in accordance to a set quota as determined by each country (i.e. NDC). In May 2016, 174 countries and the European Union signed the agreement and currently there are 178 country signatories. However, countries are yet to

submit their international binding greenhouse gas reduction emission targets (NDCs), so far only eighteen countries have submitted theirs and thus, have ratified the agreement.⁷

International Climate Change Politics

Research on international environmental politics has focused a great deal on certain aspects of international cooperation on climate change. This includes the level of effectiveness of the UNFCCC, and how different countries and groups of countries influence international climate change cooperation. Current research has however shifted their focus to how other multilateral institutions and non-state actors influence international climate change cooperation (Hoppe et al. 2013; Morin and Orsini 2015). Nonetheless, because of its central role in the governance of international climate change cooperation, the UNFCCC remains an important focus of international environmental politics research. It is therefore, also, important to improve upon research in this area. The UNFCCC plays a central role in the governance of international climate change cooperation because it involves all countries and is thus the most significant international institution on climate change. The Kyoto Protocol which is the first binding agreement created under the UNFCCC has been argued to be a significant achievement towards the goal of reducing global greenhouse gas emissions. However, one of its drawbacks is that it includes only developed countries, some of which withdrew from the agreement.⁸ Moreover not all developed countries joined the agreement, for instance, the United States is the only developed country that did not make any attempt to join the Kyoto

⁷ Among the eighteen countries that have ratified the Paris agreement, Norway is the only developed country and the remaining 17 are developing countries. UNFCCC (2016)

⁸ Canada was a member of the Kyoto Protocol but later withdrew. Japan and Russia withdrew from the second commitment period under the Kyoto Protocol. UNFCCC. "Doha Amendment to the Kyoto Protocol."

agreement. Nonetheless, the Paris agreement is said to be the most significant achievement of the UNFCCC because it is an all-inclusive binding agreement, though questions remain about its ratification as most countries are yet to ratify it.

Despite the significant achievements, the international climate change decision-making process has been difficult. According to research findings, the UNFCCC's negotiation process is often time consuming, and undermined by the conflicts amongst countries and countries refusal to participate in the binding agreements. In the decision-making process, countries strategically link other issues in a way that downplays the original aim of the UNFCCC, to further their own agendas and to maximize their conflicting interests, otherwise termed as "climate change bandwagoning" (Jinna 2011, 3-4; Zelli and Asselt 2013, 6). For instance, some countries prefer that the new binding agreement prioritize the economic development of their countries over climate change mitigation, while others prefer that climate change mitigation be prioritized above everything else. Furthermore, the mitigation of climate change is considered to be a potential threat to the economies of countries because it is associated with the reduced use of fossil fuel and most countries are dependent on fossil fuel for economic activities. This in itself already posits a challenge to international climate change cooperation. According to the IPCCs 2007 report, developing countries whose economies are mainly dependent on fossil fuel exportation will be the most affected by efforts to limit global greenhouse gas emissions because they will bear higher economic financial losses and mitigation costs than those of even developed countries. Therefore, countries that are greatly dependent on the income generated from fossil fuels, particularly, oil producing

countries, for instance, want to preserve the use of fossil fuels and so oppose binding agreement on climate change (Depledge 2008, 21)

United States

The United States, more than any other country, according to Brown (2012), has a reputation for consistently refusing to participate in any binding agreement that would hurt its economy. The United States decision not to reduce its use of fossil fuel is associated with its high dependence on fossil fuel for economic activities. The United States is the world's second largest emitter of global greenhouse gases because of its high dependence on fossil fuel. The country is currently the world's largest petroleum consumer and the world's top producer of natural gas and petroleum hydrocarbons (EIA 2016a, 2016b). Current data on the gross income of fossil fuel industries in the United States is estimated to be approximately \$220 billion (Statista 2015). Therefore, in the United States, fossil fuel industries have a decisive interest in the continued use of fossil fuel. Also, corporate businesses have an interest in keeping the cost of economic activities low by preserving the use of fossil fuels.

What is more, fossil fuel industries and corporate businesses have a decisive influence on the United States national decision-making process (i.e. Congress) and its environmental foreign policy decisions. The reason for this, according to Falkner (2005) is the United States federal political system. The ability of the executive branch to act independently is limited because it needs the approval of the legislative branch to join international agreements. Domestic actors like interest groups, corporate businesses and oil industries have direct influence on legislators and thus the legislative process. In the case of climate change agreements, Congress passed a resolution which required the

United States not to join any binding climate change agreement that would hurt the economy and would not include developing countries. During the Montreal Conference of the Parties UNFCCC meeting, the United States delegate stated that the Kyoto Protocol would have devastating impacts on the United States economy, and as a result, the United States did not join the Kyoto agreement.

Australia

Australia's approach to UNFCCC negotiations has been largely unsupportive. Its decision to join the agreements has tended to fluctuate, reflecting the ideology of the national government in power at a particular point in time. It is among the world's top greenhouse gas emitters, ranking in the sixteenth place. It also has a national interest in the continued use of fossil fuel given that it is the world's top producer of coal per person and exporter of coal and petroleum gas (Beeson and McDonald 2013). It currently accounts for 36% of total coal exports and generated the highest revenue (\$28.4 billion) from coal exports in 2015 (WTEEx 2016a). Also, major fossil fuel companies and corporate businesses in Australia have an interest in continued use of fossil fuel.

Similar to the United States, Australia runs on a federal political system and as a result, the coal industry, fossil fuel companies and corporate businesses use their leverage on the legislative branch (i.e. parliament) to influence the political agenda to reflect their economic interests. The conservative government is largely influenced by and is aligned with the economic interests of fossil fuel companies, corporate businesses, and the coal industry. The signing of climate change agreements according to the conservative government will significantly lower the country's economic revenue from fossil fuels, particularly coal. For instance, in 1997, when the conservative government of Howard

was in power, Australia refused to support the Kyoto Protocol, but when the Labor party government of Rudd was in power in 2007, Australia's approach to UNFCCC negotiations was positive, and it joined the agreement.

Canada

Canada's approach to the climate change negotiations has been largely unsupportive and its decision to join the agreements fluctuates. Its economy is highly dependent on fossil fuel, it is among the world's top ten consumers, exporters and producers of fossil fuels (Wilson 2014). In 2014, it generated a sum of almost \$17 billion from petroleum gas exports alone (WTEx 2015). Therefore, it is no surprise that it is among the world's top ten emitters (eighth) of global greenhouse gases. The country also runs on a federal political system which makes it possible for fossil fuel industries, corporate businesses and interest groups to influence the country's political agenda. Similar to Australia, the conservative party in Canada is aligned with the interests of the fossil fuel industry. Canada joined the Kyoto Protocol in 2002 when the Liberal government was in power, but it withdrew from the Kyoto Protocol in 2006 when the conservative government came into power. It withdrew from the agreement based on concerns from the fossil fuel producing provinces regarding the financial loss on the industry and the negative affect on the economy's GDP.

Russian Federation

Russia has been cooperative in the climate negotiations for the most part but at times uncooperative. It initially refused to join the Kyoto Protocol and did not sign the agreement until 2004. It took significant economic trade incentives from the European Union to persuade Russia to join the Kyoto Protocol. Russia's economy is highly

dependent on fossil fuel, it is the world's third largest consumer of fossil fuels and is the world's second largest exporter of natural gas and oil (Wilson 2014). It generated \$86.2 billion from crude oil exports alone in the previous year (WTEx 2016b). It is also the fourth highest emitter of global greenhouse gases. Russia's regional and national ministries, particularly the National Resources and Energy ministry, have opposing views regarding the country's stance on climate change agreements. However, unlike the United States, Canada, and Australia, in Russia's political system, the parliament, ministries and regional interests do not have decisive influence over the executive branch of government. Russia's executive government has the supreme decision-making power which enables the government to play a supportive role in climate change negotiations.

Japan

Japan has been both supportive and unsupportive in climate change negotiations. It joined the first Kyoto Protocol commitment period in 2002 but in the light of the financial implications (increased cost of production) of the agreement on the Japanese industry, it withdrew from the second commitment period in 2012. Also, the non-participation of the United States and developing countries, particularly China, in the Kyoto agreement has put Japan at an economic disadvantage in terms of its competitiveness with these countries. Moreover, in Japan, corporate businesses including the Japan Federation of Economic Organizations, the Ministry of Economy, Trade, and Industry (METI) have a shared interest in keeping the costs of economic activities low by the continued use of fossil fuels. According to Japan's delegation at the Conference of the Parties meeting, it will not assume the burden of limiting greenhouse gas emissions without the joint efforts of the United States and developing countries. Japan does not

produce much fossil fuel but is highly dependent on fossil fuel as a source of energy for economic activities. Therefore, it spends hundreds of billion dollars every year on fossil fuel importation (Geiling 2015). Japan is the world's second largest importer of fossil fuel, the largest consumer of fossil fuels and the fifth highest emitter of global greenhouse gases (EIA 2013). Also, Japan exports some of its imported oil which accounts for 1.8% of its total exportations, it generated a sum of \$11.4 billion in the previous year (Walkman 2016).

European Union Countries

The European Union member countries including the United Kingdom, Germany, France, Italy and Spain normally approach climate change negotiations from a joint front.⁹ These countries have been particularly supportive of climate change agreements. Most of them are not major producers of fossil fuel but their economies depend highly on fossil fuels, so they import most of their fossil fuels and sell some for exports (Eurostat 2015). They are, however, among the world's major emitter's of global greenhouse gases. The United Kingdom produces natural gas and coal, and is ranked the world's eleventh highest emitter of global greenhouse gases (Energy UK 2015). It also exports oil which accounted for 7.2% of its total highest dollar value exports in 2015, and it made a revenue of \$33.2 billion (Walkman 2016). Germany is among the top fifteen producers of coal and is ranked the world's sixth highest emitter of global greenhouse gases (Wilson 2014). It also exports oil which accounted for 2.5% of its total highest dollar value exports in

⁹ Most national legislations on the environment of European Union countries is derived from the European Union legislation. About 10% of EU environmental laws take the form of regulations. Regulations are directly binding in Member States and supersede any conflicting national laws. Member states may not transpose the provisions of regulations into national law, even if the national law is identical to the regulation. Europa (2015)

2015 and it made a revenue of \$33 (Walkman 2016). France on the other hand produces small amounts of coal, petroleum and crude oil but mostly nuclear power. It, however, exports oil which accounted for 3.2% of its total highest dollar value exports in 2015 and generated a revenue worth \$16.4 billion (Walkman 2016). Similarly, Italy produces small amounts coal, petroleum and crude oil. It exports oil which in 2015 accounted for 3.4% of its total highest dollar value exports, and it generated about \$15.7 billion (Walkman 2016). Spain also produces small amounts coal, petroleum and crude oil, oil exports accounted for 6.5% of its total highest dollar value exports and it generated about \$18.5 billion (Walkman 2016).

It is evident that European Union countries i.e. the United Kingdom, Germany, France, Italy and Spain benefit from fossil fuel consumption, and there are also European industries as well as corporate businesses that support the continued use of fossil fuel. When European Union countries were in the process of making the decision to join the Kyoto Protocol, the Centre for the New Europe which is a free market think tank, and Climate Policy Coalition, financed by the Fossil Fuel Company, Exxon Mobil, coordinated against European Union's support for Kyoto. The Kyoto agreement, they argued, would limit Europe's economic growth. In spite of this, the European Union countries have been actively participating in climate change agreements and the European public have been argued to play a positive role in making it possible. Also, a significant number of industries and firms in European Union countries consider climate change mitigation not as a threat but as an opportunity to make economic gains in the market for low-carbon technologies and clean energy. European Union countries at large

are committed to becoming solely dependent on clean energy and completely phasing out the use of fossil fuels.¹⁰

China

China is the largest producer of coal. In 2015, China's coal exports comprised 0.6% of the world's coal exports and it generated a revenue of \$498.2 million (WTEx 2016a). It is also the world's largest consumer of fossil fuel and emitter of global greenhouse gases. China clearly has the most fossil fuel dependent economy and its approach to climate change agreements for the most part has been contentious. Despite its significant economic progress, China places itself as a member of the developing countries group in climate change negotiations and has been advocating the right to economic development for developing countries as the primary means to alleviate poverty. At the Copenhagen UNFCCC meeting, China threatened to withdraw from climate change convention if developed countries imposed binding commitments on developing countries with fast growing economies. However, at the next meeting in Cancun, China pledged to its first voluntary commitment, also known as Nationally Appropriate Mitigation Action (NAMA), to reduce its greenhouse gas emissions alongside other developed countries.

¹⁰ The EU as a whole has set up Europe 2020 strategy for smart, sustainable and inclusive growth, the Roadmap for moving to a competitive low-carbon economy in 2050. This includes cutting greenhouse gases by 20% (30% if international agreement is reached), reducing energy consumption by 20% through increased energy efficiency and meeting 20% of the EU's energy needs from renewable sources. European Commission (2011)

Brazil

Brazil produces crude oil. In 2015, oil accounted for 7.2% of its exports, ranking as its third highest exports revenue and it generated about \$13.7 billion (Walkman 2016). Brazil is the world's ninth highest emitter of global greenhouse gases. However, Brazil is also very dependent on clean energy in comparison with other countries. The Federal Public ministry which is in support of climate change mitigation has been influential over the political system, and the constitution of Brazil mandates the protection of the environment as a general principle of economic activity.

Conversely, Brazil's approach to climate change negotiations has been both constructive and unsupportive. It initially refused to join any binding agreements given that developed countries are historically responsible for climate change. It aimed for all developed countries to assume the responsibility to mitigate climate change. However, Brazil played a more supportive role in climate change negotiations from 2009 when it pledged to voluntarily reduce its greenhouse gas emissions. It has thus far supported the idea that developing countries with fast growing economies should assume the responsibility to reduce their greenhouse gas emissions similar to those of developed countries but based on the principle of Common but Differentiated Responsibility and Respective Capabilities (CBDR&RC).

India

India is the world's fourth largest producer of coal and it produces crude oil. In 2015, oil accounted for 11.7% of its exports, ranking as its second highest dollar exports revenue, and it generated about \$30.9 billion (Walkman 2016). Because of its high consumption of fossil fuel, particularly coal, India is the world's third highest emitter of

global greenhouse gases. Despite this, India believes that it has the right to more climate space which permits it to emit more greenhouse gases. For a long time, its officials and Parliament Council has refused its approval to binding climate change agreements. As a result, its approach to climate change negotiations has been mostly uncooperative until recently. In climate change negotiations, India has consistently refused to join any binding agreement and has been instrumental in establishing the CBDR principle which confers the historic responsibility for climate change to developed countries, and the right of developing countries to continue in the path of economic development without restrictions i.e. greenhouse gas emissions reduction. At the Copenhagen UNFCCC meeting, India's delegation declared the country's intention to continue its use of coal because it has an abundance of it and it allows for low-cost energy expansion for economic development.

South Africa

South Africa produces fossil fuels. It is the world's third largest producer of coal per person and top exporter of coal (Wilson 2014). It accounted for 5.4% of the world's coal export revenue in 2015 and generated \$4.3 billion (WTEx 2016a). Also, in 2015 oil ranked as its fourth highest exports revenue (9.9%) and generated about \$8 billion (Walkman 2016). South Africa is the world's eighteenth highest emitter of global greenhouse gases. Despite its heavy dependence on coal, South Africa's government has a more balanced view of the economic risks of mitigating climate change. It considers climate change mitigation as a means to transition to a low pollution emitting economy and not a threat, and is adjusting its industrial strategies to meet this objective. However, at the initial stages of climate change negotiations, its approach was unsupportive and it

was among the developing countries that supported the establishment of the CBDRRC principle in the UNFCCC's convention. Nonetheless, since it hosted the 2011 Durban UNFCCC meeting it has played a constructive role in the negotiations. It was among the first developing countries to accept that developing countries should be given binding obligations to reduce their greenhouse gas emissions.

Saudi Arabia

Saudi Arabia's economy mostly depends on fossil fuel. It is the world's seventh largest producer of fossil fuel and the largest exporter of crude oil, 17% of the world's crude oil exports (WTEEx 2016b). Oil exports account for 76.9% of its total exports and in the previous year, it generated a total of \$164 billion (Walkman 2016b). As a result, Saudi Arabia seeks to continue the use of fossil fuel even though it is the world's twelfth largest emitter of global greenhouse gases. It has largely adopted an obstructive approach to climate change negotiations because it is concerned about the negative impact of climate change mitigation on its economy. For instance, at the high level segment meeting to the Kyoto Protocol, Saudi Arabia's delegate argued that industrialized countries adoption of the agreement would significantly reduce the amount of fossil fuel purchases from Saudi Arabia which would cost the country billions of dollars yearly. The delegate cited the IPCC's report which estimates lower demand and prices and lower GDP growth for oil exporters. Saudi Arabia wants a climate change agreement that will not discriminate against its fossil fuel based economy, and that will provide substantial financial and technical assistance, particularly, the transfer of carbon capture and storage technologies.

Other Research Findings on International Climate Change Politics

Research findings also show that several countries are concerned about other countries free-riding in international climate change agreement. For instance, the United States, Australia, Canada, Japan, Russia and other countries with major economies are concerned about countries with emerging economies like China, Brazil, and India paying less than their fair share of the cost of combating climate change. This is because China, Brazil, and India have an increasingly greater share of global greenhouse gas emissions. What is more striking, however, is that most countries were found to be concerned about the climate change agreement taking into consideration the disparity in their historical responsibility for the cause of climate change and socioeconomic capability. They share a joint concern over the notion of “equity” under the “Common but Differentiated Responsibility and Respective Capabilities” CBDR&RC principle. For most countries, a climate change agreement that takes into consideration the CBDR&RC principle would be equitable.¹¹

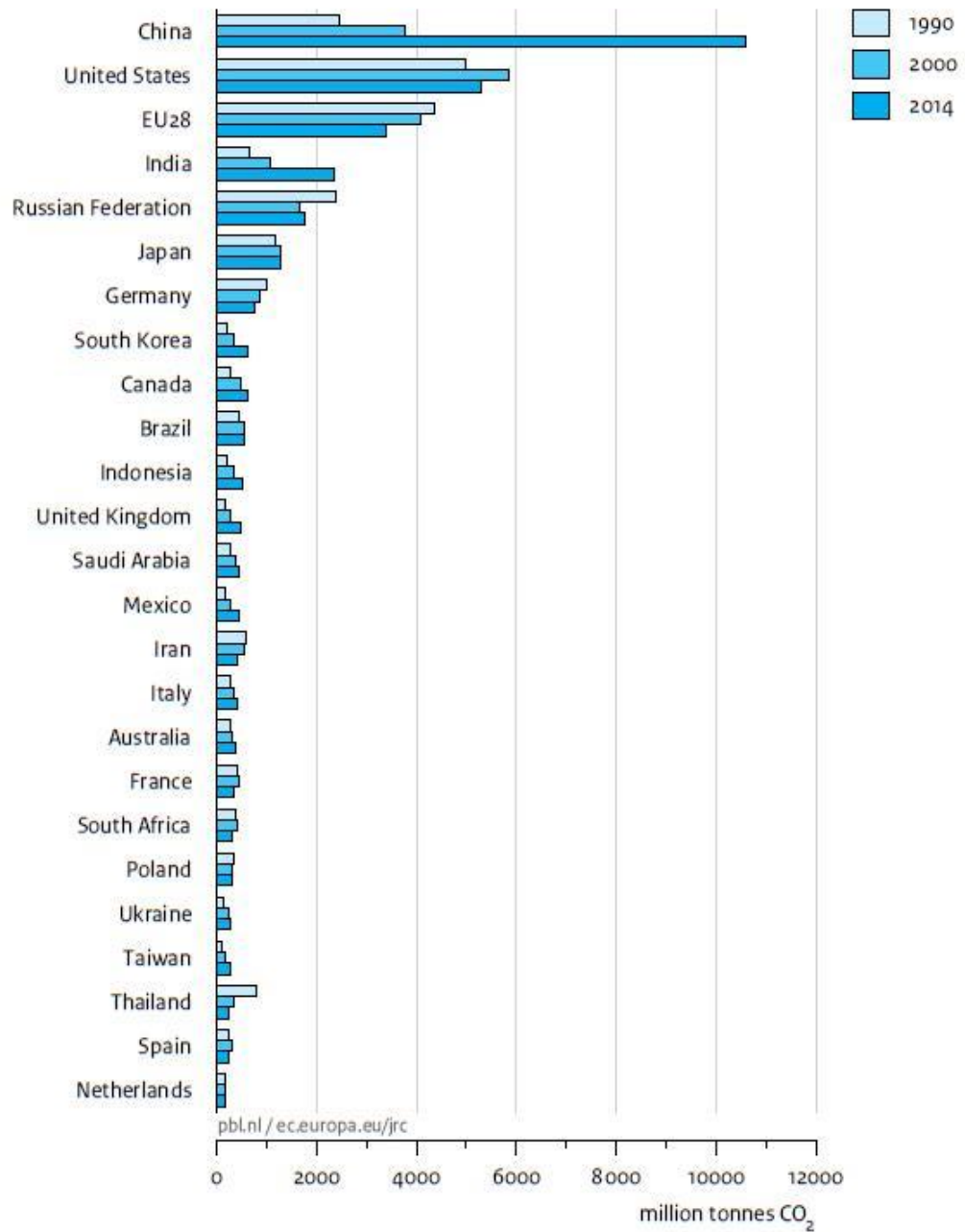
However, from a neorealist relative gains perspective the concern goes beyond conflicting national interests, free-riding, and equity, underneath and above these concerns is the concern over relative gains. Countries are concerned about these other issues because they are concerned about relative gains. Countries are concerned about equitable allocation of responsibilities to combat climate change (i.e. the CBDR&RC

¹¹ According to Vito (2012), “the CBDR&RC principle establishes a conceptual framework for an equitable allocation of the costs of global environmental protection and it has two meanings. First is the common moral responsibility of all countries to equally share the burden of environmental protection for common resources. The second is the differentiated responsibility, which refers to unequal socioeconomic situations across countries, their different historical contribution to the cause of global environmental problems; and different financial, technological and structural capability to deal with environmental problems.”

principle) not just because they have a common and equal moral obligation to combat climate change, different historical responsibility for the cause of climate change or are unequal in terms of their financial capability to combat climate change, but also and particularly, because they don't want other countries to become more prosperous and thus, more powerful than they are in the international political system. According to neorealist relative gains theory, countries are concerned about relative gains, national interests, free-riding, financial costs, and equity because they are concerned about their individual security in the international political system. Therefore, this thesis hypothesizes that countries are concerned about relative gains.

CHAPTER III - RESEARCH DESIGN

To test the research hypothesis, fifteen countries that are party to the UNFCCC are selected as the units of analysis. The countries are the United States, Russian Federation, Canada, Japan, Australia, China, Brazil, South Africa, India, Saudi Arabia and five countries from the European Union, United Kingdom, Germany, Spain, France and Italy. These countries were selected as the units of analysis because they share similar characteristics. Firstly, they are among the world's biggest economies and as a result, they are most likely to be concerned about their economic position and power status in the international political system, as well as the benefits of international agreement. Also, they are very dependent on income from fossil fuel, most of them import and export fossil fuel, and use them for economic development and activities. They are, therefore, most likely to withdraw from international agreements on climate change and on several occasions, these countries not including the five European Union countries, have refused to participate in the climate change agreements. Moreover, according to research findings, these countries have been identified as key players in international climate change cooperation. They have been particularly influential in undermining the outcome of international climate change cooperation except for the five European Union countries which, as a group, have been argued to play a leadership role in climate cooperation. This makes them suitable and compelling to study but can however limit the generalizability of the findings of this thesis to other countries that do not share similar characteristics. Lastly, and not surprisingly, these countries are among the world's top emitters of global greenhouse gases (Fig. 2), which makes their participation in international climate change agreement very important.



Source: EDGAR 4.3 FT2014 (JRC/PBL, 2015) (notably IEA 2014, NBS 2015 and BP 2015)

Figure 2. Top 24 CO₂ Emitting Countries.

Source: Olivier, Jos et al (2015)

The content analysis method is used in this thesis because it makes the process of analysis easy and suits the purpose of this research. A total of 30 transcribed statements made by the 15 countries during the UNFCCC Conference of Parties meetings in the years 2012, 2013, 2014 and 2015 are analysed. The year 2012 marked the end of the first commitment period under the Kyoto agreement, the negotiation of the second commitment period and the most recent 2015 Paris agreement. The statements analysed includes individual country statements as well as group statements from the Umbrella, BASIC, EU and G-77 associate groups. This is because countries also negotiate in groups during international climate change cooperation to express their common interests and concerns. Australia, Japan, Canada, Russian Federation, and the United States are members of the Umbrella group. Brazil, South Africa, India, and China make up the BASIC group. France, Germany, Spain, United Kingdom, and Italy are members of the European Union (EU) group. Saudi Arabia is the leading member of the Arab League of Nations group, OPEC, the G-77 group, and other groups. All data are collected online from the UNFCCC's archive and the national archives of countries.

The statements are analyzed to determine whether words that demonstrate the concept of relative gains are present. The words are same/equal, balance-balanced, equity-equitable, fair-fairness/just, the CBDR&RC principle, binding/applicable, commit, all/every, and transparency. The words have equal weighting and are coded as present (1) or absent (0). The entire content of the statements are, however, analyzed alongside the words in order to only account for when the words are used in a context that demonstrates the concept of relative gains. Therefore, it is important to clarify when the words demonstrate the concept of relative gains as opposed to different or other definitions. The

words are derived from “equitable” and “balanced” achievement of relative gains as used by neorealist, Grieco (1988) to describe the concept of relative gains. The word “equitable or equity” in its simplest form is defined as “fair and impartial” (i.e. fairness, impartiality).¹² Balanced, on the other hand, is defined as “the condition in which different elements are equal or in the correct proportions.” The dictionary definitions of equitable and balanced are considered the same in relative gains terms as both definitions demonstrate a state of equality (i.e. equal benefits). For instance, according to the dictionary definition, an international agreement that is impartial or fair means that the agreement does not favor some countries over others. This is the same in relative gains terms, an equitable international agreement means an agreement that does not provide more benefits for other countries and thus less for others (i.e. unequal benefits). Also, using the dictionary definition, and in relative gains terms, an international agreement that is balanced means an agreement that will provide all countries with equal benefits.

The dictionary definitions of the words justice/just, and fair/fairness used for analysis are similar to the definitions of equitable and balanced, but other definitions of these words are also considered to mean “morally right” or “egalitarian” which is different from relative gains terms. For instance, the word “equitable” can be understood to mean “egalitarian” which in its simplest form is defined as “the belief that all people are equal and deserve equal rights and opportunities” (similar to the interpretation of the equity CBDR&RC principle as described by Vito 2012, see footnote 11). However, the word egalitarian implies a “moral right to be equal” which is not a wrong interpretation but is different from a relative gains interpretation. Also, this is not to say that the term

¹² All definitions are from Oxford Dictionaries online

egalitarian cannot be used in relative gains terms but it depends on the context that it is used by countries. If a country uses the word “equitable” for instance in its statement “I want an equitable agreement” and proceeds to state “because I believe that all countries are equal or have the equal responsibility to combat climate change”, this will not demonstrate the concept of relative gains but the concept of egalitarianism. Conversely, if a country states “I want an ‘equitable’ agreement that is ‘binding’/‘applicable’ to ‘every’/‘all’ countries, has the ‘same’/‘equal’ responsibilities for all countries and ensures that all countries ‘commit’ to the joint agreement”, the word equitable is used in a context that implies the demand for equal benefits (i.e. concept of relative gains). Therefore, if the words are used in this context, it will indicate that a country is concerned about relative gains which is also why the words same/equal, all/every, binding, applicable, and transparency are used alongside equity-equitable, balance-balanced, fair-fairness/just, to demonstrate the concept of relative gains.

Nonetheless, before conducting the content analysis of the statements to test the research hypothesis, this thesis analyzes the texts of the UNFCCC convention, guide to the climate change process, and organizational matters adoption of the rules procedure. This is done to determine whether the general assumptions of the neorealist relative gains theory holds true in international cooperation on climate change. The general assumptions of neorealist relative gains theory are as follows:

- I. Countries are the key actors in international cooperation
- II. Countries are sovereign over the institution governing international cooperation
- III. International cooperation is based on the self-interests of countries

IV. Negotiation is a universal characteristic of international cooperation among countries

Analysis of the UNFCCC Convention, Guide and Organizational Matters

The Convention

The Parties to this Convention, Reaffirming the principle of sovereignty of States in international cooperation to address climate change.

The Parties to this Convention, Have agreed as follows:

Article 1: Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programs, taking into account that economic development is essential for adopting measures to address climate change. Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties.

Article 25: At any time after three years from the date on which the Convention has entered into force for a Party, that Party may withdraw from the Convention by giving written notification to the Depository. Any Party that withdraws from the Convention shall be considered as also having withdrawn from any protocol to which it is a Party.

The Guide to the Climate Change Convention Process

The Conference of the Parties (COP) is the “supreme body” of the Convention, that is, its highest decision-making authority. It is an association of all the countries that are Parties to the Convention. The climate change process revolves around the annual sessions of the COP. The COP is responsible for keeping international efforts to address

climate change on track. It reviews the implementation of the Convention and examines the commitments of Parties in light of the Convention's objective, new scientific findings and experience gained in implementing climate change policies. Each Party to the Convention is represented at sessions of the Convention bodies by a national delegation consisting of one or more officials who are empowered to represent and negotiate on behalf of their government.

Organizational Matters, Adoption of the Rules Procedure

The rules of procedure may be amended by consensus by the Conference of the Parties. The COP when adopting any agenda may decide to add, delete, defer or amend items and only items which are considered urgent and important by the COP may be added to the agenda. The Parties shall make every effort to reach agreement on all matters of substance by consensus, a two-thirds majority vote could be considered as a last resort. Any body or agency, whether national or international, governmental, or nongovernmental, which is qualified in matters covered by the Convention and which has informed the secretariat of its wish to be represented at a session of the Conference of the Parties as an observer may be so admitted unless at least one third of the Parties present at the session object. The "secretariat" "president" and "subsidiary bodies" of the COP is designated by the COP from among the representatives of the Parties present at the session. All offices remain under the authority of the COP and shall participate in the session in that capacity and shall not at the same time exercise the rights of a representative of a Party.

Findings from the UNFCCC Convention, Guide and Organizational Matters

The above texts collected from the UNFCCC's convention, guide to the climate change process, and organizational matters adoption of the rules procedure, show that international cooperation on climate change is predominantly made up of nation-states. They are the primary decision-makers and are recognized as sovereign in the convention. They control the agenda, procedures, appointments and subordinate bodies of the UNFCCC. Countries negotiate during international cooperation on climate change and take into account their national circumstances as well as their economic interest when negotiating climate change agreements. They are also free to withdraw from international cooperation on climate change and agreements if they decide to do so.

The findings support the four general assumptions of the neorealist relative gains theory that countries are the key actors in international cooperation. They are sovereign over the institution governing international cooperation. International cooperation is based on the self-interests of countries, and negotiation is a universal characteristic of international cooperation among countries. This particularly makes the UNFCCC a suitable case to test the research hypothesis.

CHAPTER IV –FINDINGS AND DISCUSSION

Findings from the Content Analysis

After analyzing the content of the statements, the words are found to be present a total of 220 times and a total of 55 times on average per year (see appendix, Tab. A2). The presence of each word varied, but since the words are equally weighted, it is unnecessary to make conclusions based on the frequencies. In sum, the frequency of the presence of the words show that all fifteen countries made use of at least one of the words in their group and individual statements in a manner that expressed the concept of relative gains. Therefore, in the following paragraphs, the findings are presented qualitatively, according to how countries expressed their concern over relative gains in the sentences where the words were found. The findings are then discussed in the last section of this chapter.

Doha 2012 Conference of the Parties

At the 2012 Conference of the Parties meeting held in Doha, countries met to negotiate the adoption of a second commitment period under the Kyoto Protocol and to address concerns regarding the development of the Paris binding agreement. At the conference, the countries of Canada, Japan, the United States, Russian Federation, and Australia articulated their concerns together under the Umbrella group. In their group statement, the countries bargained for an arrangement that was applicable to all and required the participation of all parties. According to the group, cooperation was only possible at the previous Durban conference because parties were able to strike a deal that had something for “everyone and required something of everyone.” They particularly bargained for an agreement that would set binding economy wise greenhouse gas

emission reduction targets for all parties, similar to the Kyoto protocol. In their group statement, Canada, Japan, the United States, Russian Federation, and Australia are committed to acting together with all parties under a common platform where each party plays a fair part based on the CBDR&RC principle. So long as this condition is fulfilled, Canada, Japan, the United States, Russian Federation, and Australia will play their full and fair part in the new agreement.

Similarly, the United Kingdom, France, Germany, Italy and Spain articulated their concerns together but under the European Union group. In their group statement, all country members of the EU are greatly committed to the Kyoto protocol and the transition to a single “global legally binding agreement in which all parties have commitments.” The EU, however, is disappointed that developed countries i.e. Japan and Russia that were party to the Kyoto Protocol in the first commitment refused to participate in the second commitment period, and that Canada decided to completely withdraw from the Kyoto Protocol. According to the EU, without these countries in the second commitment period, the remaining countries that are party the Kyoto Protocol only account for approximately 14 % of global greenhouse emissions, which is significantly less than the first commitment period. As a result, the United Kingdom, France, Germany, Italy, and Spain together with other countries from the EU, demand that all countries under the convention must take on “comparable commitments” under the new binding agreement in order to compensate for the actions taken by the countries that participated in the Kyoto Protocol. In their group statement, they concluded that each country “will have to do their fair bit to narrow this gap, no matter, whether inside or outside the second commitment period of the Kyoto Protocol (CP2).”

Brazil, China, South Africa and India were represented at the Doha conference by the BASIC group. These countries in the BASIC group statement expressed their joint concern and expectations. They demanded a comprehensive, “fair and balanced” legally binding second commitment under the Kyoto Protocol. They expect the principle of equity to be central to the international climate change process, and they want countries to provide detailed information regarding the implementation of their commitments “to ensure transparency” and to act in accordance with the “principles of equity and CBDR&RC.” Furthermore, Brazil, China, South Africa and India, want the Paris agreement to be binding on all countries and in accordance with the principles of the convention, particularly the principle of equity and CBDR&RC.” This will ensure full, effective and sustained implementation of the Paris agreement by all countries.

Saudi Arabia also articulated its concern together with other countries fully associated with the group of 77. In the group of 77 statement, the agreement reached in Doha must follow the decisions concluded in the previous Durban conference which ensured a balanced outcome based on “mutual reassurances by parties.” The arrangement “must be ambitious, equitable and comprehensive” and “should be based on equity, right to development and CBDR&CR.” It must ensure that developed countries take on “ambitious and legally binding mitigation commitments under the Kyoto protocol second commitment period”, and that their commitments be completed before 2015 so that all parties will participate in the highest level of effort under the Paris agreement. Lastly, Saudi Arabia wants all parties to be transparent and the CBDR&RC principle to apply to all of their actions.

Warsaw 2013 Conference of the Parties

The key issue at the 2013 COP meeting held in Warsaw was to address the progress on the development of the 2015 Paris agreement that is to be applicable to all countries and would come into force no later than 2020. Canada in its individual statement at the conference, argued that it would remain in support of the new binding climate change agreement if it is “just” and “includes commitments from all major greenhouse gas emitting countries.” Similarly, Brazil in its statement, argued that the new binding agreement must be “just, fair, inclusive and balanced” and must require “urgent ambitious action by all parties.” It stressed that the climate change agreement must be framed by the CBDR&RC principle. Even so, all other climate change “policies and strategies must be built on the basis of justice and participation by all countries.” For Brazil, it “is indispensable” that all work under the UNFCCC advances “in equal terms”, takes into account the historical responsibility of countries, and the transparency of action. It has achieved positive results in terms of implementing its mitigation commitments and wants “all countries, particularly developed countries to demonstrate the same kind of ambitious engagement.”

The United States stated at the Warsaw conference that it will only be fully engaged in negotiating an ambitious new climate change agreement that is consistent with the principle of equity and CDBR&RC. Similarly, China in its statement, argued that UNFCCC is the common commitment by all parties to address climate change, and should be based on the principles of “equity and CBDR&RC.” The UNFCCC conference should urge all countries especially developed countries to ratify the second commitment of the Kyoto protocol at the Warsaw conference and all countries need to be sincere when

working together. China will participate in a positive light so long as the decisions to the new agreement follow the principles of transparency, is party driven and includes all parties.

The United Kingdom, France, Germany, Italy and Spain negotiated together under the European Union group at the Warsaw conference. In their group statement, they stressed that they want the new legally binding 2015 agreement to be “applicable to all countries.” However, they want all countries to participate in mitigation actions before the new agreement comes into force by 2020 because the EU group of countries will be taking pre-2020 mitigation actions. Therefore, they request all parties to do likewise. Furthermore, the EU group wants transparency of countries' mitigation commitments and a pre-2015 assessment of countries' commitments. This will result in an ambitious, fair, legally-binding 2015 agreement and will encourage all countries to participate in the agreement. Similarly, in its statement, Saudi Arabia stressed that the new 2015 climate change agreement must be “comprehensive, balanced and should be based on the CBDR&RC principle.” Also the agreement must be binding on the national levels of all countries, particularly for developed countries as they must take the lead in efforts to mitigate climate change.

The Russian Federation, in its statement, also argued that new climate change agreement should be based on the principle CBDR&RC. However, the agreement should promote “universality” and “equality” and not introduce or be based on unnecessary divisions. The division of countries into developed and developing countries (i.e. Annex I and Non-Annex I) is “obsolete” because the greenhouse emissions of developing countries have exceeded those from developed countries. Also, the economic and technological

capabilities of certain developing countries have improved, “particularly those of the world’s so called economic powerhouses” (i.e. China, Brazil and India). Moreover, financial assistance mechanisms is being provided for developing countries. According to Russia, “countries must fulfil their interim commitments before the entry into force of the new climate change agreement.” It has considerably reduced its greenhouse emissions in the midst of economic growth and has started to implement national initiatives in economic sectors for low-carbon development. It therefore seeks that all countries, particularly developing countries be involved in the same way and that the UNFCCC revise its decision-making procedure in order to build “mutual trust.”

According to India, in its statement, the international agreement must follow the principles of convention particularly “equity and CBDR&RC” if it is to cooperate. It wants the new agreement to be applicable to all but developed countries must take the lead whilst assisting developing countries in the efforts to address climate change. Similarly, South Africa in its statement wants developed countries to take the lead in combating climate change and also wants them to undertake more responsibilities because it believes that developing countries are doing more than their fair share. It wants balanced treatment for all countries and for the new binding agreement to be based on “equity and the CBDR&RC” principle.

Australia, in its statement wants an agreement that would create a “common platform for all countries” to participate in climate action but in a manner that is economically and fiscally responsible. It particularly wants an agreement in which all countries with “major emitting economies” participate in actions to control emissions in a “comparable” manner. Japan, in its statement, also wants a fair 2015 agreement in which

all countries participate, but the framework of the agreement must have “transparency mechanisms” to monitor the national commitment of parties. It is in the process of implementing actions to reduce its greenhouse gas emissions and requests that all developed countries make equal reduction targets.

Lima 2014 Conference of the Parties

Countries met at the 2014 climate change conference held at Lima to continue negotiations on the development of the new 2015 Paris agreement, and the progress of the second commitment period under the Kyoto Protocol. South Africa, China, Brazil and India during the conference negotiated together as the BASIC group. In their group statement, these countries noted that the multilateral 2015 agreement should be “based on the principles of equity and CBDR&RC with developed countries taking the lead.” They want the agreement to make certain that parties are transparent in the implementation of their pledges under the agreement. However, they are concerned about the countries that participated in the Kyoto Protocol first commitment period but failed to participate in the second commitment. These countries should make sure to prove their commitment to the UNFCCC convention by participating in the second commitment period. Brazil, China, South Africa, and India will remain committed to the UNFCCC negotiation process so long as it is open, transparent, all-inclusive, and party-driven, and that all parties implement the decisions reached during the negotiations.

Saudi Arabia stressed in its individual statement at the Lima conference that the 2015 agreement should be built on the principles of the UNFCCC convention, particularly the CBDR&RC principle. However, rather than imposing actions, the focus at the Lima conference should be on the implementation of countries previous commitments and the

Paris agreement should focus on assisting developing countries while developed countries should take the lead role in combating climate change. Conversely, the United Kingdom, France, Germany, Italy and Spain together, in their EU group statement, announced their greenhouse gas emission reduction targets and called on all countries to do the same in a “comparable manner.” The 2015 agreement should be balanced, and in order for it to be successful as the Kyoto Protocol, the agreement should be legally-binding, and should ensure that all countries be transparent in the implementation of their commitments and held accountable.

Canada, Japan, the United States, Russian Federation, and Australia also negotiated together at the Lima conference. In their Umbrella group statement, the new climate change agreement is to be applicable to all parties. They “expect all countries to provide full and transparent information so that all can be aware of their mitigation efforts.” However, they particularly want developing countries to participate in “parallel transparency” to developed countries. They are concerned that developing countries are yet to submit their multilateral assessment unlike developed countries that have submitted theirs which showed that developed countries undertook effective actions that reduced their emissions.

Paris 2015 Conference of the Parties

At the most recent 2015 Conference of the Parties meeting in Paris, the main goal of countries was to conclude negotiations on the Paris agreement that is to be applicable to all countries and would enter into force by 2020. According to the United States, in its statement at the Paris conference, all countries must take action in a manner that is fair, and based on their CBDR&RC. The United States has always supported the CBDR&RC principle and the agreement has to ensure that all countries have this goal in common.

Equally important, all countries should be held “to the same system of transparency about the progress they’re making.” The US wants a legally binding transparency agreement because it is important to ensure that all countries are truly committed.

China, in its final statement at the conference, announced that its expectations for the newly concluded agreement was met. The agreement is fair and just as well as comprehensive and balanced. The agreement is very ambitious and that it has a “binding force.” The agreement follows the “principle of equity, CBDR & RC, and the principle of fairness and justice.” It is also built on transparency of the implementation of action by countries and it reflects a “balance of the world’s interests and the interests of countries.” Nonetheless, it wants all countries to make certain to implement their commitments under the agreement, particularly developed countries and it will make certain to undertake its own international obligations. Likewise, Japan, in its statement, wants all countries to implement the 2015 Paris agreement and take active actions to improve implementations before 2020. It also emphasised that the agreement is “both fair and effective” given that it is applicable to all countries. It will implement its commitments and expects that all countries will do the same in a transparent manner under the agreement.

Conversely, India, in its statement, argued that the requirements for developed countries under the new agreement are much lower than their “historic responsibilities and fair share.” Nonetheless, it is content that the agreement differentiates between the actions of developed and developing countries, and wants all countries to fulfil their commitments. In this sense, the agreement is “just” and “based on the principles of equity, and CBDR&RC” which it believes is a “common” concern for all parties. Similarly, according to the Russian Federation in its statement, the agreement is just and is based on the

CBDR&RC principle. It will undertake its commitment under the agreement in accordance with the principle. However, it is important that all countries act jointly to reduce global greenhouse gas emissions by implementing their respective commitments, this will encourage mutual trust and support amongst countries.

South Africa, in its statement, argued that the Paris agreement is “balanced” but does not provide the basis for countries to “contribute their fair share.” Therefore, developed countries should be made to increase their actions and support the enhanced action of developing countries. Brazil in its statement, expressed its full support for the statement made by South Africa because it shares the same view. Nonetheless, it will implement its commitment under the new agreement.

However, in its statement, Australia that the new legal agreement ensures the participation of all countries. The agreement is based on the CBDR&RC principle and thus will enable all countries to implement their commitments in accordance with the CBDR&CR principle. The agreement also builds a “strong transparency and accountability mechanism” that will enable all countries to track each other’s efforts. The United Kingdom, France, Germany, Italy and Spain articulated their views together in the EU group statement. In their group statement, prior to the Paris conference, they wanted all countries to participate in the agreement in accordance with the principle of equity, CBDR&RC, and a transparent system, and the new Paris agreement made this possible. The agreement is legally binding and fair. It allows for inclusiveness, transparency and openness and is applicable to all parties. However all countries have the responsibility to make sure to implement their action and the United Kingdom, France, Germany, Italy

and Spain together with all the European Union group of countries will ensure to implement their commitments.

Discussion of Findings

At the four Conference of the Parties (COP) meetings held in 2012 through to 2015, countries negotiated on the development of the second commitment period under Kyoto Protocol and the new 2015 Paris agreement. All fifteen countries, for the most part, expressed similar relative gains concerns in their individual and group statements at the four COP meetings, except for Saudi Arabia at the 2015 COP meeting (see appendix, Tab. A2).¹³ Therefore, in the following sections, and for the purpose of making the discussion easier to comprehend and to generalize, rather than just explaining the individual relative gains of the fifteen countries, the relative gains concern of the countries are mostly discussed in groups, according to their common relative gains concern and level of development. This includes the BASIC group and Saudi Arabia, the Umbrella group, and European Union group of countries.

The fifteen countries want all other countries to participate in the climate change agreements and want to be able to monitor each other's actions in order to make sure that countries are implementing their climate change mitigation commitments to the joint agreements. However, they particularly want the agreements to allocate climate change mitigation commitments in an equitable manner (according to relative gains terms), but they differ in their opinion of what this entails. Nonetheless, at the end of the 2015 COP meeting, the fifteen countries approved the adoption of the Paris agreement because it is

¹³ This is because none of the words used to identify the concept of relative gains was present in Saudi Arabia's 2015 COP statement.

binding on all countries and they consider the agreement to be equitable. Also, the agreement has a transparency mechanism through which countries can track each other's mitigation actions.

Brazil, South Africa, China, India & Saudi Arabia (BASIC group & Saudi Arabia)

Brazil, South Africa, China, India and Saudi Arabia in their individual and group statements at the four COP meetings expressed similar relative gains concerns, and are classified as developing countries (i.e. Non-Annex I) under the UNFCCC convention. Likewise, Canada, Australia, Japan, the United States and Russian Federation, in their individual and group statements at the four COP meetings expressed similar relative gains concerns but are classified as developed countries (Annex I) under the UNFCCC Convention. The European Union group of countries which includes the United Kingdom, Germany, France, Italy, and Spain are also classified as developed countries under the UNFCCC convention, and they expressed their relative gains concerns in unison at the four COP meetings. However, Brazil, South Africa, China, India, and Saudi Arabia are primarily concerned about developed countries benefiting more than they would from the climate change agreements.

They want Canada, Japan, United States, Russian Federation, Australia (Umbrella group) and European Union group of countries (EU) to undertake greater responsibilities than all other countries under the climate change agreements. This includes the Umbrella and EU group of countries undertaking greater greenhouse gas reduction emission targets (NDCs), and providing financial assistance to all other countries under the Paris agreement. It also includes them participating in the Kyoto agreement which is binding

on only developed countries¹⁴. The BASIC group and Saudi Arabia justify their concern on the basis that the Umbrella and EU group of countries are historically responsible for climate change and, in doing so, have advanced economies, and amassed more financial wealth than other countries. For BASIC group and Saudi Arabia, the commitments of countries under the climate change agreements will be equitable if the Umbrella and EU group of countries undertake greater responsibilities. This is clearly a relative gains concern, it is a way of Brazil, South Africa, China, India, and Saudi Arabia trying to balance the gains of the climate change agreement between themselves and the Umbrella and EU group of countries.

The overall financial capability of developed countries in terms of nominal growth domestic product (GDP) is greater than that of developing countries (see Tab. 1). Canada, Australia, Japan, the United States and Russian Federation including the European Union group of countries have a combined GDP of \$38,548.16 billion which is more than double the combined GDP of Brazil, South Africa, China, India and Saudi Arabia at \$16091.0170 billion. As a result, the overall, economic position and power status of developed countries in the international political system is relatively higher than that of developing countries. Although if considered individually, the GDP of China, India and Brazil is higher than that of some developed countries (see Tab. 1). They are even considered to have high economic and political (i.e. power) status in the international political system relative to developed countries. Nonetheless, as a whole,

¹⁴ Reminder: the Kyoto agreement requires developed countries to undertake measures to mitigate climate change which includes them reducing their greenhouse gas emissions, and providing technological and financial assistance to developing countries. However, though the Kyoto agreement does not include developing countries, it requests them to undertake voluntary measures to mitigate climate change which mainly includes them reducing their greenhouse gas emissions.

developed countries are more financially capable than developing countries and are therefore better able to protect themselves against external threats from developing countries. This, however, makes developed countries a potential threat to developing countries.

Brazil, South Africa China, India, and Saudi Arabia fear for their survival, and so want to diminish or balance the potential threat from Umbrella and EU group of countries by preventing the difference in the financial capability of developed and developing countries from expanding. Particularly, they don't want the financial capability of the Umbrella and EU group of countries to increase relative to theirs because it would increase the level of potential threat from the Umbrella and EU group of countries.

Therefore,

- if developed countries are bound by the Paris agreement to undertake more ambitious greenhouse gas reduction emission targets than developing countries, and provide financial assistance to developing countries,
- and, if developed countries participate in the Kyoto agreement which is only binding on developed countries,

the financial capability of the Umbrella and EU group of countries would be reduced relative to that of developing countries. As a result, they will not benefit more than Brazil, China, South Africa, India and Saudi Arabia from the climate change agreements. This will diminish the level of potential threat from the Umbrella and EU group of countries to Brazil, China, South Africa, India and Saudi Arabia, thus, making the agreements equitable for Brazil, China, South Africa, India and Saudi Arabia.

Table 1

GDP Nominal Ranking in Billions of Dollars, 2016

Ranking	Countries	GDP
1	United States	18,558.13
2	China	11,383.03
3	Japan	4,412.60
4	Germany	3,467.78
5	United Kingdom	2,760.96
6	France	2,464.79
7	India	2,288.72
8	Italy	1,848.69
9	Brazil	1,534.78
10	Canada	1,462.33
12	Spain	1,242.36
13	Australia	1,200.78
14	Russia	1,132.74
20	Saudi Arabia	618.274
40	South Africa	266.213

Source: Statistics Time (2016)

Canada, Japan, Australia, United States & Russia (Umbrella Group)

Conversely, the Umbrella group of countries, Canada, Japan, Australia, the United States, and Russian Federation are primarily concerned about developing countries benefiting more than they would from the climate change agreements. They want the Kyoto agreement to be binding on developing countries, particularly Brazil, China, and India. They also want the Paris agreement to assign the same responsibilities to all countries with major economies and high greenhouse gas emissions which includes all developed countries and certain developing countries (i.e. BASIC group). The climate change agreements will be equitable if these conditions are incorporated. This is a relative gains concern, and the Umbrella group of countries are trying to balance the

gains of the climate change agreements between themselves and BASIC group of countries.

Canada, Japan, Australia, the United States and Russian Federation are particularly concerned about the BASIC group of countries because the financial capability of BASIC group of countries is comparable to that of developed countries. Also, the economic position and power status of BASIC group of countries in the international political system ranks high relative to developed countries and even higher than some developed countries. Moreover, the BASIC group of countries are high emitters of greenhouse gases relative to developed countries but are classified under the UNFCCC convention as developing countries. Brazil, China, India, and South Africa are not participating in the Kyoto Protocol because they are classified as developing countries and the agreement is only binding on developed countries. For this reason, the Umbrella group of countries, particularly, Russia wants Brazil, China, South Africa, and India to be removed from the developing countries classification. Also, the United States refused to participate in the Kyoto agreement, Japan and Russia refused to join the second commitment period of the Kyoto agreement, and Canada withdrew from the agreement's first and second commitment periods altogether. Even Australia threatened to withdraw from the Kyoto second commitment period but has not yet withdrawn from the agreement.

The BASIC group of countries are considered potential threats to Canada, Japan, Australia, the United States and Russian Federation and if developed countries undertake more responsibility and provide financial assistance to developing countries, it will reduce the financial capability of developed countries and increase the financial

capability of developing countries, and thus, increase the level of potential threat from BASIC group of countries. Therefore, if Brazil, China, India and South Africa undertake equal responsibilities with developed countries which includes participating in the Kyoto agreement, undertaking comparable greenhouse emission reduction targets and providing financial assistance to other developing countries under the Paris agreement, their financial capability will be reduced. Also, they will not benefit more than Umbrella group of countries from the climate change agreements, thus, diminishing the potential threat to Umbrella group of countries, and the benefits from the agreements will be considered equitable for Umbrella group of countries.

United Kingdom, Germany, France, Italy & Spain (European Union Group)

The United Kingdom, Germany, France, Italy, and Spain with the rest of the European Union group of countries are particularly concerned about Canada, Japan, Russian Federation, and the United States benefiting more than they would from the climate change agreements. They want Umbrella group of countries to participate in the Kyoto agreement and to have ambitious responsibilities (i.e. greenhouse gas emission reduction targets NDC and provide substantial financial support to developing countries) under the Paris agreement comparable to that of European Union group of countries. The United Kingdom, Germany, France, Italy, and Spain are participating in the first and second commitment period of the Kyoto agreement. Under the agreement, they are required to provide financial assistance to developing countries and to reduce their greenhouse gas emissions. However, Canada and the United States do not have this responsibility because they are not participating in the Kyoto agreement. Also, even though Japan and Russian Federation participated in the first commitment period of the

Kyoto agreement, they have less responsibilities in comparison with EU group of countries because they are not participating in the second commitment period. This would decrease the financial capability of EU group of countries relative to that of Canada, Japan, Russian Federation and the United States, and thus would increase the level of potential threat to United Kingdom, Germany, France, Italy and Spain EU countries.

Moreover, the financial capability of Umbrella group of countries in terms of GDP is greater than that of the United Kingdom, Germany, France, Italy and Spain combined. Their GDP is \$25,562.8 billion and is more than double the GDP of the United Kingdom, Germany, France, Italy and Spain combined which is \$11,784.58 billion. The United States alone has a GDP of \$18,558.13 which is greater than that of every other country including the United Kingdom, Germany, France, Italy and Spain. However, if all developed countries participate in the Kyoto agreement's first and second commitment period and undertake comparable greenhouse gas emission targets and financial assistance commitments to developing countries under the new Paris agreement, the financial capability of Umbrella group of countries will be reduced. Also, they will not benefit more than the EU group of countries, diminishing the level of potential threat to the EU group of countries, and the benefits of the agreements will be considered equitable to the United Kingdom, Germany, France, Italy, and Spain.

CHAPTER V – CONCLUSION

This thesis uses the neorealist relative gains theory of international relations to explain international cooperation on the environment. It hypothesized that countries are concerned about relative gains in environmental cooperation and used international climate change cooperation to test the research hypothesis. A content analysis of the statements from fifteen countries that are party to the United Nations Framework Convention for Climate Change (UNFCCC) was conducted. The findings from the 2012-15 statements showed that the fifteen countries, namely, the United States, Russian Federation, Canada, Japan, Australia, China, Brazil, South Africa, India, Saudi Arabia and five countries from the European Union, the United Kingdom, Germany, France, Italy, and Spain, are concerned about relative gains. They want the benefits of climate change agreements to be equitable because they do not want countries to achieve relatively more benefits from climate change agreements.

This was especially apparent in the 2015 Conference of the Parties statements. The countries expressed their approval of the Paris agreement because they believed it was equitable. Therefore, international institutions and policy makers need to recognize that countries fear for their survival in the international political system and as a result, are concerned about relative gains in joint agreements. The only way to diminish this concern is to make certain that countries benefit or believe that they would benefit equally from joint agreements. Furthermore, the findings have implications for international environmental politics research and international relations. It shows that neorealist relative gains theory can be used to explain environmental cooperation and that the concern over relative gains does not necessarily mean that cooperation is impossible

as conventionally believed. Also, although interest based theories have been particularly persuasive in explaining international cooperation on the environment, the neorealist relative gains theory offers more insights on the decision of countries to join or withdraw from international environmental cooperation and is more persuasive. This is because relative gains takes into account the economic costs of international agreements, the self-interests of nation-states, and the free-rider problem (i.e. absolute gains) but goes beyond to explain how countries gauge their international decisions relative to each other.

This thesis, however, only determined whether countries are concerned about relative gains or not in international cooperation on the environment. Furthermore, this thesis used as the units of analysis fifteen countries, which also share similar characteristics. The countries are among the world's biggest economies, consumers of fossil fuel and emitters of greenhouse gases. They are most likely the type of countries to be concerned about the economic benefits of international agreements. As a result, the findings of this thesis may not be generalizable and may differ if a larger number and different set of countries were analyzed. Therefore, future research should build upon this and correct for some of the possible limitations of this study. Particularly, future research should use relative gains to analyze the behavior of a different set of countries in environmental cooperation and perhaps use a larger number of countries and quantitative methods in their analysis. This is important because relative gains theory can then be used to predict the behavior of countries in environmental cooperation (i.e. how they are likely to respond to environmental agreements). Grundig (2006) for instance, with the use of neorealist relative gains theory predicted that countries were less likely to cooperate in international cooperation on climate change than on the ozone and trade. As a result,

international climate change cooperation is perhaps a case study that is germane to neorealist relative gains theory, thus future research should endeavor to test relative gains theory on other forms of environmental cooperation to determine if this is the case or not. This will help to identify the limits or extension of the explanatory power of relative gains theory. Nonetheless, this thesis, has shown that countries, particularly countries with big economies, are concerned about relative gains, and by so doing, has expanded the basis on which scholars can further determine the casual relationship between relative gains and the behavior of countries with big economies in international cooperation on the environment.

APPENDIX A – Content Analysis Tables

Table A1.

Relative Gains Words, Present (1), Absent (0)

Countries	Paris COP 2015	Lima COP 2014	Warsaw COP 2013	Doha COP 2012
United States	1	1	1	1
Canada	1	1	1	1
Australia	1	1	1	1
Japan	1	1	1	1
Russia	1	1	1	1
Brazil	1	1	1	1
China	1	1	1	1
South Africa	1	1	1	1
India	1	1	1	1
Saudi Arabia	0	1	1	1
United Kingdom	1	1	1	1
France	1	1	1	1
Germany	1	1	1	1
Italy	1	1	1	1
Spain	1	1	1	1

Table A2.

Frequency of Words

COP Meetings	Words
2015 Paris Conference	55
2014 Lima Conference	52
2013 Warsaw conference	59
2012 Doha Conference	54
Total	220
Average	55

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