國立政治大學亞太研究英語博士學位學程
International Doctoral Program in Asia-Pacific Studies
College of Social Sciences
National Chengchi University

博士論文
Doctoral dissertation

國際體系研究：
冷戰時期兩極體系的再檢視

International Systems: Cold War's Bipolarity Revisited

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中華民國 107 年 7 月

July 2018

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Acknowledgements

After an intensive period of writing the dissertation, I finalize it with this note of thanks. Writing the dissertation has had a big impact on me. I would like to reflect on the people and institutions who have supported and helped me so much throughout this period.

I would first like to express sincere gratitude to the Taiwan (R.O.C.) government, in particular the Ministry of Education, for giving me the scholarship and thus the opportunity to study in Taiwan. This experience allowed me to combine Asian way of thinking and Western theories along with the knowledge about the Soviet Union and modern Russia. The NCCU and IDAS also created an academic environment beneficial to conducting the research.

I would also like to thank my advisor Prof. Yeh-Chung Lu for this valuable guidance and other members of the dissertation committee: Prof. Da-Jung Li, Prof. Ping-Yin Kuan, Prof. Teng-chi Chang, and Prof. Hsin-Wei Tang, for offering valuable suggestions to improve this research.

Without a great help and support of my husband Dr. Philippe Cachia, I would not be able to conduct this research and obtain the PhD degree. My family has also supported me all these years of studying and writing the dissertation. They have been there for me.

I finally would like to thank the IDAS colleagues and other scholars, who have been my friends for many years, Dr. Serafettin Yilmaz, Dr. Dean Karalekas, Dr. Janet Tan, Dr. Tatiana Komarova, and Fanny Guinot, for offering support and the assistance in reading the dissertation and providing valuable insights.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Abstract

In International Relations theory, the system level of analysis is one of the least studied. Although it was touched upon in a number of grand masterpieces written decades ago, there is no consensus on many key definitions. Consequently, this study attempts to clarify and operationalize neorealist theory of international systems, and more importantly, to test it on existing international systems in ancient times and the Cold War period.

The study provides an alternative vision of the Cold War era as not being a reference example of bipolarity, but rather a modern example of two unipolar coexisting systems. In particular, the separate analysis of economic, political, and military interactions among states that existed in different years of the Cold War period demonstrates a division between the two international systems: US-led and USSR-led, created by the structural changes that occurred at the aftermath of the Second World War. Furthermore, the United States and the Soviet Union established unipolar orders within their respective systems based on international institutions and a network of multilateral and bilateral alliances. Both unipoles used various economic, political, and military tools to maintain the dominancy within the respective systems. Nevertheless, unlike the West system, the Soviet counterpart collapsed due to the breakup of the unipole. By studying the Cold War systems, the current study attempts to solve the puzzle why bipolarity as defined by Kenneth N. Waltz lasted only four decades and interprets the Soviet system's collapse through an interaction analysis. This study hypothesizes that the structural change came from an increasing level of interactions with the outside world.

Finally, the thesis attempts to offer analysis and predictions regarding the current system. It is under changes due to redistribution of capabilities within the West system. China's rise in the last decade changed the capabilities' distribution. This transition allows us to speculate that the US-led international system established after the Second World War is now challenged by rising powers, such as China, Russia, India, and a united Europe. This situation will probably lead to a return to multipolarity such as the one that existed before the Second World War.

Keywords: Cold War; international system; unipolarity; bipolarity; structural change

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Table of Contents

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

List of figures

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

List of tables

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

List of maps

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

List of abbreviations

ABM	Anti-Ballistic Missile
ADB	Asian Development Bank
ANZUS	Australia, New Zealand, United States Security Treaty
BRI	Belt Road Initiative
CENTO	Central Treaty Organization
CIA	Central Intelligence Agency
CINC	Composite Index of National Capabilities
Comecon	Council for Mutual Economic Assistance
Cominform	Communist Information Bureau
COW	Correlates of War
CPSU	Communist Party of the Soviet Union
CSCE	Conference on Security and Cooperation in Europe
CW	Cold War
EEC	European Economic Community
EU	European Union
FRELIMO	Front for the Liberation of Mozambique
FRG	Federal Republic of Germany or West Germany
G7	Group of Seven
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GDR	German Democratic Republic or East Germany
IAF	Inter-American Foundation
IBRD	International Bank for Reconstruction and Development
IDB	Inter-American Development Bank
IGO(s)	International governmental organization(s)
IMF	International Monetary Fund
IR	International Relations
KGB	Komitet gosudarstvennoy bezopasnosti or Committee for State Security
METO	Middle East Treaty Organization
MFN	Most Favored Nation
MIDs	Militarized interstate disputes
MNB	Moscow Narodny Bank

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

NAM	Non-Aligned Movement
NATO	North Atlantic Treaty Organization
NGO(s)	Non-governmental organization(s)
NMC	National Material Capabilities
NSC-68	National Security Council Report 68
OAS	Organization of American States
OECD	Organization for Economic Cooperation and Development
OEEC	Organization for European Economic Cooperation
PAIGC	African Party for the Independence of Guinea and Cape Verde
PRC	People's Republic of China
ROC	Republic of China
SALT I	Strategic Arms Limitation Talk Agreement
SEATO	Southeast Asia Treaty Organization
SIPRI	Stockholm International Peace Research Institute
SOUD	System of Joint Acquisition of Enemy Data
SPSS	IBM SPSS Statistics or Statistical Package for the Social Sciences
Stasi	Ministry for State Security
TNC(s)	Transnational corporation(s)
UCDP	Uppsala Conflict Data Program
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNRRA	United Nations Relief and Rehabilitation Administration
UNSC	United Nations Security Council
US	United States of America or United States
US AID	US Agency for International Development
USSR	Union of Soviet Socialist Republics or Soviet Union
USD	United States dollar
WB	World Bank
WWI	First World War
WWII	Second World War

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Chapter 1 Introduction

1.1 Background

Global politics has a daily impact on the lives of people around the world: political forces and decisions affect not only pattern of international trade and investment as noted by Robert O. Keohane,[1] but also touch upon other spheres of life, such as the environment, sports, culture, and religion. In a globalized world, people have become closer to global political issues: intensification of linkages across political boundaries, acceleration of the pace of global interactions and processes, and increasing speed of sharing ideas, information, technology, and capital around the world greatly affect nation-states, as they are required to adapt to new challenges and to continue defending their people's core values, namely security, freedom, order, justice, and welfare.[2] Furthermore, in a globalized world, states are often affected by domestic processes occurring in other countries since borders between countries are increasingly becoming transparent.[3]

To understand and explain particular patterns of actors' behavior in global politics, it is necessary to study international systems as the highest level of analysis, since states exist within international systems. As Kenneth N. Waltz points out, systems are significant elements in the study of IR because the systems theory analyzes e forces at the international level and therefore can explain "why changes at the unit level produce less change of outcomes than one would expect in the absence of systemic constraints."[4] Furthermore, a thorough analysis of the circumstances that preceded the establishment and development of today's system contribute to a better understanding of contemporary events. Over the last century, the international system arguably suffered major changes: the first one occurred with the transition from multipolarity to bipolarity[5] after the end of the Second World War

[1] Robert O. Keohane, "Realism, Neorealism and the Study of World Politics," in *Neorealism and Its Critics*, ed. Robert O. Keohane (New York: Columbia University Press, 1986), 1.
[2] "Is it worth studying International Relations today?" *Global Matters*, January 27, 2015, http://www.global-matters.org/2015/01/why-study-international-relations/.
[3] Janet Ceglowski, "Has Globalization Created a Borderless World," *Business Review*, no. March (2000): 17-18.
[4] Kenneth N. Waltz, *Theory of International Politics* (Reading, Massachusetts: Addison-Wesley Pub. Co., 1979), 69-71.
[5] Some scholars disagree about the CW's bipolar nature, and they argue that since the 1970s the structure at the system or subsystem level on the contrary was tripolar. See: Jörn Dosch, "The United States in the Asia-Pacific," in *The New Global Politics of the Asia Pacific*, ed. Michael K Connors, Rémy Davison, and Jörn Dosch (London; New York: Routledge, 2004), 12.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

(WWII), followed by unipolarity with the collapse of the Soviet Union (USSR) as one of superpowers.[6]

Today, the world faces China's rise and its acquisition of great-power status; however, there is no consensus on defining and explaining the current system and its ongoing transformations. Scholars have proposed several possibilities for future changes: one, China dissatisfied with the current international order led by the United States (US), will try to overturn the existing dominant position of the United States and replace it as the sole superpower. The second option for China is to build a strategic alliance with other great powers for counterbalancing the United States, thereby creating a multipolar order. Finally, a third possibility would be the recognition of China as a second superpower along with the United States and therefore, bipolarity would reappear.[7] The last prediction naturally leads to comparisons with the Cold War (CW), which has been a bipolar system reference so far.[8] Therefore, the current transformations of the international system lead scholars to revisit the theory of international systems and, in particular, to empirically test the bipolarity hypothesis for the CW period, in order to let modern scholars draw conclusions on a possible contemporary shift toward bipolarity, as proposed by some.[9]

However, the CW itself is a complex and controversial period of world history. First, its timeframe and origins arouse many debates among historians.[10] Second, several scholars disagree about the CW bipolarity: They argue that since the 1970s, the system's structure changed from bipolar to tripolar.[11] Other scholars emphasize tripolarity at the subsystem level. These contradictory arguments lead to the main question of this study: was the CW international system bipolar, as commonly accepted? This dissertation attempts to address this question by operationalizing the definition of an *international system* and by empirically outlining its boundaries and measuring polarity during the CW. In particular, this study

[6] There is no consensus whether the United States is the only superpower and whether the world today remains unipolar. Some scholars argue that we witness the transition period to bipolarity or multipolarity while others believe that the United States will maintain its dominance. This discussion is described later in the following section.

[7] Øystein Tunsjø, *The Return of Bipolarity in World Politics: China, the United States, and Geostructural Realism* (New York: Columbia University Press, 2018); Judy Dempsey, "The United States and China: The Return of a Bipolar World," *Carnegie Europe* (2012), http://carnegieeurope.eu/strategiceurope/?fa=49969.

[8] Randall L. Schweller and Xiaoyu Pu, "After Unipolarity: China's Visions of International Order in an Era of U.S. Decline," *International Security* 36, no. 1 (2011); Xuetong Yan, "Why a Bipolar World Is More Likely Than a Unipolar or Multipolar One," *The Huffington Post*, 22 April 2015; Dempsey 2012.

[9] Tunsjø 2018; Dempsey 2012.

[10] In details, the debate is later described in Section 1.2.4.

[11] Robert S. Ross, ed. *China, the United States, and the Soviet Union: Tripolarity and Policy Making in the Cold War* (Armonk, N.Y.: ME Sharpe, 1993).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

provides an alternative perspective and hypothesizes that the CW system was not bipolar but rather composed of two coexisting unipolar systems, led by the United States and the Soviet Union, respectively. Furthermore, this study contributes to the discussion on the question of international systems' stability.

The research subject aroused in this dissertation is likely to cause some confusion; therefore, the research motives should first be elaborated. First, as stated above, China's rise leads the question of the future of the international system in terms of its polarity and stability, in particular whether the current system will transform into bipolar or multipolar. Then, if the system transforms into bipolar, then will it be different from the CW? This question motivated me to analyze the CW period. The second motivation was the personal impression of the CW. The Soviet people had a perception that they lived in a world different from the capitalist one, and they were separated from each other.[12] The mentality of the 'Soviet person' greatly differs from the others.[13] Therefore, this study attempts to provide an objective analysis of the CW period by taking a critical approach with respect to former studies.

1.2 Literature review

Although seminal studies of IR, such as Morton A. Kaplan's *System and Process in International Politics* or Waltz's *Theory of International Politics*, provide definitions and conceptualizations of international systems as well as prediction in terms of stability and peace, I argue here that the fundamental topic of *international system* has still not been comprehensively studied. Moreover, the definitions are sometimes contradictory and more often not operationalized and tested.[14]This subchapter examines the existing scholarship on international systems in three sections: in Section 1.2.1, I provide a detailed narrative on diverse approaches to define and characterize international systems, from the standpoint of main IR theories, such as realism, liberalism, and constructivism. In Section 1.2.2, I offer an analysis of various typologies of international systems. Then, in Section 1.2.3, I summarize the ongoing discussion on correlation between the system's types and stability. Finally,

[12] Andrey Kolganov and Alexander Buzgalin, *10 Mifov ob SSSR* [10 Myths about the USSR], (Moscow: Yauza; Eksmo, 2010), 330-371.
[13] Lev Gudkov, "Povest' o Sovetskom Cheloveke" [Story about a Soviet person], *Vedomosti*, December 28, 2016, https://www.vedomosti.ru/opinion/articles/2016/12/28/671519-povest-o-sovetskom; "Chto Takoe "Sovetskiy Chelovek"" [What is the 'Soviet Person'], *Argument*, March 8, 2016, http://argumentua.com/stati/chto-takoe-sovetskii-chelovek.
[14] Michael P. Marks, *Metaphors in International Relations Theory* (New York: Palgrave Macmillan, 2011), 35.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Section 1.2.4 reviews the perspectives on the existing international system during the CW period.

1.2.1 International systems: diverse definitions

In the 1960s, the interest toward the study of international systems increased. But as Stanley Hoffmann noted, "its [international system's] decentralization makes … its existence problematical, and to place its limits in time and space is a largely academic decision based on one's selection of key variables:" the concept of international systems was presented as an abstraction, far from real politics, the main purpose of which was "to help understand concrete historical realities." The international system in this regard is worth studying because "not merely the relations among nations, but the relations among abstractions can be held to summarize the relations among nations."[15] Hoffmann's observations contributed to a deeper understanding of the structure and functions of international systems; however, he did not develop them into a single, unified theory.[16]

One of the first researchers to theorize international systems was Kaplan. In his view, a *system* in general or a "system of action" is elaborately defined as "a set of variables so related, in contradistinction to its environment, that describable behavioral regularities characterize the internal relationships of the variables to each other and the external relationships of the set of individual variables to combinations of external variables."[17] As for international systems, he proposed the following characteristics: (1) the essential rules of the system, (2) the transformation rules, (3) the actor classificatory variables, (4) the capability of variables, and (5) the information variables.[18] However, he did not draw a line between an international system and its environment, and his definition, to my understanding, has not been operationalized until now.[19]

Through the critique of earlier analyses, Waltz in the 1970s formulated his own definition of international systems, which became commonly accepted by many theorists. By comparing domestic and international systems, Waltz defined a system as a compound of a

[15] Stanley Hoffmann, *Gulliver's Troubles, or the Setting of American Foreign Policy*, 1st ed. (New York: McGraw-Hill, 1968), 11-12.
[16] Waltz 1979, 43-49.
[17] Morton A. Kaplan, *System and Process in International Politics* (New York: Robert E. Krieger Pub. Co., 1975), 4.
[18] Ibid., 9.
[19] A more detailed critique to Kaplan's definition see: Waltz 1979, 50-59.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

structure and interacting *units*.[20] Using this definition, he developed a system theory that revised classical realism into 'structural realism' or neorealism. One of the key differences between classical realism and neorealism lies in the roots of international conflict: for the former, wars are caused by imperfect human nature, while for the latter wars derive from anarchic international systems.[21] Therefore, neorealists identify international systems as "decentralized and anarchic."[22] Waltz believes that "international-political systems, like economic markets, are individualist in essence, spontaneously generated, and unintended." Systems for him are "formed and maintained on a principle of self-help that applies to the units," the main purpose of which is to "ensure their survival."[23] Moreover, states within systems are also driven by a desire to guarantee their survival and maintain their sovereignty in an anarchical and uncertain environment: states "think strategically about how to survive in the international system. States are instrumentally rational."[24] The depiction Waltz gives of international systems so far is, in different degrees, accepted by the realist school of IR, as well as other schools of thought.[25]

Proponents of liberalism[26] have not challenged the existence of systemic forces in world politics and have actually incorporated a system level analysis into their own theories. Due to the anarchic nature of international systems, however, and in order to sustain stability, liberalist scholars argue that states elaborate and abide by international rules. They also argue that the establishment of international institutions can facilitate international stability. Therefore, international organizations, such as the Conference on Security and Cooperation in Europe (CSCE) or the *ad hoc* conference-based Concert of Europe in the 19th century became best examples of and "the only means through which nation-states can cope with an anarchic and conflict-prone [international] system."[27]

[20] Ibid., 79.
[21] The two classical works on this subject are Hans J. Morgenthau's *Politics Among Nations: The Struggle International for Power and Peace* and Kenneth N. Waltz's *Theory of International Politics*.
[22] Waltz 1979, 88.
[23] Ibid., 91.
[24] John J. Mearsheimer, "The False Promise of International Institutions," *International Security* 19, no. 3 (1994-1995): 10.
[25] John J. Mearsheimer, "Back to the Future: Instability in Europe after the Cold War," *International Security* 15, no. 1 (1990); John Gerard Ruggie, "Continuity and Transformation in the World Polity: Toward a Neorealist Synthesis," *World Politics* 35, no. 2 (1983); Keohane 1986.
[26] Liberalism includes various approaches, such as liberal institutionalism, collective security theory, economic interdependence, etc.
[27] Charles A. Kupchan and Clifford A. Kupchan, "Concerts, Collective Security, and the Future of Europe," *International Security* 16, no. 1 (1991): 116. For the detailed analysis and arguments relating to the Concert of Europe, see essay of Richard Elrod: Richard B. Elrod, "The Concert of Europe: A Fresh Look at an International System," *World Politics* 28, no. 2 (1976).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Many constructivist scholars have also accepted that international systems are anarchic by nature,[28] although they emphasize the transformation of the international system into a 'world society' where "norms of trust and sharing" play a guiding role with the ultimate goal of creating a "peace system."[29] Despite acceptance of the idea of anarchy, which is fundamental to the definition of systems, they pay attention to identities and identity-formation, highlighting that Waltz's characterization of the system as 'self-help' is not complete and features of systems are not always selfish, but instead depend on 'positive' or 'negative' identification of own security *vs.* others'.[30]

Overall, among scholars from different schools, realists are especially interested in a system's nature and its rules of operation. In particular, structural realists have analyzed the systemic forces shaping certain patterns of actors' behavior. In this regard, Waltz's definition seems to be the most adapted and comprehensive.

1.2.2 International systems: different typologies

Kaplan was the first to propose a complete typology of international systems, however, the most common typology of systems today is mainly based on the number of poles within a system.

Kaplan designated six main types of international system or more accurately six "states of equilibrium of one ultrastable international system," namely: the '*balance of power*' *system*, the *loose bipolar system*, the *tight bipolar system*, the *universal system*, the *hierarchical system* (in directive and non-directive forms), and the *unit veto system*.[31] These six kinds are different from each other in terms of their essential rules of functioning. According to Kaplan, system rules "describe general relations between the actors of a system or which assign definite systemic role functions to actors independently of the labeling of the

[28] However, not everyone shares the same vision of international system's nature. Some scholars view the international system as "an emerging superorganism," in which states can "work together to identify, manage and combat threats lying outside the system's boundaries," and therefore contest the realist worldview on anarchy. See: Sebastien Mainville, "The International System and Its Environment: Modern Evolutionary, Physiological and Developmental Perspectives on Change in World Politics" (Doctoral dissertation, Ohio State University, 2016), 5, 60.

[29] For more detailed analysis of constructivist thoughts and their critiques, see: Alexander Wendt, "Why a World State Is Inevitable," *European Journal of International Relations* 9, no. 4 (2003); Richard K. Ashley, "The Poverty of Neorealism," *International Organization* 38, no. 2 (1984); Markus Fischer, "Feudal Europe, 800-1300: Communal Discourse and Conflictual Practices," *International Organization* 46, no. 2 (1992); Mearsheimer 1994-1995.

[30] Alexander Wendt, "Anarchy Is What States Make of It: The Social Construction of Power Politics," *International Organization* 46, no. 2 (1992): 399-400.

[31] Kaplan 1975, 21.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

actors."[32] However, his classification seems to be abstruse: some types, such as the universal system and the unit veto system, have no physical examples in world history. Kaplan's typology for systems corresponds well to a commonly known polarity-based classification: the 'balance of power' system shares similar features with multipolarity, then the loose/tight bipolar systems both fall into the bipolar system category, and finally the hierarchical system can be considered as unipolar.

Before turning to the polarity-based typology, (i.e., unipolar, bipolar, and multipolar systems), I summarize definitions proposed for a *pole*. G. John Ikenberry and colleagues adopt a simple definition based on pole's capabilities: a *pole* is an extremely capable state, "whose overall share of capabilities places it unambiguously in a class by itself compared to all other states."[33] Waltz however offers a more comprehensive definition, which focuses on accumulation of national power. A *pole* is a state that uses its combined capabilities to serve its interests, and whose capabilities excel other states in all of the elements of state capabilities, including "size of population and territory, resource endowment, economic capability, military strength, political stability and competence."[34]

Therefore, in *unipolar* systems a single state – *unipole* – controls a disproportionate share of resources or capabilities of the system. Due to this distribution, the unipole faces no rival equal to it; therefore, its security cannot be threatened by others, unlike in bipolarity, where two poles or superpowers pose a fundamental threat to each other.[35] For example, after the Soviet breakup, the international system has gained a "unipolar moment", as one state, the United States, reached unprecedented power.[36]

A *bipolar system* is a system with two poles or superpowers. The CW system, established after the end of WWII and lasting until the Soviet Union's collapse, is usually classified as bipolar with two superpowers –the United States and the USSR.[37] With the US

[32] Ibid., 9.
[33] G. John Ikenberry, Michael Mastanduno, and William C. Wohlforth, "Introduction: Unipolarity, State Behavior, and Systemic Consequences," in *International Relations Theory and the Consequences of Unipolarity*, ed. G. John Ikenberry, Michael Mastanduno, and William C. Wohlforth (Cambridge: Cambridge University Press, 2011), 6.
[34] Waltz 1979, 131.
[35] Stephen M. Walt, "Alliances in a Unipolar World," in *International Relations Theory and the Consequences of Unipolarity*, ed. G. John Ikenberry, Michael Mastanduno, and William C. Wohlforth (Cambridge: Cambridge University Press, 2011), 105-106; Robert Jervis, "Unipolarity: A Structural Perspective," ibid, 254-257.
[36] Christopher Layne, "The Unipolar Illusion: Why New Great Powers Will Rise," *International Security* 17, no. 4 (1993): 7; Charles Krauthammer, "The Unipolar Moment," *Foreign Affairs* 70, no. 1 (1990).
[37] William C. Wohlforth, "The Stability of a Unipolar World," *International Security* 24, no. 1 (1999): 5.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

decline and China's rise, some scholars argue that we may soon witness a bipolar world again.[38]

Multipolarity, on the contrary, involves a larger number of great powers. It is generally accepted that the multipolar world existed before WWII with numerous poles – Great Britain, France, Russia, Germany, the United States, Japan, the Austro-Hungarian Empire, and the Ottoman Empire.[39] Today several scholars challenge the possibility of returning to bipolarity; rather they propose a shift back to a multipolar world.[40]

Finally, mixed types have also been proposed. For example, Samuel P. Huntington introduced a *uni-multipolar system* that includes one superpower, few major powers, and secondary regional powers. In this case, the single superpower is required to collaborate with other major powers in terms of decision-making on key international issues.[41] Richard N. Rosecrance proposed another intermediate type – *bi-multipolarity*, in which interests of main actors, great powers and regional powers, "would be partially opposed and partially harmonious," thus reducing the limitations of bipolarity and multipolarity.[42] On the other hand, Aaron L. Friedberg elaborated an alternative vision: *multi-multipolarity* incorporates "a set of regional subsystems, in which clusters of contiguous states interact mainly with one another," and thus multi-multipolarity is distinguishable from other types (unipolarity and multipolarity).[43] His concept represents a new trend of development toward "regional multipolarity," which emphasizes the importance of regional development over global interactions.

Besides polarity, the system can also be characterized by its size. Huntington proposed a typology based on geography, which includes regional and secondary regional powers. Thus, a system can be specified along its geographical scope or number of actors. The idea of a *global system* or *regional systems* follows this line of reasoning. For example, according to Barry Buzan and Richard Little, the European regional system expanded through voyages and new sea routes across the Atlantic and Pacific oceans, by which the

[38] Yan 2015.
[39] Richard Oliver Collin and Pamela L. Martin, *An Introduction to World Politics: Conflict and Consensus on a Small Planet* (Lanham, Md.: Rowman & Littlefield Publishers, 2013), 151.
[40] Barry R. Posen, "Emerging Multipolarity: Why Should We Care?," *Current History* 108, no. 721 (2009): 347; Fareed Zakaria, *The Post-American World* (New York; London: W. W. Norton & Company, 2008), 218.
[41] Samuel P. Huntington, "The Lonely Superpower," *Foreign Affairs* 78, no. 2 (1999): 36.
[42] Richard N. Rosecrance, "Bipolarity, Multipolarity, and the Future," *The Journal of Conflict Resolution* 10, no. 3 (1966): 322.
[43] Aaron L. Friedberg, "Ripe for Rivalry: Prospects for Peace in a Multipolar Asia," *International Security* 18, no. 3 (1993-1994): 5-6.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

process of establishing the global system started.[44] With globalization, some scholars see regional systems as subsystems of a global system.[45]

1.2.3 International systems: correlation between typology and stability

This section discusses the correlation between typologies of international systems and stability. It explains why the typology is important to study: First, as scholars point out, the typology affects the stability of an international system, or in other words, the absence or existence of wars between countries. Second, the typology also explains states' policies with respect to poles. Therefore, the theorization of international systems may predict the future of IR; in particular, whether it brings stability or not. In this regard, Section 1.2.3.1 first examines definitions of stability, and then Section 1.2.3.2 summarizes the debates on the association between typology and stability.

1.2.3.1 Stability: Several definitions

The existence of different types of international systems inevitably raises the question of the system's stability as well as the prediction of peace.[46] A first approach by Kaplan defines stability as "the ability of the system to find a stable equilibrium," where "[t]he *stable equilibrium* is the equilibrium that fluctuates within given limits."[47] However, this approach is rather hypothetical and has yet to be tested empirically. A more common definition of stability emphasizes the level of conflict / durability and peacefulness[48] as essential features. However, because a total absence of conflicts has never been enjoyed throughout world history so far, the last approach appears more appropriate: Stability is not defined by a lack of conflict, but rather by the absence of structural changes within an existing system. For neorealists, who mostly accept the following definition, a *structural change* "is a revolution,

[44] Barry Buzan and Richard Little, *International Systems in World History: Remaking the Study of International Relations* (New York: Oxford University Press, 2000), 241-242.
[45] Romano Romani, "Introduction," in *The International Political System: Introduction & Readings*, ed. Romano Romani (New York: John Wiley & Sons, 1972), 27; Friedberg 1993-1994, 5.
[46] Some historians on the contrary argue that the theories are not able to forecast the future changes due to the complexity of variables and restriction of controlling conditions. See the critics on IR theories and their ability to predict the future: John Lewis Gaddis, "International Relations Theory and the End of the Cold War," *International Security* 17, no. 3 (1992).
[47] Kaplan 1975, 6-7.
[48] Duration and the level of conflict are not clarified, e.g. what level of conflict brings instability or any armed conflict between members (even smaller nations) makes the system unstable. For Wohlforth, peacefulness mostly comprises the absence of "hegemonic rivalry over leadership." Friedberg 1993-1994, 8; Wohlforth 1999, 7-8.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

whether or not violently produced" due to a new distribution of power among interacting units or changes in structure.[49] In the words of Karl W. Deutsch and J. David Singer, stability is "the probability that the system retains all of its essential characteristics; … that most of its members continue to survive; and that large-scale war does not occur."[50] Another neorealist, Robert G. Gilpin, emphasizes the importance of cost-benefit calculations when states consider changes to the system; equilibrium can be reached if major powers are satisfied with the existing system's organization.[51] In other words, the system should be considered stable if any conflicts among members or any of their actions do not lead to changes in the distribution of capabilities among its main players. This definition is utilized in this study.

1.2.3.2 Stability of international systems

There have been debates among scholars about which type of international system upholds stability. These discussions more or less followed the historical events of the last century and can be classified by the periods of their emergence. I review these stages of discussion one by one: first, classical realism and its predilection towards multipolar stability, then neorealism favoring bipolarity, followed by two more recent approaches: one of which favors unipolarity and another one that rejects stability *in toto*.

Addressing the emergence of debates on stability among IR scholars, classical realists presented in the 1960s a first perspective on stability of systems. They regarded multipolarity as the most stable system. Hans J. Morgenthau assumes that a smaller number of actors has a deteriorating effect on the balance of power, as it diminishes flexibility and uncertainty within the system, and as a result, creates a "restraining effect upon the nations actively engaged in the struggle for power." [52]

> The greater the number of active players, the greater the number of possible combinations and the greater also the uncertainty as to the combinations that will actually oppose each other … the extreme flexibility of the balance of power resulting from the utter unreliability of alliances made it imperative for all players to be cautious in their moves on the chessboard of international politics and, since risks were hard to calculate, compelled them to take as small risks as possible.

[49] Waltz 1979, 70.
[50] Karl W. Deutsch and J. David Singer, "Multipolar Power Systems and International Stability," *World Politics* 16, no. 3 (1964): 390.
[51] Robert G. Gilpin, *War and Change in World Politics* (Cambridge; New York: Cambridge University Press, 1981), 11.
[52] Hans J. Morgenthau, *Politics among Nations: The Struggle for Power and Peace*, 5th ed. (New York: Alfred A. Knopf, 1973), 339-340.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

During the CW, the superpowers maximized their power within their blocs and therefore a traditional alliance system that had maintained the balance of power until then vanished. As a smaller number of actors reduced a range of possible interactions, instability of bipolarity appeared to be significantly greater.[53] This "inflexible balance of power" created by only two main actors was expected to bring instability to the system. "[U]ncommitted and unwillingly committed nations" such as China and France were supposed to turn themselves into independent nuclear powers, and thus challenge the existing system and transform it back into a more stable, multipolar one.[54] In other words, the possibility of breakup could come from inside the blocs (in this case China and France). On the other hand, instability might also emerge from the rivalry between the blocs, which is described as "the primitive spectacle of two giants eying each other with watchful suspicion. … [t]hus, contain or … be contained, conquer or be conquered, destroy or to be destroyed, becomes the watchwords of the new diplomacy."[55] Overall, classical realists argued that the instability of a bipolar system might originate from inside each bloc or from the competition between blocs and subsequently led to its transformation into multipolarity.

A decade later, the emergence of neorealism brought a critique to classical realist assumptions and introduced a new outlook on international systems' structure: with expansion and intensification of the CW, the new paradigm favored bipolar systems with respect to their stability.[56] According to neorealists, multipolarity brings more uncertainty and less flexibility in relations between great powers, and since a deterrence effect is greater in bipolar systems, "miscalculations of relative power and of opponents' resolve are fewer and less likely."[57] Multipolarity, in contrast, because of its many actors, appears to be more unstable. Waltz and other neorealists, such as John J. Mearsheimer, assert that for stability, "smaller is better … two is best of small numbers."[58] Waltz points out four stabilizing factors: the absence of peripheries, the range and intensity of the competition between superpowers, the presence of pressure and the recurrence of crises, and the preponderant power of both the

[53] The research compares two types of systems and concludes that although both systems have potential to be unstable, bipolarity tends to be less stable. See: Deutsch and Singer 1964, 404.
[54] Morgenthau 1973, 351.
[55] Ibid., 342, 351-353.
[56] Beside Waltz, there are many other opponents of multipolar stability among scholars, e.g. Mearsheimer and Friedberg. See: Mearsheimer 1990; Aaron L. Friedberg 1993-1994.
[57] John J. Mearsheimer 1990, 14.
[58] Waltz 1979, 161.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

United States and the Soviet Union, all of which contributed to the stability of CW bipolarity.[59]

> "They frighten us with war," he [Khrushchev] told the Bulgarians in May of 1962, "and we frighten them back bit by bit. They threaten us with nuclear arms and we tell them: 'Listen, now only fools can do this, because we have them too, and they are not smaller than yours but, we think, even better than yours. So why do you do foolish things and frighten us?' This is the situation, and this is why we consider the situation to be good."

The disintegration of the Soviet Union disclosed a new era in IR and reignited the debate on stability, this time bringing a unipolar system into view. First, neorealists such as Christopher Layne disregard unipolarity, considering it an "illusion" or "moment" that "will give way to multipolarity."[60] From their perspective, unipolarity is the least stable system, since a unipole concentrates unbalanced power and as a result "some states try to increase their own strength or they ally with others to bring the international distribution of power into balance." [61] Layne provided three "leash-slipping" cases, which display attempts to counterbalance against US hegemony, and concluded that any successful attempts of these competing states would end unipolarity and bring back multipolarity.[62]

However, not all realist scholars share the same vision. William C. Wohlforth argues the contrary, that unipolarity is "not only peaceful but durable." As a superpower does not face hegemonic rivalry and is able to exploit "the other states' security dependence as well as its unilateral power advantages," it can maintain stability of the existing system. [63] Furthermore, an alliance system created by the unipole further promotes peace and durability of unipolarity. For him, the unipolarity established after the collapse of the USSR was characterized by the US greater engagement. In addition, the system's stability depends on the effectiveness of the superpower, also called a *hegemon,* to react to various systemic forces and incentives, and thus to provide order.[64] Along the same line of thought, smaller countries in the unipolar system have less incentive to create a counter-balancing coalition against the pole rather tend to bandwagon with the hegemon.[65]

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[59] These factors and the difference between multipolarity and bipolarity are in detail analyzed in the Waltz's article "The Stability of a Bipolar World." See: Kenneth N. Waltz, "The Stability of a Bipolar World," *Daedalus* 93, no. 3 (1964).
[60] Layne 1993, 7.
[61] Kenneth N. Waltz, "Structural Realism after the Cold War," *International Security* 25, no. 1 (2000): 27-28.
[62] Christopher Layne, "The Unipolar Illusion Revisited: The Coming End of the United States' Unipolar Moment," *International Security* 31, no. 2 (2006): 7.
[63] William C. Wohlforth, "The Stability of a Unipolar World," *International Security* 24, no. 1 (1999): 8, 23-25.
[64] Ibid., 8.
[65] Walt 2011, 111-112.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Some scholarships ascribe the stability of unipolarity to different factors, such as the global nature of the contemporary system because the current system differs from other historical examples of unipolar systems such as the Indic and Far Eastern systems.[66] Others emphasize the difference in the structure of the system: the United States created a "liberal international order – that is, an order that was open and loosely rule based. It was a liberal hegemonic order." The pole offers public goods, economic benefits, and services, and thereby creates a "mutual aid society." As a result, rising powers have fewer incentives to challenge the hegemon, but they rather work within the extant order; therefore, unipolarity can last long.[67]

China's rise in the 21st century reignited the debate on the stability of unipolarity. Some scholars, such as Ikenberry, argue that the current system is unipolar and it is not only different but also durable and stable due to the liberal and democratic nature of the international order established by the United States. Stephen G. Brooks and Wohlforth also suggest that although China can potentially become a superpower, the United States will long remain the single superpower, since the gap between these two states is enormous so far.[68] However, Layne points to the fact that the United States is not different from past hegemons,[69] and the world nowadays is facing a transition toward bipolarity or multipolarity, with the United States and China at the center of global politics.[70] China, India, and Brazil are predicted to grow quickly and contest the US supremacy in economic and military areas. The costs of US efforts to maintain order are higher than benefits, and rising powers will endeavor to enhance their positions and advance their own interests at the time of the US relative decline.[71] Finally, the neorealist approach manifested in Friedberg's idea, maintaining that "the basic trend toward bipolarity should become even more pronounced over the next

[66] David Wilkinson, "Unipolarity without Hegemony," *International Studies Review* 1, no. 2 (1999): 145.
[67] G. John Ikenberry, "Liberal Sources of American Unipolarity," in *International Relations Theory and Consequences of Unipolarity*, ed. G. John Ikenberry, Michael Mastanduno, and William C. Wohlforth (Cambridge: Cambridge University Press, 2011), 251.
[68] Stephen G. Brooks and William C. Wohlforth, "The Rise and Fall of the Great Powers in the Twenty-First Century: China's Rise and the Fate of America's Global Position," *International Security* 40, no. 3 (2015/16): 53.
[69] Layne 2006, 20.
[70] Another perspective is presented in Schweller and Pu's article; the current unipolarity will be replaced by nonpolarity. See: Schweller and Pu 2011.
[71] Barry R. Posen, "From Unipolarity to Multipolarity: Transition in Sight?," in *International Relations Theory and the Consequences of Unipolarity*, ed. G. John Ikenberry, Michael Mastanduno, and William C. Wohlforth (Cambridge: Cambridge University Press, 2011), 340-341.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

several decades" with the global rise of China;[72] and the US-China system will eventually become bipolar.[73]

The rise of China also invited the upsurge of the alternative, that the current unipolar system is non-stable. Friedberg argues that no system itself is stable, but non-structural factors, such as the wisdom of leaders, correct alliance policies, shared war memories, and the existence of recognized international rules of behavior, all may have an impact on stability.[74] Gilpin also considers systemic changes as inevitable; constant changes in redistribution of power in system occur and can result either in peaceful adjustment of the international system, or in hegemonic wars, which in their turn create a new equilibrium.[75]

1.2.4 Cold War system

This section is devoted to the international system that existed during the CW period. It is an unprecedented era in world history due to numerous factors, which, according to many historians, has shaped the international system after the end of WWII, namely: "great power rivalries, changes in the technology of warfare, trans-national ideological conflict, reform and reconstruction of the world capitalist system, and movements of national liberation."[76] However, some scholarship puts the Soviet-West, and more specifically Soviet-US, relations at the center of the CW period due to a high level of tension, hostility, and competition.[77]

Many historians argue that the CW started right after the end of WWII or few years later due to the Soviet occupation of Eastern and Central European countries and intensifying mistrust between the Soviet Union and the West.[78] The CW period roughly started in 1947 with antagonistic policies of the United States and the Soviet Union. On the one hand, US President Harry Truman announced his doctrine and provided support to Greece and Turkey

[72] Friedberg analyzes this tendency in the context of the East Asian subsystem; however, basic assumptions of realism should be applicable to the global extent as well. See: Aaron L. Friedberg, "The Future of U.S.-China Relations: Is Conflict Inevitable?," *International Security* 30, no. 2 (2005): 28.
[73] Dempsey 2012.
[74] Friedberg 1993-1994, 10.
[75] See the more detailed analysis on the cycle of change in Gilpin's *War and Change in World Politics.* Visit, Gilpin 1981, 11-15.
[76] David S. Painter and Melvyn P. Leffler, "Introduction: The International System and the Origins of the Cold War," in *Origins of the Cold War: An International History*, ed. Melvyn P. Leffler and David S. Painter (New York: Routledge, 2005), 12.
[77] Geoffrey K. Roberts, *The Soviet Union in World Politics: Coexistence, Revolution, and Cold War, 1945-1991* (London; New York: Routledge, 1999), 2.
[78] Robert A. Pollard, *Economic Security and the Origins of the Cold War, 1945-1950* (New York: Columbia University Press, 1985); Roberts 1999; Painter and Leffler 2005.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

against the communist movements within those countries, followed by the Marshall Plan, which offered economic aid to European countries. On the other hand, Joseph Stalin, the USSR's leader, abandoned the alliance with the West and adopted the CW perspective outlined in the Andrei Zhdanov's 'two-camps' speech at the founding conference of the Communist Information Bureau (Cominform) in September 1947.[79] Therefore, in 1947 it was clear that the CW had started and Europe was divided into two parts led by the United States and the Soviet Union, respectively.[80] Some scholars on the contrary argue that the CW started earlier, since the United States and the Soviet Union became dominant on the world scene from 1943 onwards.[81] Another perspective presented by Ronald E. Powaski viewed the CW as a struggle between the two great powers with "fundamentally incompatible" ideologies; therefore, he argued the CW started after the Bolshevik Revolution and Lenin's rise to power.[82]

Regarding the end of the CW, some scholars argue that a series of democratic revolutions of 1989 in the Soviet bloc overthrew the communist regimes in these countries and thus ended the CW.[83] Other experts consider 1991 as the final year of the CW due to the end of the Warsaw Pact in February and the following dissolution of the Soviet Union in December 1991. The collapse of the Soviet Union can be explained by structural factors: first, the structure of the USSR's economy was that of a planned economy, which became stagnated in the 1970s.[84] Second, the United States built a special relationship with its allies, and Moscow posed itself as the only financial donor and provider of public goods for Eastern European countries.[85] Third, the Kremlin had a large defense budget and military expenditures, including the expenses for the Soviet-Afghan war.[86] The changing structure of global production had changed and since the Soviet Union was out of this chain of production,

[79] Geoffrey K. Roberts, "Stalin and Soviet Foreign Policy," in *Origins of the Cold War: An International History*, ed. David S. Painter and Melvyn P. Leffler (New York: Routledge, 2005), 44.
[80] David Holloway, "Stalin and the Bomb," ibid, 77.
[81] Martin McCauley, *Origins of the Cold War, 1941-1949*, 3rd ed. (Harlow, England; New York: Pearson Longman, 2008), 105.
[82] Ronald E. Powaski, *The Cold War: The United States and the Soviet Union, 1917-1991* (New York: Oxford University Press, 1998), 1.
[83] Francis Fukuyama, "The End of History?," *The National Interest*, no. 16 (1989); "The Cold War (1945–1989)," *CVCE* (2016), http://www.cvce.eu/content/publication/2011/11/21/6dfe06ed-4790-48a4-8968-855e90593185/publishable_en.pdf.
[84] Richard Sakwa, *The Rise and Fall of the Soviet Union 1917-1991*, 2nd ed. (London; New York: Routledge, 2005), 339-340; Vladislav M. Zubok, *A Failed Empire: The Soviet Union in the Cold War from Stalin to Gorbachev* (Chapel Hill: University of North Carolina Press, 2009), 299-300.
[85] Yang Li and Xiaojing Zhang, *Imbalance and Rebalance: To Create a New Framework of Global Governance* (Singapore: China Social Science Press, Springer, 2017), 18.
[86] Valerie Bunce, "The Soviet Union under Gorbachev: Ending Stalinism and Ending the Cold War," *International Journal* 46, no. 2 (1991): 226; Zubok 2009, 299.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

its economy lagged behind the Western powers, who benefitted the faster speed of the technological progress.[87] Vladimir Zubok however emphasizes the role of the leader's personality in world history; in particular, he argues that if Mikhail Gorbachev did not implement reforms in the second half of the 1980s, the Soviet Union would have existed longer.[88]

With respect to the characterization of this period, the generally accepted approach is to describe this period as a bipolar global system with two antagonistic powers – the United States and the Soviet Union.[89] These two superpowers established and nurtured the economic and financial organizations in order to support their allies. In addition, the two superpowers created military alliances: the North Atlantic Treaty Organization (NATO) along with other regional alliances such as the Inter-American Treaty of Reciprocal Assistance (or Rio Pact), the Australia, New Zealand, United States Security Treaty (ANZUS), the Southeast Asia Treaty Organization (SEATO), the Central Treaty Organization (CENTO) on the one hand, and the Warsaw Pact on the other hand. This confrontation in different parts of the world created a "bipolar balance" (at least in the short run) and, as a result, encouraged the parties to develop weapons of considerable destructive power. Under these circumstances, the countries were locked in strategic deterrence, which played a role of "a powerful but very dangerous medicine" and thus secured the status quo between the superpowers.[90]

The status quo did not prevent main actors from engaging military conflicts in different regions, the Asia-Pacific, Africa, and Latin America in particular. For example, the Cuban missile crisis displayed a dangerous possibility of direct confrontation that would end up in a third world war or a nuclear war with mutual destruction.[91] Although the superpowers were not directly involved in military conflicts with each other, except the Cuban missile crisis, they provided various means to support different regimes against the other superpower.[92]

[87] Stephen G. Brooks and William C. Wohlforth, "Power, Globalization, and the End of the Cold War: Reevaluating a Landmark Case for Ideas," *International Security* 25, no. 3 (2000/2001).
[88] Zubok 2009, 307-308.
[89] Waltz 1964; Gaddis 1992.
[90] Richard Ned Lebow and Janice Gross Stein, "Deterrence and the Cold War," *Political Science Quarterly* 110, no. 2 (1995): 180.
[91] Jan Eichler, *War, Peace and International Security: From Sarajevo to Crimea* (London: Palgrave Macmillan, 2017), 98-99; John Young and John Kent, *International Relations since 1945: A Global History*, 2nd ed. (Oxford: Oxford University Press, 2013), 170-173.
[92] Walter LaFeber, *America, Russia and the Cold War, 1945-1980*, 4th ed. (New York: Alfred A. Knopf, 1980).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Besides hostile relations between the superpowers, the CW period was also characterized by decolonization, which led to numerous military conflicts between colonial powers and colonies (e.g. Afghan War, First Indochina War, Angolan War of Independence, etc.) and between former colonies (Indo-Pakistani conflict, Second Indochina War, Swaziland-South Africa territorial dispute, etc.). Intensification of the hostility between the superpowers greatly influenced the newly emerged nations in the Third World or Global South, which faced a dilemma to choose a side between the United States and the Soviet Union, symbols of ideologically incompatible capitalist and communist systems, respectively.[93] Some Third World nations responded to this reality by creating the Non-Aligned Movement (NAM), an institute whose goal to stay away from the superpowers' rivalry.[94]

1.2.5 Summary

Altogether, the literature review above indicated that the concept of international systems offers a non-exhaustive list of definitions. The review also finds that the idea of an international system is intimately associated with stability and with war and peace. However, the variety of definitions provided for international systems and their multiple characteristics in terms of the number of poles, geographies, and sizes, challenges the validity of stability predictions made so far. For example, whether or not the system is unipolar, bipolar or multipolar remains controversial and one can hardly draw conclusions about the stability of a system that is not clearly defined.

One of the clearest examples is the CW system, which is considered bipolar, but there is no consensus as to whether it was stable or not. The existence of two antagonistic sides in the CW brought a certain level of stability;[95] however, this argument has remained disputable.[96] Bipolarity of the CW system comes from the assumption that the system has been global and reflects the Western thinking, which views the international system to expand with colonization and, consequently, become global.[97] In this regard, the CW period turned to be the most recent and one of the most well-researched examples of international

[93] LaFeber 1980, 173.
[94] Janick Marina Schaufelbuehl et al., "Non-Alignment, the Third Force, or Fence-Sitting: Independent Pathways in the Cold War," *The International History Review* 37, no. 5 (2015): 903.
[95] Waltz 1964: 882-883.
[96] The debate on stability of different international systems is provided in the Section 1.2.3.2.
[97] Waltz 1964: 882; Buzan and Little 2000, 241-242.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

systems, at the same time, one of the most controversial subjects in IR that has caused numerous debates up to now.

1.3 Research questions and hypotheses

The literature review has demonstrated a lack of clear definitions that could present a holistic view on international systems. This situation leads to debates on the nature and mechanisms of functioning. Although Waltz has so far provided the most influential theory on international system, some of his conclusions are questionable.[98] For example, some scholars found his argument that economic interdependence in multipolarity prior to the First World War (WWI) was higher than during the bipolarity has been deemed controversial by some scholars.[99] Furthermore, bipolarity, according to Waltz, was supposed to be the most stable type of system; however, unlike multipolarity, which survived major wars between the great powers, it only lasted four decades.[100] His main conclusions regarding bipolarity derived from his theory are opposite to other neorealists who consider bipolarity as less stable and durable. Furthermore, the neorealist theory did not clearly explain the fall of the Soviet Union and the demise of the Soviet bloc.[101]

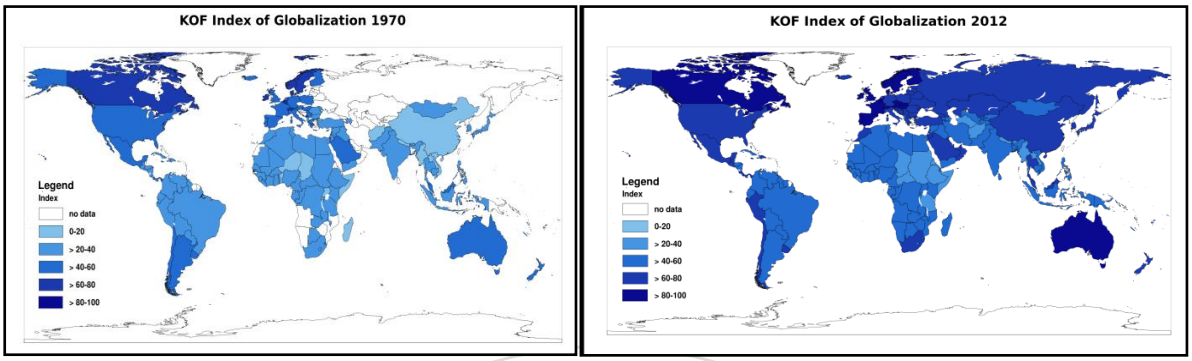
The contradictions in neorealists' assumptions stated above seem to exist inasmuch as they view the international system since WWII as being single and global. Due to the fact that Waltz defines a system through units' interactions, the world can be defined as a unique and single global system, only if it is fully globalized in terms of interstate interactions. However, today's studies demonstrate that the world has not fully globalized yet, so *a fortiori* could not be global during the CW. The data of the KOF Index of Globalization covering the period from 1970 to 2015 shows that the level of globalization increased from 39.66 to 60.94 points out of 100 in the given period.[102] Yet, the pace of globalization was not equal for individual countries, and in 1970, globalization did not touch the Soviet countries (Map 1.1). In other words, the Soviet countries were not integrated due to limited interactions between

[98] Adam R. C. Humphreys, "Kenneth Waltz and the Limits of Explanatory Theory in International Relations" (Doctoral dissertation, University of Oxford, 2007), 371.
[99] Ruggie 1983, 269-270.
[100] Kenneth N. Waltz, "The Emerging Structure of International Politics," *International Security* 18, no. 2 (1993): 45.
[101] Rey Koslowski and Friedrich V. Kratochwil, "Understanding Change in International Politics: The Soviet Empire's Demise and the International System," *International Organization* 48, no. 2 (1994): 215-216.
[102] Axel Dreher, "Does Globalization Affect Growth? Evidence from a New Index of Globalization," *Applied Economics* 38, no. 10 (2006); "KOF Globalization Index," KOF Swiss Economic Institute, https://www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

the West and the Soviet countries. This can be explained by the existence of multiple international systems.

Map 1.1 Comparison of the world of 1970 and 2012 using the KOF Index of Globalization



Source: Axel Dreher 2006, 1091-1110.

Barry Buzan and Richard Little analyzed the history of pre-international and international systems and argued that multiple international systems have existed for the largest part of world history.[103] This argument raises a question as to whether the CW system was global, as assumed by Waltz and other scholars, or the world was better represented during the CW as two international systems: i.e. a US-led system and a Soviet system. To look at it from this perspective, the world was separated not into two antagonistic blocs within a single international system, but rather it was divided into two international systems that were self-sustaining and had limited interactions between them. While one system collapsed in 1991, the second one maintained its existence. This assumption of two coexisting international systems is a central argument of this dissertation. Through a comparison of two systems, the reasons behind the stability of one and the instability of the other one can also be analyzed: since the two systems were unipolar and did not experience any wars between the systems, I assume that a structural change could come from within the system or derive from interactions between the systems. For this purpose, I bring the examples of coexisting multiple international systems in world history, which have very limited, almost absent interactions between them. Finally, after analyzing the CW period, I answer the research question set in this dissertation: Whether during the CW period there were two coexisting international systems: the US-led system and the USSR-led system.

Summing up the above discussions, I propose the following hypotheses:

[103] Buzan and Little 2000, 163-166.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

H1: After WWII, the world was made up of two international systems: US-led and Soviet.

H2: The US-led system was unipolar. It continues to exist today.

H3: The Soviet system was unipolar. It collapsed with the breakup of the Soviet Union.

H4: The higher level of interactions between systems brings instability.[104] In other words, the more dependent one system is, the more likely it is to collapse.

1.4 Significance of the research

In IR theory, the system level of analysis is probably one of the least studied. Although it was touched upon in a number of grand masterpieces written decades ago, there is no consensus on many key definitions and characteristics of systems. Consequently, one can notice inconsistencies or a lack of clarity in the vocabulary used. However, it is undoubtedly important to conduct thorough research on international systems as it provides explanations for particular patterns of actors' behavior.

Unlike much scholarship focusing on the state or intrastate level, the present research concentrates on international systems theories, systems' main features, and aspects of stability. Therefore, the given study not only systematizes existing knowledge on international systems, but more importantly, tests them by comparing existing international systems in ancient times and the CW era. It also offers a different interpretation of neorealist theory of international systems by clarifying Waltz's definition of the *international system* itself. The research also contributes to IR theory by using innovative ways to operationalize neorealist descriptions of international systems and provide novel methods to test system-level assumptions, in particular to determine the international system's boundaries, using a multi-level analysis of interactions between states.

In addition, the study provides an alternative vision of the CW era as not being a reference example of bipolarity but rather a modern example of two unipolar coexisting systems. By doing so, the study attempts to solve the puzzle of why bipolarity as defined by Waltz lasted only four decades and interprets the Soviet system's collapse through an interaction analysis. Furthermore, this study attempts to mitigate the critique that IR is

[104] In this research, the system is considered stable until any conflicts among members, or any actions, lead to changes in the distribution of capabilities among the system's major actors.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Western-dominated,[105] by providing an alternative that incorporates the Soviet view in testing a key IR theory. Finally, the thesis attempts to offer analysis and predictions regarding the current system, its features, and in particular its stability.

1.5 Theoretical framework

The main framework used in this research is based on Waltz's *Theory of International Relations.* This theory conceptualizes political systems, national and international, as well as forces influencing them. Waltz's theoretical paradigm is so far one of the most influential among IR theories. His main assumptions have not been challenged yet: (a) the international system by nature is anarchic; [106] (b) the states[107] in the system are rational and driven by a desire to survive; (c) states are never certain of others' intentions; (d) the states enjoy military capabilities, which make them "potentially dangerous to each other."[108] The above neorealist assumptions determined my decision to use neorealism as a theoretical framework for conducting research on international systems, with *states* as a unit of analysis.

With respect to the definition, for neorealists, "[a] *system*[109] is composed of a *structure* and interacting *units*. The structure is the system-wide component that makes it possible to think of the system as a whole."[110] Therefore, it is important to define properly *structure* and *units*. Characterizing political structures in general, which include domestic and international as examples of "centralized and hierarchical" and "decentralized and anarchic" respectively, Waltz provides the following definition:[111]

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[105] Amitav Acharya and Barry Buzan, "Why Is There No Non-Western International Relations Theory? Ten Years On," *International Relations of the Asia-Pacific* 17 no. 3 (2017): 342; Barry Buzan and Richard Little, "The Idea of "International System": Theory Meets History," *International Political Science Review* 15, no. 3 (1994): 234-236.

[106] Anarchy is a key term in explaining operation of international system; it implies equality between states and a lack of central authority over them, "no government over governments." Unlike classical realists, neorealists see the reasons in anarchy of international system, which is visualized as "a brutal arena, where states look for opportunities to take advantage of each other and therefore have little reason to trust each other." See: Mearsheimer 1994-1995, 9-10.

[107] In this research, I use the *state*'s definition and the number of states defined and operationalized by the Correlates of War project. See: Correlates of War Project (COW), 2011, "State System Membership List, v2011," http://correlatesofwar.org.

[108] There are two sub-branches of neorealism, defensive realism and offensive realism, both argue that states attempt to ensure their survival, but offensive realism diverges from defensive realism with respect to the accumulation of power states need to possess and the strategy they pursue for that purpose. Mearsheimer 1994-1995, 10-12.

[109] Prior to Waltz's analysis, Romani elaborated a systemic approach to international systems and distinguished four components: *actors*, *structure*, *processes*, and *environment,* which are slightly different from those in the Waltz's definition. See: Romani 1972, 18.

[110] Waltz 1979, 79.

[111] Ibid., 100-101.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

> Structures are defined, first, according to the principle by which a system is ordered. Systems are transformed if one ordering principle replaces another. To move from an anarchic to a hierarchical realm is to move from one system to another. Structures are defined, second, by the specification of functions of differentiated units. Hierarchic systems change if functions are differently defined and allotted. For anarchic systems, criterion of systems change derived from the second part of the definition drops out since the system is composed of like units. Structures are defined, third, by the distribution of capabilities across units. Changes in this distribution are changes of system whether the system be an anarchic or hierarchical one.

By removing the characteristics of domestic structures, the definition of international political structures becomes the following: An *international political structure* includes the following ordering principles: anarchy, self-help (applicable to system and units as well), survival as a motive for units, and structural constraints of the system. Distribution of capabilities across states is not equal; it is a key factor in determining the structure of the system and consequently its stability.[112] As Waltz notes, while capabilities are units' attributes, the distribution of capabilities across units is a system-wide concept.[113] A change in capabilities' distribution leads to structural changes and hence to systems' stability. Within the structure, units are states, which are so far dominant actors[114] on the international arena and differ from each other in terms of their capabilities. States are ranked with respect to assessment of power through a comparison of their own capabilities with others'.[115]

Now, the definition of the international system used for this research reads as follows: Since the international system consists of the structure and interacting units. The *international system* is characterized by, on the one hand, ordering principles and distribution of capabilities across units and, on the other hand, units with different ranges of capabilities that interact with each other. Figure 1.1 schematically shows the units of different sizes interact with each other within the structure (arrows represent systemic forces, not operationalized here).[116]

[112] The structural change comes with changes in the distribution of capabilities across the system's units. See: ibid., 97.
[113] Ibid., 98.
[114] Since the 1970s some theories have incorporated transnational organizations (governmental and non-governmental), multinational corporations, international media, subunits (provinces, cities) etc. as non-state international actors that participate or act in international relations. However, classical and structural realists consider (and will in the future) states as dominant actors, therefore I focus only on states as main actors. See: Amitav Acharya, "Theoretical Perspectives on International Relations in Asia," in *International Relations of Asia*, ed. David Shambaugh and Michael Yahuda (Lanham: Rowman and Littlefield Publishers, 2008), 59.
[115] Waltz 1979, 97-98.
[116] Figure 1.1 is a modified version of Waltz's Figure 5.2. See: Ibid., 100.

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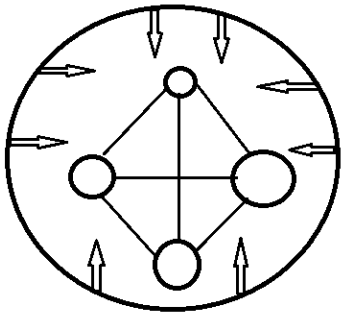

Figure 1.1 The structure and interacting units

The next step is to clarify what are the units and their levels of interactions. In line with Waltz, the *units* considered for the analysis are states. States' interactions form the structure. Although interstate interactions are a unit-level component,[117] Waltz omits the analysis of the level of interactions and rather focuses on capabilities as units' attributes to define the distribution of capabilities and count the number of poles.[118] However, sociologists, such as Talcott Parsons, argue that interactions between actors are crucially important to form a *social system*. Through interactions, he argues, actors develop common meanings of signs and symbols, which serve as a means of communication between them. After these symbols are developed into 'symbolic systems,' systematic interactions of various individual actors compose the social system.[119] This system formation leads us to realize the importance of systematic interactions, i.e. their intensity along with regularity. Furthermore, "the ability of states to create and communicate mutually credible military threats … generates a systemic relationship."[120] For the reasons discussed above, I incorporate interactions in this analysis.

In sum, this thesis proposes an approach to analyze the organization of the international system, as illustrated in Figure 1.2, where *units' analysis* involves the evaluation of capabilities, *structure analysis* relates to the ordering principles and the distribution of capabilities across units, *interaction analysis* is the estimation of intensity and regularity of interactions among units, and finally, *system's analysis* summarizes combined inferences regarding the system.

[117] Kenneth N. Waltz, "Political Structures," in *The Realism Reader*, ed. Colin Elman and Michael Jensen (Milton Park, Abingdon, Oxon; New York: Routledge, 2014), 103-112.
[118] Waltz views interactions as interdependence and argues that in any international system its extent varies. See: Waltz 1979, 146.
[119] Talcott Parsons, *The Social System* (Abingdon: Routledge, 2013), Chapter 1.
[120] Buzan and Little 2000, 80.

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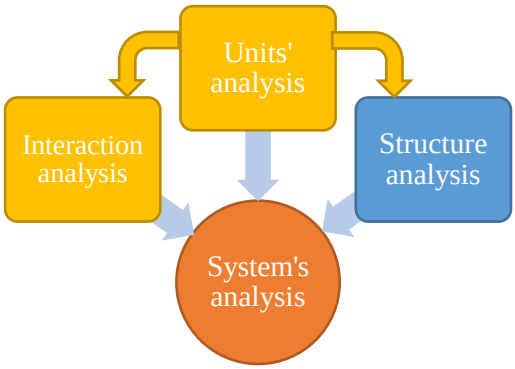


Figure 1.2 Compound analysis based on organization of international systems

The next subchapter focuses on operationalization of the constituent elements of international systems: units' analysis, structure analysis, and interaction analysis.

1.6 Methodology

This subchapter discusses the operationalization of the international systems' definition (Section 1.6.1), timeframe of this research (Section 1.6.2), research methods employed in this study (Section 1.6.3), and limitations (Section 1.6.4).

1.6.1 Operationalization

Based on the theoretical framework presented in the previous subchapter, operationalization of the international system's definition consists of measuring units' *interactions*[121] and their *capabilities*. The first question that arises is how to measure the level of interactions[122] among units. As one possible solution, Buzan and Little propose to measure *interaction capacity*, which defines what units *can* do, rather than what they *actually* do.[123] However, interaction capacity is a measure of *possible* interaction that cannot be easily operationalized. In addition, it does not explain why some states interact less than others do. Therefore, an alternative measurement is needed. I propose here to measure *actual* states' interactions between units by sectors: units' interactions include economic, political, and military exchanges between countries (Table 1.1), since neorealism focuses on these three

[121] Since an *interaction* is a broad term that can be applied to any exchange between two or more individuals or groups. Visit, "Understanding Social Interaction," *Boundless Sociology*, https://courses.lumenlearning.com/boundless-sociology/chapter/understanding-social-interaction/. However, in this research, a *regular interaction* is considered as an interaction, based on Charles Tilly's definition, which emphasizes the regularity of interactions "to that degree that their interaction affects the behavior of each state." Visit, Charles Tilly, *Coercion, Capital, and European States, AD 990-1992* (Cambridge: Blackwell, 1992), 162.
[122] The level of interactions imply their intensity with regularity.
[123] Buzan and Little 2000, 80.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

aspects of interstate relations.[124] States' interactions outline the system's boundaries: a high level of interactions would imply that the countries belong to the same system. The indicators in Table 1.1 are chosen due to availability of statistical data with respect to major countries within the given period. Second, bilateral trade, participation in international governmental organizations (IGOs) and alliances, military conflicts and arms transfers represent major economic, political, and military exchanges between countries.

After defining the geographic borderlines of the system, the next step is to measure countries' capabilities and their distribution in order to determine how many poles are in the system.[125] Waltz proposes that states "use their combined capabilities in order to serve their interests," and as a result, "economic, military, and other capabilities of nations cannot be sectored and separately weighed." However, in order to rank states, he proposed to measure their capabilities in the following items: "size of population and territory, resource endowment, economic capability, military strength, political stability, and competence."[126] However, the indicators, such as resource endowment, political stability, and competence, could not be measured easily. Later theorists provided other measurement items, for example, the Gross Domestic Product (GDP), public debt, defense expenditures, and gross domestic expenditures on R&D, dividing them into economic, military, and science and technology indicators.[127] In this research, in order to measure countries' capabilities, I use the two measures, GDP[128] and Composite Index of National Capabilities (CINC).[129] Through a comparison of the states' capabilities, we can observe the distribution of capabilities and conclude whether the system is unipolar, bipolar, or multipolar. Therefore, a main difference between unipolar, bipolar, and multipolar systems derives mainly from the distribution of major powers' capabilities.

[124] Robert G. Gilpin, "The Richness of the Tradition of Political Realism," in *Neorealism and Its Critics*, ed. Robert O. Keohane (New York: Columbia University Press, 1986), 308-313.
[125] Waltz did not clarify how to count poles, saying that only "common sense can answer it." Waltz 1979, 131.
[126] Ibid.
[127] Ikenberry, Mastanduno, and Wohlforth 2011, 5-11; Posen 2011, 320-327.
[128] I use the historical GDP, PPP, calculated based on 1990 international Geary-Khamis dollars.
[129] The CINC integrates six indicators of economic and military capabilities: namely size of total population, size of urban population, military personnel, military expenditures, primary energy consumption, and iron and steel production. Visit, "National Material Capabilities (v5.0)," *The Correlates of War Project*, http://cow.dss.ucdavis.edu/data-sets/national-material-capabilities.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Table 1.1 Sectors and items of measuring units' capabilities and interactions

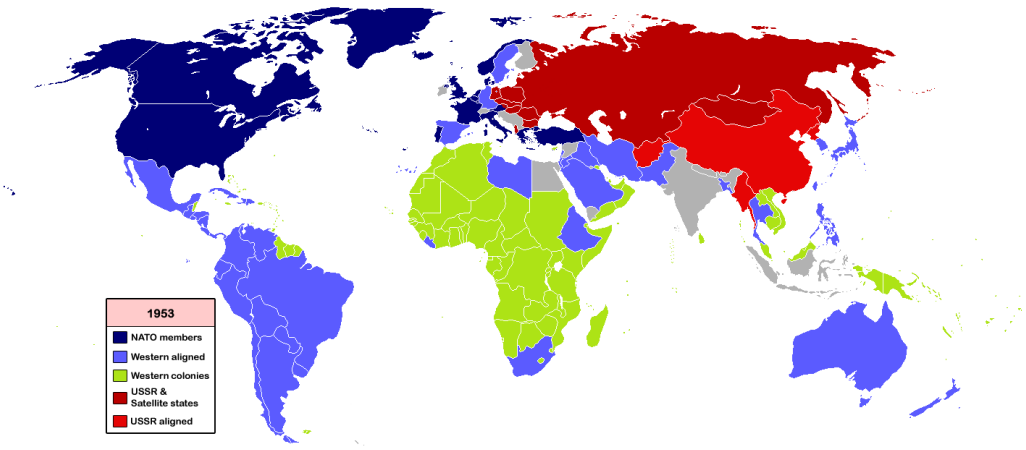
Sectors[130]	Indicators of units' capabilities	Indicators of units' interactions
Economic	Size of total population[1] Size of urban population[1] Energy consumption[1] Iron and steel and production[1] GDP, PPP	Bilateral trade Foreign aid
Political		Participation in alliances Participation in international governmental organizations Participation in non-governmental organizations Party-to-party interactions
Military	Military personnel[1] Military expenditures[1]	Military conflicts Arms transfers Military aid

Note: [1] These indicators are part of the CINC measure.

In summary, the two indicators – states' interactions indicating geographic boundaries of the system and distribution of countries' capabilities determining the polarity – are measured in this study. The ordering principles of the structure are constant and in line with Waltz's original definition. Therefore, by assessing these two elements of the system, it is possible to conduct the system's analysis and test the research hypotheses.

In the CW period, I expect to observe two international systems: US-led and Soviet, with limited interactions between them (H1). I expect to find results similar to those described in Map 1.2, which schematically illustrates political and military interactions in 1953.

Map 1.2 The world map during the Cold War



Note: The Soviet system is marked in red and the US-system in blue, while those not included in any system are painted in grey and the green-marked are Western colonies of that time.
Source: Mosedschurte, *Cold War World Map.* 1953. 2009, Digital Image. Available from: Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Cold_War_WorldMap_1953.png.

[130] Although the boundaries between sectors are vague and make up the whole, they are required for better conceptualization but in reality. Therefore, this research uses sectors for analyzing interactions.

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Then, after measuring the capabilities, I predict the structure of both systems to be unipolar as hypothesized in H2 and H3. Finally, I analyze the interactions between the two systems in order to examine the instability of a more dependent system (H4). I expect to obtain the same result after an analysis of ancient international systems.

1.6.2 Timeframe

Although there is no consensus on the beginning of the CW,[131] the given research roughly covers the CW period from 1947 to 1991. The year 1947 was determined by the antagonistic policies of the Soviet and Western leaders toward each other. On the one hand, US President Harry Truman announced his doctrine and provided support to Greece and Turkey against the communist movements within those countries, followed by the Marshall Plan, which offered economic aid to European countries. On the other hand, the USSR's leader Joseph Stalin abandoned the alliance with the West and adopted the CW perspective outlined in the Andrei Zhdanov's 'two-camps' speech at the founding conference of the Communist Information Bureau (Cominform) in September 1947.[132] Therefore, in 1947 it was clear that the CW had started and Europe was divided into two parts led by the United States and the Soviet Union respectively.[133] Furthermore, this division was accepted by the great powers.[134] With the dissolution of the Soviet Union as a superpower of the Soviet system, the CW ended in 1991.

1.6.3 Research methods

In order to answer the research question, I apply a historical approach, which combines quantitative and qualitative methods for the data analysis. The combined methods allow discovering patterns in international system's development in the ancient times and the CW period.[135]

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[131] Some historians, such as Powaski, view the CW as a struggle between the two great powers with "fundamentally incompatible" ideologies, therefore for Powaski the CW started after the Bolshevik Revolution and Lenin's rise to power. However, others consider the end of WWII as the beginning of the CW due to the Soviet occupation of Eastern and Central European countries and intensifying mistrust between the Soviet Union and the West. See: Powaski 1998, 1.
[132] Roberts 2005, 44.
[133] Holloway 2005, 77.
[134] John Lewis Gaddis, *The Long Peace: Inquiries into the History of the Cold War* (New York: Oxford University Press, 1987), 57.
[135] Earl R. Babbie, *The Practice of Social Research*, 12th ed. (Belmont, CA: Cengage Learning, 2010), 360.

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In the first step, I analyze ancient international systems according to my hypotheses. The ancient Mediterranean, East Asian, and Indic systems exemplify coexisting international systems with different level of interactions among them. First, I measure interactions between actors to outline geographical boundaries. Then, I examine actors' capabilities for defining the structure of the systems. Then, I assess the level of interactions between the systems and analyze their stability. This part is based on the prior studies done by different historians, archaeologists, etc.

In the next step, I take the CW period as a case for analysis, and I first measure the level of interactions among independent states to outline geographical boundaries of the system. Second, I review states' capabilities in order to estimate the polarity and to classify the system. Finally, I review the interactions between the systems to analyze their stability. The analysis of the CW period allows me to review main characteristics of the present international system and potential directions that it may take with respect to the interactions among its major units.

For conducting thorough research, collecting accurate data is crucially important. Since a part of my dissertation focuses on units' capabilities and their interactions, I use statistical documents and additional information issued by governments and international institutions, as well as other secondary data sources, such as previous studies, historical data, and databases created by the Correlates of War (COW) project, Maddison Project, and Stockholm International Peace Research Institute (SIPRI).

All collected data is analyzed by applying quantitative and qualitative methods. As for quantitative methods, using different databases on economic, political, and military interactions, I select the similar years to conduct an analysis and run an exploratory cluster analysis: the cluster analysis is a statistical tool that combines countries into "homogenous clusters by merging them together one at a time in a series of sequential steps."[136] Then, I analyze the level of interactions between the created clusters and represent the results in a heatmap, with a higher level of interactions indicated in darker colors and a figure, representing a relative closeness of each cluster with respect to the Soviet and the West systems. This method is described in more detail in Section 3.1 to account for economic interactions, in Section 4.1 for political interactions, and in Section 5.1 for military interactions. As for qualitative methods, I use historical descriptions to systematize and apply

[136] Odilia Yim and Kylee T. Ramdeen, "Hierarchical Cluster Analysis: Comparison of Three Linkage Measures and Application to Psychological Data," *The Quantitative Methods for Psychology* 11, no. 1 (2015): 9.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

the results obtained through quantitative analysis to historical facts in order to provide an alternative vision of world politics in the ancient times and during the CW period.

1.6.4 Limitations of study

Although this research was carefully prepared, I am still aware of its limitations and shortcomings. First, the research is based on the review of historical data, which is not always available: for example, the specific geopolitical environment during the research years limited the availability of national data recorded by international organizations, such as International Monetary Fund (IMF), World Bank (WB), or the United Nations (UN). Second, I use databases, which to some extent lack available and verified data: some information is found missing or incorrect. To deal with these issues I used additional source of information such as Russian and Western archives and prior research to validate the data.

As my goal is to operationalize definitions and concepts, the some of the items to measure units' capabilities, such as resource endowment, political stability, and competence, are hard to operationalize. Therefore, I subjectively selected the measures, which are easier to assess and examine quantitatively. My subjectivism is based on the availability of databases and statistical data covering the vast majority of the countries within the CW period.

This study analyzes general features of the CW international systems. It does not study enough data points (years) to analyze the evolution of international system and its cycle of development. The future studies could particularly focus on this aspect of the CW international systems and generalize to the international system's cycle of development, starting from the establishment to the collapse. In addition, the future research could also further elaborate the impact of decolonization on the CW international systems, in particular, the role of the NAM in the increasing interactions between the systems.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Chapter 2 Historical examples of international systems

World history provides a number of examples of international systems existed long before the Westphalian nation-states.[1] This chapter systematizes the knowledge on ancient international systems and their interactions. As discussed in the previous chapter, an *international system* comprises of interacting units and the system's structure in which units interplay.[2] This definition matches the David Wilkinson's definition of *civilizations,*[3] in which he emphasizes *connectedness* as a main feature of civilizations. Wilkinson argues that "[o]n a connectedness criterion, cities whose people are interacting intensely, significantly, continuously, … belong to the same civilization, even if their cultures are very dissimilar and their interactions mostly hostile."[4] According to him, history is linear and the ancient civilizations have merged into one single global civilization, so-called 'Central Civilization.'[5] Figure 2.1 presents the integration of world civilizations into the Central Civilization.[6]

[1] Buzan and Little 1994, 239.
[2] The international system's definition in details is discussed in Chapter 1.
[3] Approximately five thousand years ago, in the world appeared few centers of highly organized socio-political life called *civilizations.* A civilization comprises a combination of technological, socio-economic, political and ideological features. See: Josep R. Llobera, *An Invitation to Anthropology: The Structure, Evolution and Cultural Identity of Human Societies* (New York: Berghahn Books, 2003), 136-137.
[4] David Wilkinson, "Central Civilization," *Comparative Civilizations Review* 17, no. 17 (1987): 33.
[5] Ibid., 31.
[6] Ibid., 32.

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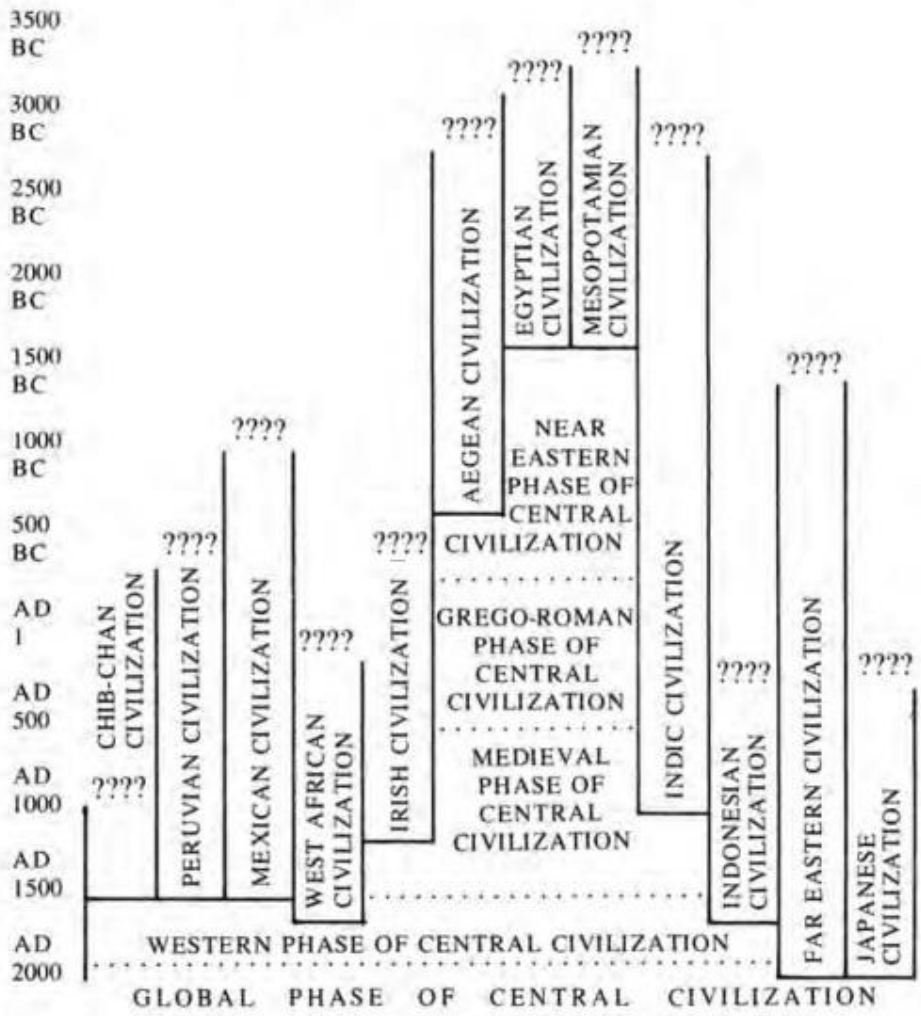


Figure 2.1 Mergence of twelve civilizations into Central Civilization according to Wilkinson

However, Wilkinson did not measure the connectedness between civilizations. He rather incorporated different civilizations into one system by using "the thinnest filaments of long-distance trade linking complex cultures. … [For him] the interaction itself would make … one civilization."[7] Nevertheless, his findings demonstrate that in the ancient world there were coexisting international systems, which were mostly regional or sub-regional.

Although not using the concept of civilization, this chapter analyzes the historical examples of international systems (or ancient systems) and their connectedness between each other. In this regard, I take Eurasian ancient systems as case studies for the analysis. The main goal of this introduction is to argue using historical examples that multiple international systems might have existed concurrently. Furthermore, these systems due to limited interactions between each other were self-sustainable and therefore I can observe reasons of changes in capability distribution, which leads to structural changes. The simultaneous

[7] Lawrence Birken, "What Is Western Civilization?," *The History Teacher* 25, no. 4 (1992): 452-453.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

existence of ancient systems leads us to look at other historical periods with the concept of coexisting international systems in mind. In this regard, the CW can be seen as a historical period in which the world was composed of two international systems with a certain level of interactions between them. The CW period is discussed in details in the subsequent chapters.

2.1 Ancient systems

The ancient world was composed of few independent international systems (or civilizations according to Wilkinson) that had limited interactions with other systems. Table 2.1 offers a brief description of the coexisting ancient systems in Eurasia, while omitting South American and African ones.

Table 2.1 Description of ancient systems in Eurasia

Name	Geographical region	Time	Units	Structure description
Mediterranean system	Mediterranean Sea	800–323 BC[8]	Greek and Phoenician city-states, Persian empire	Multipolarity
		338–323 BC	Macedonia, Greek city-states	Unipolarity
		323–146 BC	Roman Republic, Macedonia, Carthage, Seleucid Empire, Egypt, Greco-Bactrian Kingdom, Indo-Greek Kingdom	Multipolarity
	Mediterranean Sea, Europe	146 BC – 476 AD	Roman Empire, client states, tribes	Unipolarity
East Asian system	East Asia	656–221 BC	States, tribes	Multipolarity
		221 BC – 220 AD[9]	Qin, Han Empire, states, tribes	Unipolarity
		220 AD – 581 AD	Jin Empire, numerous states	Multipolarity
Indic system	South Asia	600–322 BC	States, tribes	Multipolarity
		322–185 BC	Mauryan Empire, states	Unipolarity
		185 BC – 320 AD	States	Multipolarity
		320–550 AD	Gupta Empire, states, tribes	Unipolarity

Note: J. K. Fairbank and S. Y. Teng (1941); Claudio Cioffi-Revilla and David Lai (2001); Robert M. Carmack 2013; Stuart J. Kaufman, Richard Little, and William C. Wohlforth (2007); Barry Buzan and Richard Little (2000).

According to the data presented in Table 2.1, in the Eurasian continent there were three coexisting international systems located in the Mediterranean, East Asian, and Indian

[8] Some scholars, like Peter Joachim Fliess, argue that the Athens-Sparta rivalry in the fifth century BC presents a historical example of bipolarity, although other researchers, such as Andre R. Novo, demonstrate that this rivalry was within the multipolar system. Visit, Peter Joachim Fliess, *Thucydides and the Politics of Bipolarity* (Baton Rouge, La.: Louisiana State University Press, 1966); Andrew R. Novo, "Where We Get Thucydides Wrong: The Fallacies of History's First "Hegemonic" War," *Diplomacy & Statecraft* 27, no. 1 (2016).

[9] Some scholars argue that bipolarity was established within the East Asian system in the period 198-133 BC. See: Hu Bo, "Gudai Dongya Guoji Guanxi Tixi De Zhaoshi" [The Beginning of the System of International Relations in Ancient East Asia], *Waijiao Pinglun*, no. 1 (2008); Lizhou Sun, "Xihan Shiqi Dongya Guoji Tixi De Liangji Geju Fenxi" [An Analysis of the Bipolar International System in East Asia during the Western Han Period], *Shijie Jingji Yu Zhengzhi*, no. 8 (2007).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

subcontinents. All of them occasionally experienced shifts between multipolarity to unipolarity.

The following sections discuss these three ancient systems: the multipolar and unipolar Mediterranean systems in Sections 2.1.1 and 2.1.2 respectively, the East Asian system in Section 2.1.3, and the Indic system in Section 2.1.4. In order to study each system, I first define units, analyze their interactions, and then measure their capabilities.[10] Finally, I review the literature on the level of interactions between the studied systems.

2.1.1 Mediterranean multipolarity

In the first millennium BC, the Mediterranean Sea gave the rise of small city-states, which were integrated through trade links, political alliances, and military campaigns. The Mediterranean system lasted approximately thirteen centuries and comprised the city-states, empires and other polities concentrated in the Mediterranean region.

The periodization described in Table 2.1 provides some indications of the geographic scope of the Mediterranean system. In the first period, main units were Phoenician and Greek city-states, which were in rivalry between each other and with the Persian Empire. The rise of Macedonia over other city-states and victory over Persians allowed it to gain the control over larger territories to the east. However, this period did not last long. With the death of Alexander the Great, parts of the collapsed Alexander's empire became independent, although kept a high level of interactions with each other within the Mediterranean system until the Roman Republic obtained domination over the region. The end of the multipolar Mediterranean system came with the expansion of the Roman Republic and the establishment of the Roman Empire.[11]

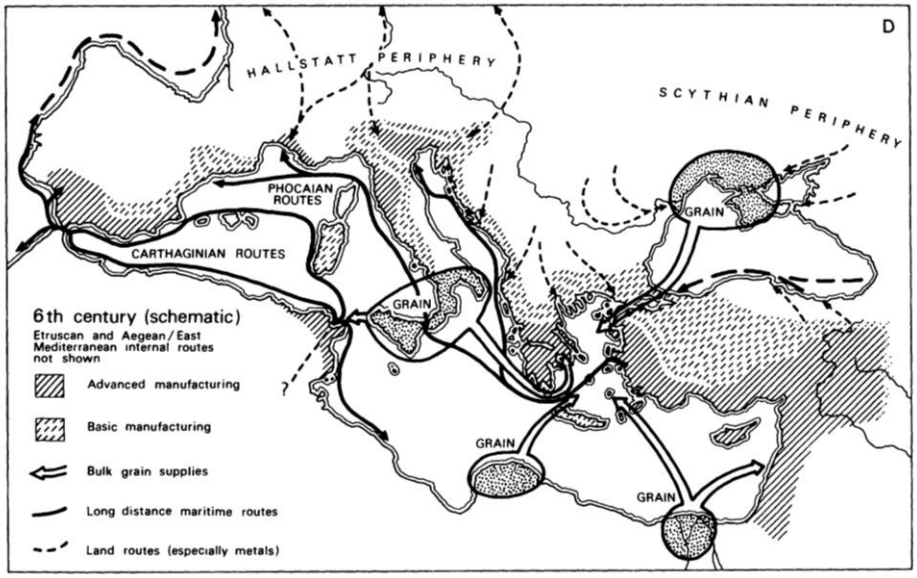
Within the Mediterranean system, the units were actively interacting economically. Maritime trade became critically important for survival and political autonomy for small polities in the Aegean time; however, earlier Greeks perceived commerce negatively, on the contrary, military earnings after warfare or plunder were considered as noble activities, and Phoenicians were the ones that mostly exercised trade in the region.[12] By the sixth century

[10] Theoretical framework and its operationalization discussed in the Sections 1.4 and 1.5.
[11] The Roman Empire can be considered as a unit within the international system, as well as the system itself. See: Buzan and Little 2000, 178. However, in this research the empire is seen as a single unit with central government and army.
[12] Philip D. Curtin, *Cross-Cultural Trade in World History* (Cambridge: Cambridge University Press, 1984), 75.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

BC, local maritime exchange cycles and long-distance trade routes were highly diversified (Map 2.1). Furthermore, the geographical proximity to the rich and developed Near East facilitated a rapid increase of maritime links between different areas of the Mediterranean Sea.[13]

Map 2.1 Development of Mediterranean maritime trade in the sixth century BC



Source: Susan and Andrew Sherratt 1993, 373.

The growing number of manufacturing centers across the sea brought the greater trade diversification: "agricultural and animal products from a large Levantine hinterland (grain, oil, honey, resin, wine, wool, sheep, goats, horses, mules), bronzework and slaves from Anatolia and the Aegean, metals from the far west and exotica from the Red Sea."[14] One of the trading centers of grain in the fourth century BC became Rhodes not only due to its advantageous geographical location but also because of its possession of merchant fleet, the ships of which were found in the harbors of Syria, Phoenicia, Cilicia and Pamphylia.[15] Rhodes was a connecting link between Greek cities and Egypt with the Black Sea, supplying the former with grain, while Athens exported olive oil, honey, pottery and similar manufactures, other parts of Greece – wine, Macedon – lumber and pitch, and Ionia – wine, oil and wool.[16]

[13] Susan Sherratt and Andrew Sherratt, "The Growth of the Mediterranean Economy in the Early First Millennium BC," *World Archaeology* 24, no. 3 (1993): 374-375.
[14] Ibid., 371.
[15] Lionel Casson, "The Grain Trade of the Hellenistic World," *Transactions and Proceedings of the American Philological Association* 85 (1954): 172.
[16] Ibid., 171.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Political interactions between the units were also diverse. Between Greek states in the fifth-fourth centuries BC, 250 treaties of friendship, of peace, or of alliance were signed.[17] Few times, Greek states even signed treaties of "general peace" in order to stop continuous warfare between themselves and their neighbors, but such treaties were often short-lived due to the fear of greater power's domination.[18] Although the treaties were often broken and the alliances dissolved, such attempts to regulate the inter-state relations were impressive. However, there were also efforts to solve disputes with the help of the third neutral party: around sixty of such cases are known in the period of 750-337 BC.[19] Besides the written forms of agreement, states to some extent followed informal codes of conduct, e.g., "protection of official envoys (and sometimes other resident aliens) from harm; not attacking neutral states during wartime; minimal protection of civilian population of the enemy under specific circumstances; and abiding by sworn treaties."[20]

Despite attempts of solving disputes peacefully, states were constantly in rivalry, which spilled over into military conflicts. Wars became part of cities' life and an important source of income for further growth and expansion. Plato described war as "always existing by nature between every Greek city-state."[21] In order to wage a war states joined coalitions: Greek city-states created a great number of different leagues for confederating the states and/or ensuring someone's supremacy. One of the earliest leagues created on the territory of ancient Greece was the Peloponnesian league, created in the sixth century BC to secure Sparta's domination. In the first half of the fifth century BC, another growing power – Athens – and its Delian league challenged Sparta's hegemonic position, which led to the Peloponnesian War (431-404 BC).

Overall, despite economic connectedness between different units of the Mediterranean system, their political relations can be characterized by a constant rivalry over power, which led to unstable alliances against the greater power and inter-state wars that disturbed the equilibrium in the region from time to time. The ordering principles – absence of central authority (i.e. anarchy), self-help, and quest for survival – determined the structure of the Mediterranean system.

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[17] Arthur M. Eckstein, *Mediterranean Anarchy, Interstate War, and the Rise of Rome* (Berkeley; Los Angeles; London: University of California Press, 2006), 38.
[18] Ibid., 41.
[19] Ibid., 40-41.
[20] Ibid., 38.
[21] Jackson J. Spielvogel, *Western Civilization: Volume I: To 1715*, 7th ed. (Boston: Cengage Learning, 2010), 60.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Furthermore, this system was also described by the struggle between a single major power and smaller players. Persia and Sparta successively obtained dominance over the region, which pushed Greek city-states to create coalitions against these stronger states; the standoff spilled over into the Peloponnesian War (431-404 BC) and the Corinthian War (395-387 BC). These two wars resulted into Sparta's short-lived supremacy and Persian increased influence in the region. Next, Macedonia rose from a small state to one of the largest empires in the world history by creating the League of Corinth and defeating rivals, such as Persia. The Macedonian rise changed the structure of the multipolar due to the redistribution of capabilities and the major powers' war. However, the Macedonian dominance did not last long and after the death of Alexander the Great, the Mediterranean system turned to be multipolar with a number of strong poles: Ptolemaic Kingdom, the Seleucid Empire, Macedonia, and Rome. Then, the rise of Rome significantly changed the system's structure: Roman expansion resulted in a series of wars with other powers in the region, after which Rome gained supremacy over the region and established another empire expanding its territory throughout the Mediterranean region, Europe, and the Near East.[22]

From the IR perspective, the Mediterranean system is arguably an *international system*, in which units are city-states or empires that desire to survive and ensure their own domination. Few major actors, appeared and disappeared over time, were the cornerstones of this multipolar system; the system was predominantly multipolar until the rise of Rome, which changed the structure to unipolar for six centuries. The interactions between actors intensified over time: production specializations among sub-regions and diversification of manufacturing centers enhanced the trade and tied the region with various trade routes. Political alliances, treaties, and numerous military conflicts represent regular and intensive political and military interactions between units. Due to the anarchic nature of international system, interactions between units were also characterized by the balance of power: the states enhanced their own aggregate capabilities and played a "game of alignment and realignment" to challenge the stronger power.[23] In this situation, the actors used two alliance strategies: "balance (ally in opposition to the principal source of danger) or bandwagon (ally with the state that poses the major threat)."[24] However, distribution of capabilities was changed and

[22] The Mediterranean unipolarity or Roman system is discussed in Section 2.1.2.
[23] Waltz 1979, 117-118.
[24] Stephen M. Walt, "Alliance Formation and the Balance of World Power," *International Security* 9, no. 4 (1985): 4.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

the system's structure shifted from multipolarity to unipolarity, which is discussed in the following section.

2.1.2 Mediterranean unipolarity or Roman system

When Rome was rising as a new power in the Mediterranean Sea, other great powers in the region started declining. After a series of wars in the third century BC, Rome defeated Carthage, one of the most important commercial centers in the region, which first became a Roman client state and then totally lost its independence in 146 BC. The same year Rome waged a war against the Achaean League and conquered Corinth. Since the second century BC, Rome steadily increased its influence in the Ptolemaic Kingdom of Egypt as well. Rome's triumphs over other great powers marked a new stage in the ancient Mediterranean history: establishment of a unipolar system led by Rome.[25] The year 146 BC can be considered a turning point as Rome became a unipole in the region after defeating its rivals. Since then, it geared its efforts towards expansionism and territory protection.

Rome created a tributary system under which independent units paid tributes to Rome for protection. For example, it is known that Lycia and other nominally "free" states started making financial contributions to Rome in the first century BC.[26] However, in 74 AD Lycia lost its sovereignty and became part of a Roman province along with Pamphylia under direct Roman control.[27] The same fate awaited other smaller actors in the region. Map 2.2 displays the approximate boundaries of the Roman system.

[25] Sarah Helen Davies, "Rome, International Power Relations, and 146 BCE" (Doctoral dissertation, University of Texas at Austin, 2012), 38-39.
[26] Hyla A. Troxell, *The Coinage of the Lycian League* (New York: American Numismatic Society, 1982), 117.
[27] Stephen Colvin, "Names in Hellenistic and Roman Lycia," in *The Greco-Roman East: Politics, Culture, Society*, ed. Stephen Colvin (New York: Cambridge University Press, 2004), 48.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Map 2.2 The Roman Empire under Augustus Caesar (31 BC –6 AD)

Note: Yellow: prior to 31 BC, Dark Green: 31–19 BC, Light Green: 19–9 BC, Pale Green: 9–6 BC, Pink – client states of Rome. Source: Cristiano64 - Lavoro proprio, self-made, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=2452303.

Roman expansion brought it close to numerous nomadic and semi-nomadic tribes, which inhabited the lands north and east of the Roman boundaries. Intensive interactions with these nomads allow us to incorporate them into the Roman system.

Through various political, economic and diplomatic tools, Rome administered its vast provinces and neighboring states like a unipole in the system. For example, the Marcomanni, kingdom north of the Danube, enjoyed a friendly relationship with Rome: King Maroboduus lived in Rome under the protection of Augustus in his youth and served in the Roman army. Besides close political ties, the Marcomanni had a trade agreement with Rome, under which "Roman traders were presumably granted safe-conduct in the area under his [Maroboduus] control and were perhaps also exempt from any taxes on their goods." It is nevertheless not clear whether it was a two-way agreement.[28]

Unlike the Mediterranean multipolar system, the Roman ancient system represents a unipolar system with the Roman Empire as a unipole surrounded by client states. It differs from the multipolar system in few aspects: absence of strong rivals able to challenge the Rome's dominance, the growing importance of nomadic tribes in international politics, and the Roman success to establish a stable system. This achievement was reached by a

[28] Lynn F. Pitts, "Relations between Rome and the German 'Kings' on the Middle Danube in the First to Fourth Centuries A.D," *The Journal of Roman Studies* 79 (1989): 46-47.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

combination of advanced military tactics and diverse economic and diplomatic tools. Nevertheless, the collapse of the Roman system came from inside: the Roman Empire collapsed due to different political, economic, military, and social factors.[29]

2.1.3 East Asian system

Not only in the Mediterranean region, did the states engage in rivalries, East Asia was in the similar position: in both cases power struggle led to changes in the structure of international systems. In the fifth century BC, a number of states located in contemporary China were involved in military conflicts with each other without clear dominance of a single country; this system during the China's Warring states period (475–221 BC) can be regarded as multipolar with the presence of seven major powers Qin, Qi, Chu, Yan, Han, Zhao, and Wei.[30]

The ancient East Asian system (or China's system) included seven great powers and other smaller states, which interacted with each other through economic, political, and military channels. Interstate trade was little to be known, although archeological findings proved that economic exchanges of that period were important.[31] For protecting their own territory, states formed political alliances, so-called "horizontal and vertical alliances:" the former was an east-west grouping of states under the leadership of Qin, while the latter was an anti-Qin coalition bringing together northern and southern states, particularly Chu and Qi. However, these alliances were unstable, and sometimes the partners were coerced into participation. For example, after Qi troops defeated the army of Wei, the latter "became an unwilling and subordinate ally of Qi."[32] The great powers had active military interactions as well, waging 256 wars within the period of 656-221 BC.[33]

After defeating all contending states, Qin, like Rome, established a unified empire. The balance of power was disturbed and the structure of the system was transformed from

[29] James William Ermatinger, *The Decline and Fall of the Roman Empire* (Westpower, CT: Greenwood Publishing Group, 2004), 55-60.
[30] Yongjin Zhang, "System, Empire and State in Chinese International Relations," *Review of International Studies* 27, no. 5 (2003): 49; Victoria Tin-bor Hui, "The Triumph of Domination in the Ancient Chinese System," in *The Balance of Power in World History*, ed. Stuart J. Kaufman, Richard Little, and William C. Wohlforth (New York: Palgrave Macmillan, 2007), 124. Victoria Tin-bor Hui considers 656 BC as the start of the China's ancient multipolar system.
[31] Hironori Asakura, *World History of the Customs and Tariffs* (Brussels: World Customs Organization, 2003), 97-98.
[32] John S. Major and Constance A. Cook, *Ancient China: A History* (Abingdon, Oxon: Routledge, 2017), 152.
[33] Hui 2007, 125-126.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

multipolar to unipolar. Although the Qin domination only lasted fifteen years (221–206 BC), the unification of China determined the system's unipolarity, which was not disturbed by the change of the dominant power in 206 BC, when Liu Bang defeated his rivals and came to power, establishing a new dynasty – the Han dynasty. Economic, political, and military interactions displayed that the international system under the Han dynasty was unipolar and lasted four centuries.

The Han dynasty (206 BC–220 AD) expanded the territory of China and shaped the tributary system under which subordinated states payed tributes to the Chinese emperor. In its turn, China provided economic and political benefits to the tributaries. The tributary system was China-centered; through tributes, the envoys of non-Chinese states confirmed their acceptance of suzerain-vassal relations with the Emperor. The system carried out multiple goals: it displayed "the cultural pre-eminence of the early Chinese" and played as a political means of self-defense, as well as a fundamental and important commercial and diplomatic instrument.[34] The tributary system reinforced the hierarchical structure of China's relations with its neighbors supported by the ideology of superiority: the Confucianism and the rule of the 'Son of Heaven' over all states in the system.[35] The relations with Namviet, which agreed to be a Chinese vassal state during the reign of Zhao Tuo (204-137 BC), exemplifies the China's cultural and political dominance.[36] Other smaller city-states and nomadic or semi-nomadic people also sent tributes to the Chinese court.[37] The Han dynasty also developed relations with states located in modern Korea and Japan.[38]

Following the expansion of Han's influence in the region, the system boundaries enlarged, incorporating the Central Asian steppes. Despite the Han's supremacy over the neighboring states and tribes, one nomadic group – the Xiongnu[39] – did not accept the former's domination; furthermore, they even forced the Han emperor to sign an agreement

[34] J. K. Fairbank and S. Y. Teng, "On the Ch'ing Tributary System," *Harvard Journal of Asiatic Studies* 6, no. 2 (1941): 137.
[35] L. I. Duman, "Ancient Chinese Foreign Policy and the Origins of the Tribute System," in *China and Her Neighbours from Ancient Times to the Middle Ages*, ed. S. L. Tikhvinsky and L. S. Perelomov (Moscow: Progress Publishers, 1981), 28-30; Patricia Buckley Ebrey, *The Cambridge Illustrated History of China* (Cambridge; New York: Cambridge University Press, 1996), 65.
[36] L. S. Perelomov, "China and Vietnam from the Third Century B.C. To the Third Century A.D.," in *China and Her Neighbours from Ancient Times to the Middle Ages*, ed. S. L. Tikhvinsky and L. S. Perelomov (Moscow: Progress Publishers, 1981), 66-67.
[37] Fairbank and Teng 1941, 142-144.
[38] Zhenping Wang, *Ambassadors from the Islands of Immortals: China-Japan Relations in the Han-Tang Period* (Honolulu: University of Hawaii Press, 2005); Yingshi Yu, *Trade and Expansion in Han China: A Study in the Structure of Sino-Barbarian Economic Relations* (Berkeley: University of California Press, 1967), 184-186.
[39] The Xiongnu formed a tribal confederation and expanded the control over the eastern Asian Steppe and Central Asia in the third century – first century AD.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

that established kinship relationship through political marriage, determined annual China's tribute to the Xiongnu, and recognized equality between two states.[40] As a result, some scholars argue that the Xiongnu-Han relations constituted a core of the system and therefore the system's structure between 198 and 133 BC was bipolar.[41] In this regard, after defeating the Xiongnu, Han China became a unipole in the system and started gaining control over the Silk Road. Nevertheless, the Han dominance did not last long and in 220 AD, the system collapsed due to domestic instability and political struggles among various clans.[42] Next centuries of China's history can be characterized by multipolarity and constant military conflicts among different states until unification done by the Sui Dynasty in 589 AD.[43]

Like the Mediterranean systems, the structure of East Asian systems was shifting from multipolarity to unipolarity. With time, the system expanded, especially when the structure was unipolar. Like Rome, Han China as a unipole extended its sphere of influence and integrated neighbouring territories into the East Asian system. Nevertheless, it suffered the same fate as Rome by collapsing due to domestic instability.[44]

2.1.4 Ancient Indic system

By the sixth century BC, sixteen Indian kingdoms by interacting economically, politically, and militarily formed an ancient system, largely occupying the Indo-Gangetic Plain.[45] According to various historians, these "states were frequently at war, and several of them sought universal hegemony."[46] William Brenner characterizes these states as "sovereign[s], functionally similar, like units, interacting under anarchy."[47] Like in other ancient systems, the larger states sought for expansion and competition with equal powers. One of the powers – Magadha – appeared to strive for, and eventually succeeded in

[40] Yu 1967, 41.
[41] Bo 2008; Sun 2007.
[42] There is no strict periodization regarding the beginning of the Three Kingdoms period that superseded the Han dynasty due to the steady decline of the Eastern Han dynasty and the rise of provinces against the central government in last years of the Eastern Han dynasty.
[43] Ebrey 1996, Ch. 4-5.
[44] Ibid., 84-85.
[45] William J. Brenner, "The Forest and the King of Beasts: Hierarchy and Opposition in Ancient India (C. 600–232 BCE)," in *The Balance of Power in World History*, ed. Stuart J Kaufman, Richard Little, and William C. Wohlforth (New York: Palgrave Macmillan, 2007), 104.
[46] Anthony Kennedy Warder, *Indian Buddhism*, 3rd ed. (Delhi: Motilal Banarsidass Publ., 2000), 28.
[47] Brenner 2007, 104.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

domination over other states in the region. Despite some attempts of balancing and building alliances, one after another states felt under the hegemony of Magadha.[48]

Due to foreign invasions by Persians and later by Alexander the Great, the Mauryan rulers of Magadha first managed to consolidate control over the northwest of the Indian subcontinent, then expanded the territory of the empire into the south.[49] Besides direct conquest, the Mauryan Empire developed close economic and political relations with neighboring states. For example, Ashoka, the Mauryan emperor, maintained friendly relations with neighboring southern kingdoms, like Chola, Pandya, and Keralaputra; "gave them advice on occasions, and established philanthropic institutions in their dominions." Furthermore, these states were seen "as objects of religious conquest."[50] The Mauryan Empire through conquests and diplomacy established its dominance, which altered the structure of the Indian ancient system. In the fourth century BC, the system became unipolar, which lasted for few centuries. However, power shifts in the Indic system happened occasionally. These changes lead us to the conclusion that compared to the Mediterranean and Chinese systems the structure of the ancient Indic system was less stable.

The Mauryan Empire did not last long: after its fall, the Greco-Bactrian Kingdom attacked the northwest of the empire, resulting in the establishment of the Indo-Greek Kingdom. Along with the Indo-Greek Kingdom, new powers such as the Shunga Empire, the Satavahana dynasty, the Mahameghavahana dynasty, and other smaller states were established on the territory of the former Mauryan Empire. Only in the fourth century AD, Chandragupta and his successors used political alliances with other kingdoms and territorial conquests to unify India under the Gupta dynasty. The defeated kingdoms in the south were not annexed to the Gupta Empire (320-550 AD), but were obliged to pay tribute and were thus accepted as subject allies.[51] The rise of the Gupta Empire changed the structure of the system from multipolar to unipolar.

The comparison of these three ancient systems shows that the structure of the ancient Indic system resembles that of the Mediterranean and East Asian systems: the shifts between multipolarity and unipolarity have occasionally occurred. The states within the multipolar

[48] Ibid., 106-107.
[49] Ibid., 108.
[50] Hemchandra Raychaudhuri, *Political History of Ancient India: From the Accession of Parikshit to the Extinction of the Gupta Dynasty* (Calcutta: University of Calcutta, 1923), 174.
[51] Duncan Head, *Armies of the Macedonian and Punic Wars: 359 BC to 146 BC* (Cambridge: Wargames Research Group, 2016), 124; Raychaudhuri 1923, 275.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

systems sought for power and domination over others, which periodically led to the change in the number of actors and hence brought structural changes. Another important factor influencing ancient systems was the presence of nomadic tribes attacking unipoles. These tribes like the Huns or Xiongnu although did not establish a state, in the modern sense of the concept, but played an important role in the politics within the systems. Furthermore, the Indic system compared to its counterparts was less stable; such instability was largely facilitated by foreign invasions, which occurred in the northern part of the Indian subcontinent, and decline in trade with the Roman Empire occurred due to the third century crisis.[52]

2.2 Interactions between the ancient systems

Although the stories about each other's existence circulated within the ancient systems, the detailed knowledge was quite obscure due to limited (or absent) direct contacts. The Mediterranean states were familiar with location of India but not China until the first century BC: Herodotus' geography contained India but not China.[53] In the first century BC, China, or Serica, was mentioned in Virgil, Horace, and Strabo works, however, even in the first century AD Roman geographers could only describe the Indian territories up to the delta of the Ganges.[54] Pomponius Mela described the Seres (or Chinese) as one of three peoples living in "the furthest east of Asia," who inhabited the land between the Indians and the Scythians.[55] Chinese knowledge of the Roman Empire, or Daqin, was also very limited: "thinking of it as a kind of counter-China at the other end of the world."[56] *Book of the Later Han*, the annals of the Later Han dynasty, published in the fifth century AD, contains the earliest descriptions of Daqin.[57] The book also mentioned the maritime trade between the Roman Empire, Parthia, and India.[58]

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[52] John McLeod, *The History of India* (Westport, Conn.: Greenwood Publishing Group, 2002), 20-21; Sailendra Nath Sen, *Ancient Indian History and Civilization*, 2nd ed. (New Delhi: New Age International, 1999), 570.

[53] Herodotus wrote the stories and rumors existing at his time regarding India. See: Gauranga Nath Banerjee, *India as Known to the Ancient World: Or, India's Intercourse in Ancient Times with Her Neighbours, Egypt, Western Asia, Greece, Rome, Central Asia, China, Further India and Indonesia* (London: Oxford University Press, 1921), 17-18.

[54] Max Ostrovsky, *Y= Arctg X: The Hyperbola of the World Order* (Lanham: University Press of America, 2007), 44.

[55] Henry Yule, *Cathay and the Way Thither: Being a Collection of Medieval Notices of China* (London: The Haklyut Society, 1866), cliii.

[56] Edwin G Pulleyblank, "The Roman Empire as Known to Han China," *Journal of the American Oriental Society* 119, no. 1 (1999): 71.

[57] Daqin is generally considered as Rome; however, some historians argue that the Chinese called the eastern provinces, the Levant in particular, as Daqin. See: Friedrich Hirth, *China and the Roman Orient: Researches*

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

With respect to direct contacts between India and China, the knowledge about India itself came to China with the Zhang Qian's trip to Western Asia in the second century BC and expanded with the transmission of Buddhism in the first century BC.[59] The Buddhist teaching slowly spread throughout East Asia; after the fourth century AD, the number of followers travelled between the regions increased dramatically and the sacred books were translated into Chinese. Buddhism began to influence China's political and spiritual life.[60]

Prior to the Han dynasty, trade between China and other countries outside of the Chinese system was rare.[61] Han China, through its tributary states started trading with Europe, exchanging silks and slaves for Roman metals, obtained from peripheral areas of the latter. With the help of the Xiongnu, after establishing a friendly relationship with the nomadic tribe, the trade went inland through the Silk Road.[62] However, Chinese merchants could only go to Merv, a city in Parthia; there is no record of any Chinese reaching the Roman Empire.[63] The Parthians up to the second century BC carried out major trade between Rome and China, main products of which were gold, silver, coral, silk, amber, etc.[64] The direct trade relations between Rome and China came to existence when Roman merchants claiming to be envoys of Marcus Aurelius arrived in China in 166 AD.[65] However, in the third century AD, due to the Imperial Crisis in Rome, the trade between the two systems declined dramatically.[66]

Despite the development of the Silk Route, the economic exchanges between the two systems were quite limited due to weak interaction capacities: the absence of direct borders, slow communications and transport, as well as the presence of mediators like the Parthians and nomadic tribes restrained the development of trade between East Asia and the Mediterranean region. At the same time, political factors like a lack of strong central

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into Their Ancient and Mediaeval Relations as Represented in Old Chinese Records (Leipsic, Munich: G. Hirth, 1885), 5.

[58] Banerjee 1921, 43.

[59] Ibid.

[60] Ibid., 47-48.

[61] Asakura 2003, 98-99.

[62] Robert M Carmack, *Anthropology and Global History: From Tribes to the Modern World-System* (Plymouth, UK: AltaMira Press, 2013), 99.

[63] According to the *Book of the Later Han*, Pan Ch'ao was sent to Rome but he reached only the Parthia's western border. See: J. Thorley, "The Silk Trade between China and the Roman Empire at Its Height, 'Circa' A. D. 90-130," *Greece & Rome* 18, no. 1 (1971): 75.

[64] Ibid., 76-78.

[65] Fairbank and Teng 1941, 139.

[66] Carmack 2013, 100.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

government that could promote interstate trade further restrained economic exchanges.[67] In the Manfred Raschke's study, the author concluded that Chinese silk went to Central Asia and then the eastern provinces of the Roman Empire as gifts or tribute.[68] Furthermore, the Roman coins found in China were from Byzantium and only dated to the 530s and 540s.[69] Therefore, the economic exchanges between the two ancient systems were very limited; furthermore, due to geographic location and little knowledge of each other, the two systems had no political interactions, neither military.

Unlike China, Indian kingdoms established closer relations with the Mediterranean system: due to the Alexander's conquests, Greece developed tight relations with the Middle Eastern cities, as well as India, the latter could be even described as an important "part of Greek commerce."[70] The Mauryan Empire later maintained an extensive trade with the Mediterranean states; Indians called all foreign merchants "Yavanas," or Greeks.[71] The trade became even more significant with the time. Roman merchants regularly travelled to the Western coast of India to purchase the spices and pepper.[72] Historians assume that Indian maritime trade between the first and third centuries CE was mostly with the Roman Empire, exchanging Indian luxury goods, like spices and fine textiles, for Roman gold.[73] Like economic interactions, political relations between the Mediterranean and Indian systems were quite close. Hemchandra Raychaudhuri describes the communications between the Hellenistic powers and the Mauryan Empire as equal and friendly.[74] Cultural exchanges between the Mediterranean and Indian states also intensified especially after the Alexander's conquests: philosophical ideas, art, and folklore influenced each other.[75] During the Augustus's reign and later, Rome occasionally received embassies from Indian states.[76]

[67] Peter Fibiger Bang, "Commanding and Consuimg the World: Empire, Tribute, and Trade in Roman and Chinese History," in *Rome and China: Comparative Perspectives on Ancient World Empires*, ed. Walter Scheidel (Oxford; New York: Oxford University Press, 2009), 102.
[68] A. F. P. Hulsewé, ""New Studies in Roman Commerce with the East." by Raschkemanfred G.. In Aufstieg Und Niedergang Der Römischen Welt, Geschichte Und Kultur Roms in Der Neueren Forschung, Ii Principat [Rise and Fall of the Roman World: History and Culture of Rome in Recent Research, 2nd Principat], Ed. Temporinihildegard. Vol. 9, Part 2: 604–1361. Berlin: Gruyter, 1978. 758 Pp. Select Addenda, Bibliography, Maps, Finding List, Indexes. Vol. 9, Dm 360," *The Journal of Asian Studies* 41, no. 2 (1982): 342.
[69] Valerie Hansen, *The Silk Road: A New History* (Oxford; New York: Oxford University Press, 2012), 20.
[70] Banerjee 1921, 20.
[71] McLeod 2002, 20.
[72] Banerjee 1921, 25.
[73] McLeod 2002, 22.
[74] Raychaudhuri 1923, 156-157.
[75] Banerjee 1921, 20; McLeod 2002, 21.
[76] Banerjee 1921, 23-24.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Overall, the interactions between the Mediterranean region and East Asia were quite restrained due to geographic, technical, and political factors. However, the Indic system intensively interacted with the Mediterranean counterpart; geographical proximity determined the development of close economic and political relations, and, as can be speculated, it may determine more frequent foreign invasions and military conflicts. As Indian history displays, occasional foreign invasions from the Mediterranean system, economic interdependence, and domestic crises resulted in the relative instability of the ancient Indic system.[77]

2.3 Summary

IR is often criticized by being Western-dominated due to abundance of Western examples testing IR theories.[78] Incorporating into, and learning other regions' history as part of the world history can mitigate the IR westernization critique. This chapter provides an overview of coexisting ancient systems in the Eurasian continent and describes interactions between them. The states' regular and intensive interactions formed the system's structure. Three cases of ancient systems demonstrate that in the fifteen-century period of history the structure of international systems varied between multipolar and unipolar, depending on the number of poles. There was no reference of bipolarity.[79]

As realists describe the nature of states as expansionists, ancient states sought for gaining greater power, which led to territory expansion and possibly dominance in the system if there were no stronger rivals. Technological advancement and quest for wealth led to expansionism, under which weaker states became subservient to a unipole. Furthermore, the system's expansion occurred within the unipolar structure. However, with time, a dominant state weakened and rivals reappeared. As a result, the system returned to multipolarity, as occurred after the fall of Rome or Macedonia in the ancient Mediterranean system, after the collapse of the Han government in the ancient East Asian system, and the Mauryan Empire in the Indic system.

These ancient systems are, I argue here, examples of ancient international systems coexisted in the world. Due to partial knowledge about each other, their level of interactions was limited. In this regard, they were quite "closed" international systems. The level of

[77] McLeod 2002, 20-21; Sen 1999, 570.
[78] Acharya and Buzan 2017, 342; Buzan and Little 1994, 234-236.
[79] Some scholars however argue that the Athens-Sparta rivalry in the fifth century BC and Han-Xiongnu relations in the second century BC are historical examples of bipolarity. Visit, Fliess 1966; Bo 2008; Sun 2007.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

interaction capacities between the Mediterranean and East Asian systems was very low: long distance, geographical barriers and slow technological progress separated the two systems. However, with an increasing level of mutual knowledge, the systems expanded and started sharing borders, and consequently increased interconnectedness.

Unlike the East Asian system, the ancient Mediterranean and Indic systems had a higher level of interactions in terms of economic exchanges, political and military interactions, and mutual cultural influences. This led not only to greater wealth coming from trade, but also to outside aggressions and economic crises. Due to geographical proximity of great powers located outside of the system, the Indic system was vulnerable to regular foreign invasions, coming mostly from the Mediterranean system. For that reason, I argue the level of interactions may determine the stability of the system: the higher level of interactions may lead to the system's instability.[80] However, a lack of complete data on connectedness between ancient systems does not allow whether to confirm or invalidate this hypothesis. Therefore, the following chapters attempt to verify this hypothesis due to greater availability of the data on interactions between systems.

I brought up an example of the ancient systems in world history in order to confirm the hypothesis on coexisting international systems (H1). Three regional (Mediterranean, East Asian, and Indic) systems located in different parts of Eurasia were quite independent and self-sustainable. The systems consisted of city-states and empires as major units, which were actively engaged with each other through bilateral and multilateral trade, political exchanges, and military conflicts, which were common within each of these systems. Such regular and intensive interactions formed the boundaries of these systems. Furthermore, assessing the capabilities of major units allowed determining the number of poles and therefore the polarity of these ancient systems. The structure of these systems was shifting from multipolar to unipolar during the period of 800s BC to 500s AD, specified in Table 2.1.

The study of ancient systems introduced few remarkable conclusions listed below. First, by testing the concept of *international system* in a certain historical period, I confirmed the coexistence of multiple international systems (H1). Second, after analyzing the structure of ancient systems throughout the period that lasted approximately fifteen centuries, I observed that unipolarity and multipolarity were common types of international systems, while bipolarity was not detected. Third, with respect to stability of ancient systems,

[80] The fall of Rome or the Han dynasty occurred due to domestic instability. Therefore, I assume that structural changes can come as from within the system as well as from outside due to a high level of interactions.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

structural changes could come from within the system (e.g. major powers' war or the dissolution of unipolar states like Rome, Han and Magadha) or from the outside of the systems (e.g. the invasion of India by Alexander the Great or the Third Century Crisis in Rome that influenced the Indian subcontinent). This inference is further elaborated in Section 6.4. Therefore, based on a historical precedent of multiple international systems, I can challenge a generally accepted existence of a bipolar global system during the CW period; the analysis of the CW system(s) is provided in the following chapters.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Chapter 3 The Cold War systems' geographical boundaries: economic interactions

After the end of WWII, the membership of international systems was influenced by the arrangements done at the international conferences between the great powers.[1] At the meetings, the Big Three (United States, United Kingdom, and Soviet Union) discussed the post-war borders and domestic regimes in Europe, in which Washington and London to certain extent agreed on the Soviet claims to establish and maintain the Soviet influence in Eastern Europe and the Balkan region.[2] As a result, after WWII, the European continent first, then the rest of the world was split into two international systems. The scope of these international systems is defined and analyzed in this chapter and the two following by the sectors of interactions. Each sector forms the geographic boundaries of the system. Therefore, this chapter assesses the economic interactions, in particular countries' bilateral trade, and *economic system(s)*. The Chapter 4 will analyze the political interactions, which form *political system(s)*. Then, Chapter 5 will be devoted to military interactions and *military system(s)*.

This chapter on *economic systems* includes, first, the quantitative analysis of bilateral trade to demonstrate the higher levels of integration within the West and Soviet systems respectively, together with the relative absence of trade between the two systems. Second, the chapter elaborates on nature of the economic structure within each system, including the review of units' material capabilities in order to analyze the distribution of capabilities and the systems' polarity. Then, I describe the poles' policies involved in consolidating the "within-system" economic exchanges. Finally, the chapter describes the policies engaged by both unipoles aimed at limiting trade *between* the two systems. The goal of the chapter is therefore to confirm, in the economic sphere as hypothesized, and in line with the definition of an international system provided in Section 1.4, that the CW period is characterized by the two economic systems that are highly integrated "within", and relatively independent "between" each other.

[1] During WWII, international conferences mostly between the United States, United Kingdom, and Soviet Union were held (in Tehran in 1943, Moscow in 1944, Yalta and Potsdam in 1945) to discuss the post-war future of Europe and its division into spheres of influence.
[2] Lloyd C. Gardner, *Spheres of Influence: The Great Powers Partition Europe, from Munich to Yalta* (Chicago: Ivan R. Dee, 1993), 265; Serhii M. Plokhy, *Yalta: The Price of Peace* (New York: Viking, 2010), 139-151.

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3.1 Quantitative methods for the analysis of *economic systems*

The quantitative data of economic systems uses a bilateral trade dataset provided by the COW project that spans the period 1870-2009. The method of this analysis follows three steps: In the first step, I selected the most appropriate years for analysis and dealt with missing data. Second, I ran a hierarchical clustering analysis to group countries according to their dyadic trade patterns. Third, I analyzed the level of interactions between the clusters in order to determine the boundaries of the *economic systems*, according to the level of trade interaction. In addition, I measured the significance of the level of economic interactions within the systems *vs.* between the systems.

The dataset used to determine the boundaries of the economic systems is the COW project database, which includes a large database of yearly dyadic trade data between countries from 1870 to 2009.[3] Despite the abundance of data, some years in the COW dataset include a large amount of missing values. To palliate this issue, I selected the years with the lower percentage of missing data (Table 3.1). Besides the total missing data, I calculated the approximate percentage of missing data in the bilateral trade of communist nations[4], since these countries often did not provide national trade data to international organizations. During the post-WWII period, the years 1948, 1957, 1973, and 1989, which conveniently span over the CW period, and have fewer missing values, were selected.

Table 3.1 Missing data by years

Year	Missing values (%)		Year	Missing values (%)		Year	Missing values (%)	
	Total	Communist		Total	Communist		Total	Communist
1945	99.7	97.2	**1957**	**14.2**	**30.5**	1972	19.4	33.7
1946	99.8	97.2	1960	16.3	29.1	**1973**	**19.1**	**33.0**
1947	99.8	98.1	1963	16.7	32.9	1974	19.7	33.1
1948	**15.2**	**22.0**	1964	17.2	43.8	1975	21.9	33.6
1949	19.0	43.9	1965	17.6	44.7	1977	21.9	25.7
1950	14.2	45.7	1966	17.9	44.4	1980	24.4	23.7
1951	14.4	46.2	1967	17.6	43.9	1982	23.0	17.3
1952	12.9	45.1	1968	18.1	39.6	1985	22.9	13.3
1953	14.0	45.3	1969	18.2	38.9	1987	20.6	11.5
1954	17.3	51.7	1970	17.6	34.4	**1989**	**18.8**	**10.7**
1955	14.1	30.9	1971	19.9	35.5	1990	22.2	24.6

Note: The years in bold letters are chosen for this research.

[3] In 2016, Katherine Barbieri and Omar Keshk published an updated version "Project Trade Data Set Codebook, Version 4.0," which did not differ from the previous dataset, for the years selected and examined in this study. Visit, Katherine Barbieri and Omar M. G. Omar Keshk, "Correlates of War Project Trade Data Set Codebook, Version 4.0," 2016, http://correlatesofwar.org.

[4] Communist nations are Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Mongolia, North Korea, Poland, Romania, Soviet Union, and Vietnam.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

For each selected year, the COW dataset includes import and export raw values in USD for a range of 72 to 161 countries, presented as country-country dyads. Both import and export represent forms of economic interaction. I therefore summed up import and export data to make up the total trade volume between each dyad of countries. Although the years with fewer missing values were selected, some of the countries in the selected years still included a large percentage of missing data. When data was available, I used trade volumes from prior and next years to replace missing values: If no replacement data was available in neither the five prior year nor five next years, then the data was left missing. Overall, up to 28.2 percent of the total data was replaced using this approach. After replacing missing data with available values, the countries with still missing more than 25 percent of their data were removed from the datasets and not analyzed. The final total list of countries by year is provided in Appendix A.[5] For each selected year, the dataset is composed of a large range of countries (the sample includes 62 nations for year 1948 to 143 countries for the larger sample of year 1989).

The next step of clustering consists in combining countries into homogenous clusters (i.e., groups of countries). The process of clustering consists in merging the countries together according to their patterns of trade with other countries.[6] The purpose of clustering is double: first, it simplifies the analysis of trade interaction by grouping countries according to their type of trade pattern. However, the simplification is data-driven, done without preconceived assumptions of structure. Second, clustering already provides indication about economic interaction itself, as it groups the countries that share a similar trading pattern with the world. Thus, I particularly expect that Western European countries and Eastern European countries would differ in their trade patterns, as I assume that the latter would deal with the Soviet Union more than with the United States. To run the cluster analysis, I used the IBM SPSS software (version 20.0). I applied the "between-group linkage" method, which calculates the distance between cases in a series of consequential steps, that is finally reflected in a single (squared Euclidian) distance value.[7]

This analysis was run for years 1948, 1957, 1973, and 1989 separately. For each year, the software produced the distance between countries in terms of trade pattern, which is

[5] Countries with total trade of zero were also removed.
[6] Yim and Ramdeen 2015, 9.
[7] The main advantages of cluster analysis compared to other methods, are its robustness to outliers and the ability to estimate and average distance values between pairs of cases from different clusters. Other distance measures, such as so-called "complete linkage" or "single linkage," are strongly affected by the presence of outliers. The different methods are described in the article by Odilia Yim and Kylee T. Ramdeen. See: ibid.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

reflected in a dendrogram (Appendix B). Clusters are determined as groups of nations separated from each other by a relatively smaller distance. In other words, clusters are groups of countries that share similar trade patterns. For example, the United States and the Soviet Union throughout the CW period have significantly different trade patterns, which both differ from Eastern European countries that form the Soviet cluster (figures 3.1, 3.3, 3.5, and 3.7). Each of them constitute a cluster. In line with the hypothesis of this study, Western countries and Eastern European countries should agglomerate in separate clusters as their trade patterns are expected to differ widely.

The final step consists in mapping the trade exchange between clusters. A high level of trade between two clusters would indicate that the two clusters have a high level of interactions in terms of trade volume: they belong to the same *economic system*, defined in this chapter as trade. Reversely, if two clusters are not trading, then their level of interactions is low and they hence do not belong to the same system, but they rather belong to two different systems. The level of interactions *within clusters* is obtained by summing up the trade of countries in each cluster. The level of interactions *between clusters* is obtained by summating the trade of countries that belong to two distinct clusters. Certainly, there is never zero trade between two clusters, and as such, two clusters are never totally independent. However, if a cluster trades 90 percent with another cluster, the two appear more interconnected that if only 10 percent of their trade is shared. As a starting point, I propose that if 50 percent of a cluster's trade goes with another cluster, then they belong to the same system. The percentage of trade within the cluster and between clusters are presented in a heatmap of each year. The heatmap provides a visual representation (using color strength that is proportional to the calculated percentage) of the trade *within cluster* and the trade *between clusters*, that delineates the trade boundaries of each system (figures 3.1, 3.3, 3.5, and 3.7). Finally, each cluster is represented in figures 3.2, 3.4, 3.6, and 3.8, according to its percentage of trade shared with the Soviet system on the X-axes, and the percentage of trade with US-led system on the Y-axes. As a final point, I did countries' pairwise comparison within the economic systems versus between the systems, measuring the significance with 95% of confidence.

3.2 Results on economic systems' boundaries

The analysis is conducted year by year. For each year, the list of countries in each cluster, the heatmap of trade between and within clusters, and finally, the graphic

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

representation of the clusters' distance to the Soviet system and to the West system are provided.

The 1948 dataset includes 62 countries. The cluster analysis divided these countries into five different clusters labelled respectively *US-UK*, *Soviet*, *Russia*, *Rest*, and *PK-MM*. The list of the countries included in each cluster is provided in Appendix A. Among the five clusters, three of them (*Rest*, *US-UK*, and *PK-MM*) have a high level of trade among each other (greater than 55%). In addition, these three clusters have a low level of trade with the *Soviet* and *Russia* clusters (less than 3%). Then, the *Soviet* and *Russia* clusters have a high level of interactions with each other (greater than 24%). However, the *Soviet* and *Russia clusters* have a high level of interactions with other clusters (less than 38%; see Figure 3.1).

1948	Economic Partner Rest	Economic partner US-UK	Economic partner Soviet	Economic partner Russia	Economic partner PK-MM	TOTAL
Cluster Rest	39% 19,109 MUSD	55% 27,147 MUSD	3%	1%	2%	100% 49,241 MUSD
Cluster US-UK	90% 27,147 MUSD	7%	1%	1%	1%	100% 30,269 MUSD
Cluster Soviet	38% 1,456 MUSD	11%	26% 989 MUSD	24% 909 MUSD	0%	100% 3,791 MUSD
Cluster Russia	38% 725 MUSD	14%	47% 909 MUSD	0%	1%	100% 1,916 MUSD
Cluster PK-MM	71% 804 MUSD	26% 298 MUSD	1%	2%	1%	100% 1,136 MUSD

Figure 3.1. The level of trade between countries in 1948 – cluster analysis. Each line displays the level of interactions between the chosen cluster (left column) and its economic trade with all clusters (top line).

From Figure 3.1, it is clear that the five clusters form two groups, which I argue here, represent two economic systems, characterized by the high-level interactions within the groups and lesser interactions between them. The first group of clusters that includes the clusters *Russia* and *Soviet* is labelled the *Soviet system* and the group that includes the clusters *US-UK*, *Rest*, and *PK-MM* is labelled the *West system*. Figure 3.2 represents the trade

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

percentage of each cluster with these two groups respectively and graphically demonstrates how separated in terms of trade exchange the West system and the Soviet system are.

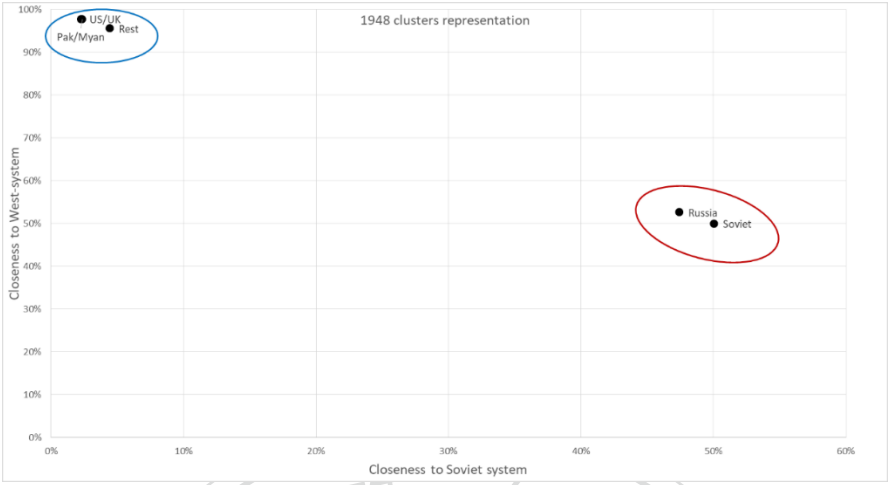

Figure 3.2. 1948 economic clusters' representation. The X-axis represents the amount of trade each cluster shares with the *Soviet system* and the Y-axis represents the amount of trade each cluster shares with the *West system*.

In 1948, the division between these two systems was already quite clear. However, the level of dependency of the Eastern European countries on the trade with the rest of the world was high. Such a high number was probably the result of the WWII post-war reconstruction processes in Europe and a remnant of existed pre-war economic relations; consequently, in 1948 there was kept a certain level of interactions between European countries, regardless of their affiliation to each system. For example, the share of the post-war Swiss trade with Eastern Europe reduced dramatically compared with pre-war period, although the trade of the first few years after WWII measured in constant values reached the pre-war volume.[8] Furthermore, some countries like Poland, Yugoslavia, and Czechoslovakia after the war were the major recipients of economic aid from the US-dominated international institution United Nations Relief and Rehabilitation Administration (UNRRA).[9] In 1948, Moscow and Washington, as two former allies in the first years of the post-war time, also maintained a certain level of interactions in the form of bilateral trade and diplomatic exchanges with respect to the post-war development processes. Then, due to their growing disagreements in their respective plans to heal the economies of their satellites, the United States and the Soviet Union limited their own interactions and of their allies, resulting in a

[8] Klaus Ammann, "Swiss Trade with the East in the Early Cold War," in *East-West Trade and the Cold War*, ed. Jari Eloranta and Jari Ojala (Jyväskylä: University of Jyväskylä, 2005), 118-120.
[9] William I. Hitchcock, *The Bitter Road to Freedom: A New History of the Liberation of Europe* (New York: Free Press, 2008), 220.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

deeper West-Soviet division in Europe first, and in the world later on.[10] Therefore, the partition of the world into two separated economic systems that was initiated after WWII growingly deepened with time.

The 1957 dataset includes 82 countries (Appendix A). Compared with 1948 (Figure 3.1), the Soviet economic system in 1957 showed a dramatic decrease in connectedness with the outside world and enhanced bilateral trade within the system. The cluster analysis provided the *Soviet* cluster that traded mostly with *Russia* and within itself (together greater than 68%). Their trade with the outside of these two clusters now reduced (less than 33%). Other three clusters (*Rest*, *US*, and *MA-TN-LA-KH*) interacted mostly with each other, and their percentage of trade with the *Russia* and *Soviet* clusters remained low (less than 5%). This demonstrates that by the end of the 1950s the establishment of the two economic systems has finalized. The two systems were characterized by a high level of interactions within themselves and quite limited connectedness between them. The trade divide between the West system and the Soviet system appeared clearly in the heatmap (Figure 3.3).

1957	Economic Partner Rest	Economic partner US	Economic partner Soviet	Economic partner Russia	Economic partner MA-TN-LA-KH	TOTAL
Cluster Rest	70% 97,417 MUSD	24% 33,311 MUSD	4%	1%	1% ⇨	100% 138,783 MUSD
Cluster US	99% 33,311 MUSD	0%	1%	0%	0% ⇨	100% 33,745 MUSD
Cluster Soviet	31% 5,286 MUSD	2%	29% 4,900 MUSD	39% 6,606 MUSD	0% ⇨	100% 17,152 MUSD
Cluster Russia	20% 1,656 MUSD	0%	80% 6,606 MUSD	0%	0% ⇨	100% 8,301 MUSD
Cluster MA-TN-LA-KH	91% 1,113 MUSD	6%	2%	1%	0% ⇨	100% 1,224 MUSD

Figure 3.3. The level of trade between countries in 1957 – cluster analysis. Each line displays the level of interactions between the chosen cluster (left column) and its economic trade with all clusters (top line).

Figure 3.4 illustrates this decline of Soviet trade with the outside from 50 percent of total trade in 1948 (Figure 3.2) to 30 percent in 1957. In the same period, the trade realized

[10] The US and USSR's economic policies are discussed in the following subchapters.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

by the West system remained mostly within the system, and the economic interactions with the outside were minimal.

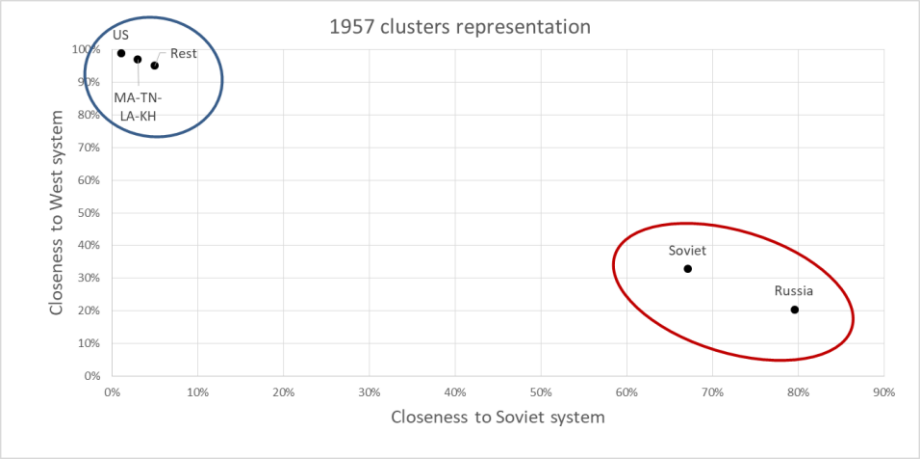

Figure 3.4. 1957 economic clusters' representation. The X-axis represents the amount of trade each cluster shares with the *Soviet system* and the Y-axis represents the amount of trade each cluster shares with the *West system*.

In 1973, the data sample includes 124 countries (Appendix A); the cluster analysis provided only three clusters. The cluster *Rest* includes most countries, illustrating a high level of bilateral trade between those countries. Meanwhile, the situation within the Soviet system started to change (Figure 3.5): the trade of the countries in the *Soviet* cluster began to diversify and the level of interactions outside of the Soviet system increased. In this regard, the economic interactions between the West and Soviet systems started slowly strengthening.

1973	Economic partner Rest	Economic partner Soviet	Economic partner Russia	Total
Cluster Rest	96% 984,873 MUSD	2%	1%	100% 1,022,554 MUSD
Cluster Soviet	37% 23,108 MUSD	23% 13,961 MUSD	40% 24,610 MUSD	100% 61,679 MUSD
Cluster Russia	37% 14,573 MUSD	63% 24,610 MUSD	0%	100% 39,183 MUSD

Figure 3.5. The level of trade between countries in 1973 – cluster analysis. Each line displays the level of interactions between the chosen cluster (left column) and its economic trade with all clusters (top line).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

The increased connectedness between the two economic systems was however asymmetrical: the proportion of the trade the Soviet system was doing with the West was greatly higher than the proportion of trade the West was doing with the Soviet system (Figure 3.6). In other words, opening the Soviet economy to the outside led to a greater asymmetry between the two systems. Such situation could be exploited advantageously by the more independent West system, in terms of growing bargaining power and political influence.[11]

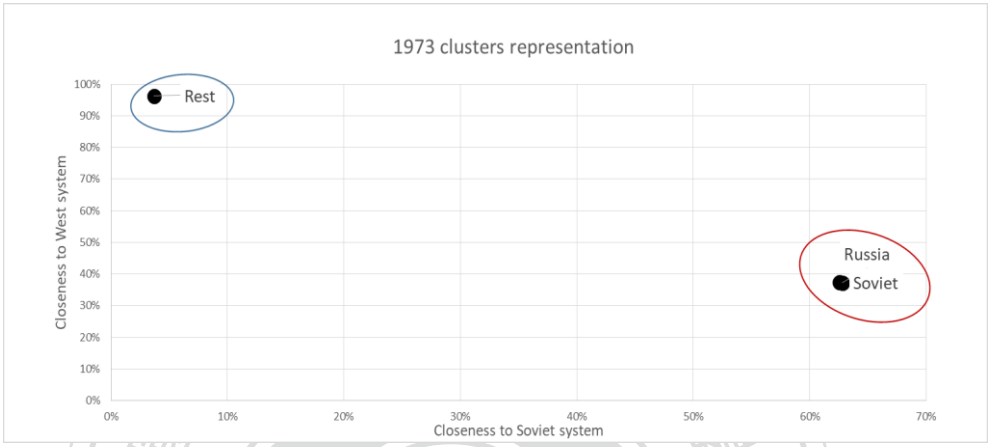

Figure 3.6. 1973 economic clusters' representation. The X-axis represents the amount of trade each cluster shares with the *Soviet system* and the Y-axis represents the amount of trade each cluster shares with the *West system*.

By the end of the 1980s, the number of countries available in the dataset rose to 143, as the number of countries significantly contributing to international trade increased (Appendix A). In this period, the volume of global trade was further amplified, and the trade patterns diversified. In 1989, the analysis produced ten distinct clusters with various trade patterns (Figure 3.7). The *Soviet* cluster not only demonstrated a high level of interactions with the *AL-RU* cluster, but also showed a growing amount of trade with the *Eur/Afr* cluster. Again, the relationship was not symmetrical: the Soviet system's dependency on trade with outside clusters was higher that the reverse.

[11] Klaus Eugen Knorr, "International Economic Leverage and Its Uses," in *Economic Issues and National Security*, ed. Klaus Eugen Knorr and Frank N. Trager (Lawrence, Kans.: University Press of Kansas, 1977); R. Harrison Wagner, "Economic Interdependence, Bargaining Power, and Political Influence," *International Organization* 42, no. 3 (1988).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

1989	Economic partner Eur/Afr	Economic partner Am/Afr/As	Economic partner US	Economic partner Soviet	Economic partner AL-RU	Economic partner Bahrain	Economic partner Jordan	Economic partner Liberia	Economic partner MZ-SC-LA-MM	Economic partner CapeVerde	Total
Cluster Eur/Afr	74% 2,116,999 MUSD	14%	8%	2%	2%	0%	0%	0%	0%	0%	100% 2,873,182 MUSD
Cluster Am/Afr/As	22% 415,784 MUSD	42% 780,946 MUSD	33% 612,654 MUSD	1%	1%	0%	0%	0%	0%	0%	100% 1,856,867 MUSD
Cluster US	27% 226,562 MUSD	72% 612,654 MUSD	0%	0%	1%	0%	0%	0%	0%	0%	100% 848,288 MUSD
Cluster Soviet	27% 56,374 MUSD	9%	1%	21% 43,186 MUSD	41% 85,789 MUSD	0%	0%	0%	0%	0%	100% 207,363 MUSD
Cluster AL-RU	32% 52,085 MUSD	13%	3%	52% 85,789 MUSD	0%	0%	0%	0%	0%	0%	100% 165,185 MUSD
Cluster Bahrain	24% 1,102 MUSD	69% 3,171 MUSD	7%	0%	0%	0%	0%	0%	0%	0%	100% 4,619 MUSD
Cluster Jordan	34% 1,101 MUSD	50% 1,623 MUSD	9%	6%	0%	1%	0%	0%	0%	0%	100% 3,239 MUSD
Cluster Liberia	78% 2,301 MUSD	17%	4%	1%	0%	0%	0%	0%	0%	0%	100% 2,944 MUSD
Cluster MZ-SC-LA-MM	32% 788 MUSD	58% 1,424 MUSD	4%	2%	4%	0%	0%	0%	0%	0%	100% 2,456 MUSD
Cluster CapeVerde	72% 85 MUSD	15%	6%	5%	2%	0%	0%	0%	0%	0%	100% 118 MUSD

Figure 3.7. The level of trade between countries in 1989 – cluster analysis. Each line displays the level of interactions between the chosen cluster (left column) and its economic trade with all clusters (top line).

Furthermore, as trade patterns branched out, three major economic groups appeared, which can be distinguished by the connectedness to the United States or the Soviet Union (Figure 3.8). Unlike other years, the situation changed because Western European countries integrated into a strong and economically independent group, namely the European Economic Community (EEC). The incorporation of the economies of twelve member countries created an alternative economic group, which appeared rather separated from the US-led group in the heatmap (figures 3.7 and 3.8). I nevertheless combine the US-led group and EEC-led groups into a single economic system for economic reasons developed in the following subchapter and political and military reasons analyzed in Chapter 4 and Chapter 5.

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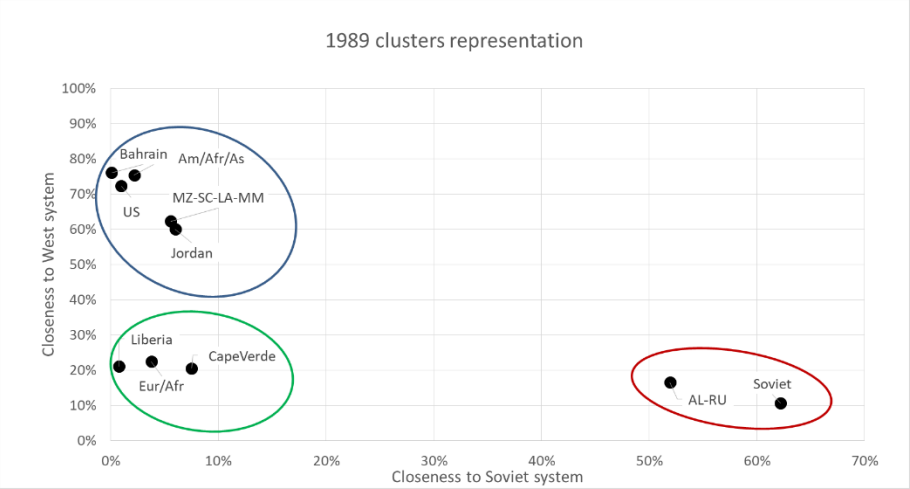

Figure 3.8. 1989 economic clusters' representation. The X-axis represents the amount of trade each cluster shares with the *Soviet system* and the Y-axis represents the amount of trade each cluster shares with the *West system*.

For countries belonging to the West system, the percentage of bilateral trade they have with other countries within the system is statistically significantly higher with 95% confidence to the percentage of bilateral trade they have with countries of the Soviet system.[12] These results support the hypothesis that the West system is independent from the Soviet system in terms of trade. For countries belonging to the Soviet system, the percentage of bilateral trade within the system is higher than the percentage of trade with the West system. The difference however does not reach statistical significance due to different levels of integration within the Soviet system.[13] In particular, the percentage of bilateral trade among Eastern European countries that constitute a core of the Soviet system is statistically higher with 95% confidence to the percentage of bilateral trade they have with the West system's countries.[14]

In sum, the year-by-year analysis of bilateral trade from 1948 to 1989 revealed that throughout the CW period the world was divided into two major economic systems – the Soviet system and the West system, which included the vast majority of countries with significant trade volumes.[15] Although the two systems were connected to each other to some extent, a higher level of interconnectedness was observed within these two systems. The

[12] *p*s < 0.001 for each studied year.
[13] *p*s > 0.265 for each studied year, except 1957 year, which shows the significance with $p = 0.030$.
[14] Economic interactions within the system are statistically significant compared to the interactions between the systems (*p*s < 0.042).
[15] With the exception of year 1989, where three major groups of clusters are distinguished (Figure 3.8).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

structure, membership, and economic measures to maintain the systems throughout the CW period are discussed in the following subchapters.

3.3 Units' capabilities and economic interactions within the West system

The previous subchapter illustrated countries within the West system mostly traded *within* this system, and not with the Soviet system. This section studies the reasons for such a high level of integration within the West system. In particular, I examine here three key elements in the construction of an integrated West economic system. First, I review in Section 3.3.1 the structure of the West economic system, specifically, the distribution of capabilities, in which the United States was the strongest power. Then, I examine in Section 3.3.2 the US-established international order, in particular, how Washington employed different economic tools to maintain countries within the West system and how it established and nurtured international economic institutions in order to preserve its supremacy.

3.3.1 Measuring units' capabilities within the West system

As shown in Section 3.2, the West system included a vast number of countries interacting with each other. According to the definition of *international system* discussed in Sections 1.5 and 1.6, country's membership defines the geographical scope of the international system. In addition to the system membership, the units' capabilities are required to analyze, in order to study the distribution among members and the structure of the international system.

In this section, I therefore examine the capabilities of countries and their distribution within the West system in order to determine the number of poles. To that end, I analyze two measures: GDP and CINC. The first measure typically represents the overall economic power of each country. I used the data from the Maddison Project, which collected the historical GDP data in the period from 1 AD to 2008.[16] The CINC on the contrary integrates certain elements indicative of power: It combines six indicators of economic and military capabilities, namely total population, urban population, military personnel, military expenditures, primary energy consumption, and iron and steel production. The CINC database is created within the

[16] Maddison Project, http://www.ggdc.net/maddison/maddison-project/home.htm.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

COW project and covers the 1816-2012 period.[17] The two indexes are provided for major units with the share greater than five percent within the West system in Table 3.2 and for all West system's members in Appendix C.

Table 3.2. Ranking major units' capabilities in the West system by year

		1948		
Units	GDP	% (GDP)	CINC	% (CINC)
United States	1,334,331	36%	0.2946597	38%
China[1]	244,985	7%	0.1150552	15%
United Kingdom	337,376	9%	0.075426	10%
India	215,927	6%	0.0524505	7%
France	180,611	5%	0.0325886	4%
		1957		
United States	1,878,063	33%	0.2550486	38%
United Kingdom	412,315	7%	0.0473189	7%
India	277,924	5%	0.0457935	7%
West Germany	461,071	8%	0.0372537	6%
Japan	287,130	5%	0.0328617	5%
France	305,308	5%	0.0327303	5%
		1973		
United States	3,536,622	26%	0.1588194	21%
China	739,414	5%	0.1134221	15%
Japan	1,242,932	9%	0.0587464	8%
India	494,832	4%	0.054161	7%
West Germany	814,786	6%	0.0360924	5%
United Kingdom	675,941	5%	0.0276301	4%
France	683,965	5%	0.0247987	3%
		1989		
United States	5,703,521	24%	0.148239	19%
China	2,051,813	9%	0.1144659	15%
India	1,043,912	4%	0.0595363	8%
Japan	2,208,858	9%	0.0516204	7%
West Germany[2]	1,182,261	5%	0.0271015	3%

[1] 1950 data.
[2] 1990 data.
Note: The Maddison Project estimates historical GDP in millions of 1990 International Geary-Khamis dollars.

Throughout the CW period, the US share of GDP and CINC was the largest among all other major actors of the West system. The US economic power (GDP) was at least three times larger than other powers' GDP and that US material capabilities (CINC) throughout the CW period were twice larger than that of the second major player, except in China's case in 1973 and 1989 (Table 3.2). The United States was the dominant power and therefore the unipole in the West system throughout the CW period. Only China, which slowly progressed in its share of combined material capabilities but not economic power after its rapprochement to the West in the 1970s, was somehow narrowing the gap with the dominant power.[18]

[17] "National Material Capabilities (v5.0)," The Correlates of War Project, http://cow.dss.ucdavis.edu/data-sets/national-material-capabilities.
[18] China's large population greatly influenced the high value of China's CINC.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Therefore, we can conclude that the West international system was unipolar, with the United States as the strongest power. As a unipole, the United States established an international order[19], which was beneficial to itself and its allies, needed economic restoration after WWII and the independence movements in the later period of the CW. The US policies toward the establishment of the US-led international order are discussed in the following section.

3.3.2 US economic policies toward the establishment of the US-led unipolar order

The post-war West economic system was framed largely due to the policies of the strongest power – the United States. Starting from the US President Truman's doctrine in 1947, the US policies aimed at protecting the West system, separated from the Soviet system. As part of the Truman's doctrine, the Marshall Plan, a post-war economic assistance program to devastated Europe, was proposed by the United States in 1947. The plan, which requested beneficiary countries to accept the US influence, was rejected by the countries under the Soviet sphere of influence.[20] Therefore, the Marshal plan applied to, and only benefitted the countries that belonged to the West system. As such, it was a founding pillar of the US engagement in the region thereby attaching Western Europe to its sphere of influence.[21] In this regard, the plan had two facets: preserving the loyal to the United States regimes and putting these countries under the US influence, meanwhile alienating countries belonging to the Soviet economic system.[22] Indeed, the dire situation in post-war countries ravaged by poverty was known to be favorable to communist ideals.[23] Thus, an indirect goal of the Marshall Plan was to contain Soviet expansion. The furniture of economic (and military) assistance to Greece and Turkey threatened by communist uprising in 1947 exemplifies the

[19] This study differentiates the concepts of *international system* and *international order*. Although both concepts are shaped by units' interactions, the latter is defined by the strong states (poles), which institutionalize and regularize the relations between them in order to secure and advance their interests. In particular, the US international order is established by the unipole's policies through creating international institutions that reflect the unipolar structure of the international system. Visit, G. John Ikenberry, "Introduction: Power, Order, and Change in World Politics," in *Power, Order, and Change in World Politics*, ed. G. John Ikenberry (Cambridge: Cambridge University Press, 2014), 3-5.

[20] Michael Cox and Caroline Kennedy-Pipe, "The Tragedy of American Diplomacy? Rethinking the Marshall Plan," *Journal of Cold War Studies* 7, no. 1 (2005): 110.

[21] Ikenberry argued that the United States originally wanted to limit its involvement in Europe, in opposition to European governments that preferred greater US engagement; "U.S. hegemony in Europe was largely an empire by invitation." See: G. John Ikenberry, "Rethinking the Origins of American Hegemony," *Political Science Quarterly* 104, no. 3 (1989): 376.

[22] It is worthy to note that the Soviet system followed the same logic and pursued similar policies to separate its system from the West economic system. It would be the only way to maintain the countries together and preserve the order within the system.

[23] Cox and Kennedy-Pipe 2005, 110.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

goal of US economic assistance. Overall, sixteen European countries signed up to the Marshall Plan and established the Organization for European Economic Cooperation (OEEC) as a recipient for US aid.[24] Referring back to the quantitative analysis, all these countries appeared in a single cluster (labelled *Rest*) in 1958, whose 24 percent of total trade occurred with the United States and less than 4 percent with the whole Soviet system (Figure 3.3). Although in 1989, European and African countries got integrated into one bloc as shown in figures 3.7 and 3.8, these states had strong economic ties with the United States, which can be seen in large economic assistance to these countries and their active participation in the US-led international economic and financial institutions.

Besides the Marshall Plan for Europe, the United States proposed recovery and development plans to other countries and regions. Largely, the assistance was given to developing countries in the Middle East, South Asia, and the Asia-Pacific (Appendix E). In sum, in the 1946-1991 period, the United States provided approximately $300 billion USD as net grants and credits for countries across the world, including $21 billion USD as investment in financial institutions.[25] In total, economic, military, and technical aid during this period amounted to approximately 390 billion USD.[26]

Besides the economic aid provided to individual countries, the United States as a unipole used its overwhelming power to establish a liberal economic order within the West system.[27] During WWII, the allied nations already discussed the post-war economic restoration; for this purpose in 1944, 730 delegates from 44 nations gathered in Bretton Woods, United States, to participate in the United Nations Monetary and Financial Conference. The agreements, signed and ratified after the conference, established the Bretton Woods financial system and two major international institutions, namely the International Bank for Reconstruction and Development (IBRD) and the IMF.

[24] The OEEC founding members were Austria, Belgium, Denmark (with the Faroe Islands and Greenland), France, Greece, Iceland, Ireland, Italy (and San Marino), Luxembourg, the Netherlands, Norway, Portugal (with Madeira and the Azores), Sweden, Switzerland (with Liechtenstein), Turkey, and the United Kingdom. The OEEC became the Organization for Economic Cooperation and Development (OECD) in 1960.
[25] Appendix E provides statistical data on US net foreign grants and credits from 1946 to 1991. See: *Statistical Abstract of the United States 1992*, US Census Bureau, Table 1326, pp. 791-793; *Statistical Abstract of the United States 1994*, US Census Bureau, Table 1318, pp. 813-815.
[26] *Statistical Abstract of the United States 1994*, US Census Bureau, Table 1319, p. 816.
[27] Eric Helleiner, *States and the Reemergence of Global Finance: From Bretton Woods to the 1990s* (Ithaca; London: Cornell University Press, 1996), 3; John Gerard Ruggie, "International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order," *International Organization* 36, no. 2 (1982): 397.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

After the establishment of the Bretton Woods financial system, the US dollar became the dominant currency and a symbol of American hegemony in the West system. The US dollar provided a decisive advantage for the US government to pursue foreign and domestic policies without having to face difficult trade-offs in the short term.[28] In addition to financial organizations, the United States through a UN agency created an international organization regulating foreign trade: Although Washington failed to ratify the agreement of establishing the organization, the General Agreement on Tariffs and Trade (GATT), signed in 1947, became by default the general regulatory institution for international trade in the West system.[29] Although several countries, Czechoslovakia for example, that belonged to the post-war Soviet system were signatories of the Bretton Woods agreement and the GATT, these countries did not trade much outside the Soviet system and were therefore little influenced by these international institutions.[30]

Besides the Bretton Woods system, the United States created and supported a range of regional organizations for nurturing economic development at the regional level and of individual countries thereby providing an alternative to communism. For this purpose, the United States attracted and encouraged regional powers to take more responsibilities for the welfare and stability of their respective regions.[31] For example, the United Kingdom and Australia furnished economic and technical aid to the Commonwealth countries, in particular India, Pakistan, and Ceylon, by founding the Colombo Plan for Cooperative Economic Development in South and Southeast Asia (Colombo Plan); later non-Commonwealth countries joined this organization and thus it covered the whole Asia-Pacific region.[32] In the Western hemisphere, the United States and Colombia called for establishing an Organization of American States (OAS), created in 1948. In 1959, its members formed an Inter-American Development Bank (IDB) for lending to governments and government agencies. In the beginning of 1960s, Japan developed a plan for founding its own multilateral bank, Asian Development Bank (ADB), and in 1966, the plan was executed with 31 member countries. In

[28] Michael Mastanduno, "System Maker and Privilege Taker: U.S. Power and the International Political Economy," *World Politics* 61, no. 1 (2009): 130.
[29] John H. Jackson, "The General Agreement on Tariffs and Trade in United States Domestic Law," *Michigan Law Review* 66, no. 2 (1967): 251-252.
[30] Michel M. Kostecki, *East-West Trade and the GATT System* (London: Macmillan, 1979), 23-34.
[31] "Outline of Far Eastern and Asian Policy for Review With the President," Office of the Historian, Bureau of Public Affairs US Department of State, November 14, 1949, https://history.state.gov/historicaldocuments/frus1949v07p2/d386; Daniel Oakman, *Facing Asia: A History of the Colombo Plan* (Canberra: Pandanus Books, 2010), 44-45.
[32] Oakman 2010, 51.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

general, old and new regional great powers, like Japan, did not challenge the US leadership in their regions, but rather kept a low profile during the whole CW period.[33]

This acceptance of the unipole's dominant position was conditioned by the prosperity the US-led economic order provided.[34] The Bretton Woods system and consequent international institutions not only secured the US position as a unipole within the West system but also provided essential resources to the US allies for economic reconstruction and subsequent growth.

In summary, after examining the structure of the West system created after WWII, we can note that the United States appeared to be the most powerful actor, able to provide public goods to countries in need while in the process, also satisfying the objectives of its own foreign and domestic policies. The structure of the West system after WWII was unipolar due to the post-war devastation: old powers like the United Kingdom, France, Germany, and Japan lost their positions and became dependent on the United States for assistance. In order to maintain in the long term the dominance obtained after WWII, the United States also established an economic order essential to the economic growth of its allies and itself as well.

3.4 Units' capabilities and economic interactions within the Soviet system

The war arrangements discussed at the international conferences by the Soviet Union, United States, and United Kingdom contributed to attach Eastern and Central European states to the Soviet economy, thereby creating an independent USSR-dominated international system, in parallel to the West international system.[35]

Like the United States, the Soviet Union, the most powerful actor in the Soviet system (Section 3.4.1), formed and maintained its dominated economic order through various means: strengthening bilateral and multilateral trade with Central and Eastern European countries, nurturing economic institutions and providing economic, military, and technical assistance to its allies (Section 3.4.3). Economic aid was an important factor to attract the countries from the outside and extend its sphere of influence; thereby the scope of the Soviet system was subject to changes throughout the CW period (Section 3.4.2).

[33] Ming Wan, "Japan and the Asian Development Bank," *Pacific Affairs* 68, no. 4 (1995): 519.
[34] Ikenberry 2011, 217-218.
[35] The wartime negotiations regarding the post-war world are described in details in the Lloyd Gardner's book. See: Gardner 1993.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

3.4.1 Measuring units' capabilities within the Soviet system

The examination of trade data in Section 3.2 indicated that the Soviet system comprised a number of countries that were highly interacting with each other. The group of countries composing the Soviet system, based on the trade data mostly covered the Eurasian continent (although with some exceptions like Cuba since the 1960s and Nicaragua in the 1980s). In the system, the most dominant actor was the Soviet Union, whose economic, political, and military power was far above all others. The comparison of aggregated power based on GDP and CINC is provided for major Soviet system's countries with the share greater than five percent in Table 3.3 and for all countries within this system in Appendix D.

Table 3.3. Ranking major units' capabilities in the Soviet system by year

		1948		
Units	GDP	% (GDP)	CINC	% (CINC)
Soviet Union	420,555	50%	0.1639996	47%
China[1]	244,985	29%	0.1150552	33%
Poland[1]	60,742	7%	0.0298539	9%
Czechoslovakia	38,108	5%	0.0126014	4%
		1957		
Soviet Union	724,470	50%	0.1672666	51%
China	405,386	28%	0.0995304	30%
Poland	83,641	6%	0.013803	4%
		1973		
Soviet Union	1,513,070	65%	0.1674098	68%
Poland	177,973	8%	0.0144596	6%
East Germany	129,969	6%	0.0090189	4%
		1989		
Soviet Union	2,037,253	67%	0.1368206	63%
Poland	215,815	7%	0.0117983	5%
North Korea	55,934	2%	0.0112662	5%
Vietnam	65,615	2%	0.0110879	5%

[1] 1950 data.
[2] 1990 data.
Note: The Maddison Project estimated historical GDP in millions of 1990 International Geary-Khamis dollars.

The examination of aggregated GDP and CINC throughout the existence of the Soviet system indicates that the Soviet Union was the dominant power, constituting the largest part of total economic and military power of the system. Even though the number of the countries in the Soviet system increased from eleven in 1948 to nineteen in 1989, the USSR's share of aggregate power within the system increased from 47 percent in 1948 to 63 percent in 1989 (Table 3.3 and Appendix D).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

3.4.2 Fluctuated membership of the Soviet system

Although the number of countries within the system varied throughout the CW period, the Soviet system's core members were the Soviet Union, Bulgaria, Czechoslovakia, Hungary, Poland, Romania, and East Germany. Their initial participation in the Soviet system was determined by the WWII arrangements, negotiated between the great powers. Other Soviet system's countries were occasionally shifting between the two systems. These swings were driven by two major stimuli: geopolitical and economical. In this section, I bring the examples of Yugoslavia, China, and Cuba to illustrate the geopolitical and economic aspects of their transfers from one system to another.

One of the first countries to divert from the Soviet dominance was Yugoslavia. Yugoslav leader Josip Broz Tito determined to pursue independent foreign policy and dominate in the Balkans; hence, he resisted the Soviet control of the emerging communist camp.[36] Due to these deviations from the Soviet policies, in the early 1950s, Tito and other Yugoslav communists were denounced as traitors within the international communist movement and expelled from Cominform.[37] After this split, Yugoslavia improved economic relations with Western Europe and the United States. Meanwhile, Moscow along with the other Eastern European countries imposed a trade embargo against Yugoslavia. The consequences appeared in the examination of the trade volumes of Yugoslavia with the Soviet system's members, which dropped from 50 percent of total trade in 1948 to zero in 1954.[38] The Stalin-Tito split reflected the nature of the emerging Soviet system, i.e. no deviation from the Soviet line on ideology, economy, domestic politics, or foreign policy.[39]

In the end of the 1950s, among other actors in the Soviet system, the communist China's power rose to half that of the Soviet Union (Table 3.3) and in the future could potentially contest the unipole. With rising power, the Chinese leadership wanted to be considered equal but the Kremlin still played the role of the senior partner.[40] Therefore, Mao Zedong in the late 1950s started challenging the Soviet Union's dominance by questioning both the Soviet model of economy and ideological principles, as well as by pursuing autonomous foreign policy. These divergences resulted in the Sino-Soviet split in 1956-

[36] Roberts 1999, 29.
[37] Ibid.
[38] Willard L. Thorp, "American Policy and the Soviet Economic Offensive," *Foreign Affairs* 35, no. 2 (1957): 275.
[39] Roberts 1999, 30.
[40] Zubok 2009, 112.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

1966.[41] After the split, only Albania supported the People's Republic of China (PRC), this partly triggered the split between Moscow and Tirana. These splits were the consequence of diverging political ideologies between the Soviet Union that entered post-Stalinist times on the one hand and China with Albania, which remained pro-Stalinist regimes on the other hand. These changes are also visible in the bilateral trade analysis: communist China shifted from the Soviet system and appeared in the West system in 1973 (Appendix A).

Nevertheless, not all countries tried to escape the Soviet system. There were also countries that shifted from the West system to the Soviet economic system. Reasons for these shifts were of two kinds in particular: the attractiveness of the Soviet economic model and resentment over US policies. For example, in the early 1960s, the US-Cuban relations deteriorated due to the new Cuban pro-socialist government's policies and the US failed invasion. Facing US trade restrictions, Cuban leader Fidel Castro asked Moscow for economic and military assistance. Consequently, Cuba was integrated into the Soviet economic system and joined the Council for Mutual Economic Assistance (Comecon), which allowed the Castro's regime to not only receive large amounts of economic aid, but also improve bilateral trade with the members of the Soviet system. The change of allegiance of Cuba is visible in the trade analysis: Cuba shifted from the West system to the Soviet system that can be seen in Appendix A.

On the other hand, the systems' fluctuating membership resulted from the enlargement of the economic systems due to the decolonization and the emergence of many new independent countries. These new nations were then pressured to choose between the two available systems. This choice was determined by geopolitical and economic factors. With respect to the economic factors, the Soviet Union was able to offer economic aid and loans often under more favorable conditions compared to the West, whose economic aid was conditioned by domestic structures and procedures.[42] Furthermore, the Soviet programs were self-proclaimed to be "disinterested without strings," while the assistance from the West was represented by the Soviets as being "militaristic, imperialistic, and set about with conditions."[43] However, due to existing strong ties between former colonies and their metropoles, many newly emerged nations chose to join the West system (Figure 6.1). Nevertheless, through economic and technical assistance, the Soviet Union gained the

[41] Roberts 1999, 52-58.
[42] Thorp 1957, 279; LaFeber 1980, 179-180.
[43] Thorp 1957, 279.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

political advantage in attaching several developing countries such as Egypt and Afghanistan to the Soviet system (Figure 6.1).

3.4.3 Soviet economic policies toward establishing the USSR-led international order

The first decade after WWII witnessed a high-speed economic integration with the USSR at the center. Meanwhile, the Soviet Union pursued similar policies as the United States to separate its system from the West economic system (visit Section 3.3). It seemed to be the only way to keep the states together and preserve the unipole's dominance within the system. Like the United States, the Soviet Union aimed at establishing the Soviet system "as a self-contained economic unit."[44] The analysis of trade data exemplifies the reinforced economic integration within the Soviet system: The volume of the trade within the system expanded more than 2.5 times while the trade with the rest of the world decreased to less than half of its prewar level.[45] Thus, according to Willard L. Thorp, in 1954, the trade of the Soviet system countries with the rest of the world varied between 20 to 30 percent; the similar results obtained in 1957 as well (Figure 3.3). Within the Soviet system, the Soviet Union emerged as the most important trading partner. In 1948, its exports to other Soviet system's countries increased 25 times while imports increased 10 times, compared to their prewar levels.[46] This data on economic integration correlates to the economic data given in Section 3.2. Within the first decade of the post-war period, intra-Soviet-system trade was stable and represented approximately 75 percent of the total trade, the remaining 25 percent being traded outside of the Soviet system.[47]

After rejecting the US-proposed Marshall Plan, the Soviet Union initiated a series of policies to increase economic interactions within the Soviet system. The USSR offered a program of bilateral trade agreements, the so-called "Molotov Plan" in July 1947. Like its counterpart, the Marshall Plan with respect to Western Europe, the Molotov Plan provided economic assistance to Eastern European countries and promoted bilateral trade between them.[48] In January 1949, the Soviet Union institutionalized the trade relations with the countries by creating a program of economic cooperation, known as Comecon, and by

[44] Ibid., 272.
[45] Ibid., 271-272.
[46] Ibid.
[47] Ibid., 273.
[48] Li and Zhang 2017, 19.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

founding a centralized agency for stimulating and controlling economic development.[49] This resulted in reducing dependence on the trade outside of the Soviet system and increasing interconnectedness within the Soviet economic system.[50] Stalin in 1952 optimistically stated, "[W]ith this pace of industrial development, it will soon come to pass that these [Soviet] countries will not only be in no need of imports from capitalist countries."[51] Furthermore, the Soviet Union clearly recognized the importance of binding the member countries to itself and to each other by strong economic ties. For example, the Moscow offered to buy the Polish coal, which was originally going the West in an effort to enhance the economic interdependence between Poland and the Soviet Union.[52] In the first decade of the system's existence, the Soviet policies aimed at establishing an independent economic system based on communist principles and planned economy. As a result of these policies, a "parallel" financial system, coexisted with the US-led Bretton Woods system, was created.[53]

Later, in the mid-1950s, the Soviet Union however revised the economic policies by promoting a return to bilateral trade with the countries outside the system: The "Soviet economic offensive" largely covered newly emerging nations and those with historically ties to Russia such as Finland and Turkey. The new economic policies included various tools, such as intergovernmental trade, loans, technical assistance, trade fairs, technical exchange, trade missions, and propaganda.[54] Credit agreements concluded during 1955 amounted to nearly $600 million USD, most of which went to Yugoslavia, Egypt, Afghanistan, and India.[55] In total, since mid-1954 to 1957 the credit program of the Soviet countries (including the Soviet Union and its satellites) totaled $1.5 billion USD.[56] Improvement of economic relations with the developing world was considered as an important instrument attaching the countries to the Soviet economy and bringing them into the Soviet system.[57]

In the 1970s, the USSR's economy started declining due in particular to low productivity and the absence of economic incentives.[58] In addition, the Soviet system's

[49] "The Cold War (1945–1989)" 2016, 9; LaFeber 1980, 71.
[50] Visit Section 3.2 for detailed information.
[51] Joseph Stalin, *Economic Problems of Socialism in the Ussr* (Moscow: FLPH, 1952), 31.
[52] Thorp 1957, 275.
[53] Li and Zhang 2017, 18.
[54] Thorp 1957, 278.
[55] Ibid.
[56] Robert Loring Allen, "The Soviet and East European Foreign Credit Program," *American Slavic and East European Review* 16, no. 4 (1957): 434.
[57] Stanley J. Zyzniewski, "Soviet Foreign Economic Policy," *Political Science Quarterly* 73, no. 2 (1958): 207-208.
[58] Sakwa 2005, 339-340.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

economy was touched by the global crisis of 1973, especially the Eastern European economies.[59] In this period, Eastern European countries along with the Soviet Union improved bilateral trade with the West system's countries. Nevertheless, due to attachment to the USSR's economy and given subsidies, the dependency of the smaller countries upon the Soviet Union increased dramatically as well. The total Soviet subsidies to Eastern European countries rose from $2.6 billion USD in 1970 to $6.2 billion USD in 1975.[60] Moscow was required to subsidize the economies of its satellites, and it later seized this opportunity as an additional tool to enhance its influence in the region and promote its own pattern of integration.[61]

In general, the Soviet economic system was based not only on the planned economy, but more importantly, on the unipole's position as the only economic and financial donor. The Soviet Union as a unipole in the beginning of the 1980s started facing harsh economic challenges partly derived from the structure of the economic system. However, the Soviet Union received fewer returns, while the economic burden associated with subsidies, economic assistance, and the costs to curb unrests within the system dramatically increased.[62] For example, the defense expenses of the Soviet Union amounted to 67.7 billion rubles (16.4 percent of the USSR's budget) and annual expenditures on allies, such as Vietnam, Cuba, and Syria, reached 40 billion, 25 billion, and 6 billion rubles respectively.[63]

In order to respond to this challenge, Mikhail Gorbachev, a new leader of the Soviet Union, initiated a series of reforms that cardinally changed the structure of the Soviet international system. These reforms aimed at deregulation of politics and economics within the Soviet Union and the Soviet system in general and improvement of relations with the outside world.[64] Providing autonomy to Eastern European countries demolished the existing structure of the Soviet system: the communist regimes collapsed and the opposition came to power.[65] Comecon and other international economic and financial institutions were dissolved and the Soviet international system was disintegrated with the unipole breaking up into independent states.

[59] Mark Harrison, "Economic Growth and Slowdown," in *Brezhnev Reconsidered*, ed. Edwin Bacon and Mark Sandle (London: Palgrave Macmillan, 2002), 45.
[60] Josef C. Brada, "Interpreting the Soviet Subsididzation of Eastern Europe," *International Organization* 42, no. 4 (1988): 647.
[61] Marie Lavigne, "The Soviet Union inside Comecon," *Soviet Studies* 35, no. 2 (1983): 149.
[62] Bunce 1991, 225.
[63] Zubok 2009, 299.
[64] Bunce 1991, 229.
[65] "The Cold War (1945–1989)" 2016, 24-25.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

3.5 Economic interactions between the CW systems

While the two previous subchapters focused on economic interactions within the systems, this subchapter analyzes the level of economic interactions between the systems. In this regard, I examine these interactions in the form of the US-USSR relations as of the most powerful countries in the systems in Section 3.5.1. Then, I study the intra-European relations (Section 3.5.2) as an example of the Soviet-West economic interactions due to geographical proximity.

3.5.1 US-USSR relations as an example of the Soviet-West economic interactions

After WWII, the US-USSR economic relations were limited. The first priority for the Soviet Union was to consolidate the Soviet control over Eastern European countries.[66] Meanwhile, the United States pursued the same policy but in Western Europe by proposing the Marshall Plan in 1947. The Marshall Plan although was proposed to all countries including the Soviet Union and its allies was drafted to be unacceptable for the Soviet side and therefore was rejected.[67] This plan along with other policies pursued by the both sides split the region and then the world into two systems.

This division was facilitated by the differences in the structures of the economic systems, e.g. ruling communist parties in Eastern and Central Europe monopolized foreign trade in their own countries. This monopoly protected the Soviet system's economies not only from the economic crises but also from the Western sanctions, which existed throughout the CW period.[68]

The developed countries of the West system used sanctions against the Soviet countries to limit interactions. In particular, the US government during the CW period made a series of unilateral actions to restrict a level of interactions between the members of the systems. For example, due to a fear that the increasing trade with the communist system would bolster the Soviet and Chinese "war machines," Congress in 1951 passed the Kem Amendment and the Battle Act, which allowed cutting US aid to those nations that exported strategic goods to the communist countries.[69] Nevertheless, even when there was some

[66] Marc Trachtenberg, "The Marshall Plan as Tragedy," *Journal of Cold War Studies* 7, no. 1 (2005): 139.
[67] Holloway 2005, 74.
[68] Valentin Katasonov, *Ekonomika Stalina* [Stalin's Economy] (Moscow: Institut Russkoy Civilizacii, 2014), 178-182; Zyzniewski 1958, 206.
[69] LaFeber 1980, 129.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

relaxation of the limitations on trade with the communist nations, for example, in August 1954 the imports of machinery, which had been declining in earlier years, did not increase in 1955.[70] In the beginning of the 1970s, there was another attempt to restrict bilateral trade: the Jackson-Vanik Amendment on emigration and the Stevenson Amendment on export credits again hibernated the development of bilateral trade.[71]

Therefore, prior to the 1970s, the relations were almost absent: little communication, poor knowledge about ongoing processes within the other's system.[72] However, since the 1970s the economic relationships started slowly improving. As part of détente between the two superpowers, the countries in October 1972 signed the Soviet-American Trade Agreement, which granted the US Most Favored Nation (MFN) trading status to the USSR.[73] In addition, the controversial 1972 Russian wheat deal, amounted $700 million USD, nearly doubled the Soviet-American trade.[74] Besides the increase in bilateral trade, the United States provided credits through the Export-Import Bank to promote foreign trade with the Soviet Union.[75] However, the Stevenson and Jackson-Vanik amendments in 1974 undermined the importance of trade agreements signed few years earlier and froze bilateral trade.[76] For example, in November 1974 the US government denied export authorization for two major U.S.-Soviet computer deals.[77]

The new phase of the US-USSR relationships started with Mikhail Gorbachev coming to power. He hoped to improve relations with the developed West and thus obtain the "peace dividends" — lower military expenditures and Western credits, in order to ease the economic situation in the Soviet Union.[78] High defense expenses and costs of its allies burdened the USSR's economy while oil prices went down.[79] However, despite the improvement of political relations in the second half of the 1980s, there was no significant increase in trade between the two countries. Low oil prices also compelled the Soviet Union to make cuts in imports from the United States in 1985 and 1986.[80] Overall, the existing economic sanctions

[70] Thorp 1957, 274.
[71] Daniel Yergin, "Politics and Soviet-American Trade: The Three Questions," ibid.55, no. 3 (1977): 517-518.
[72] Ibid., 519.
[73] Roberts 1999, 76.
[74] LaFeber 1980, 275.
[75] Yergin 1977, 531-532.
[76] Ibid., 517-518.
[77] Michael Kaser, "Soviet Trade Turns to Europe," *Foreign Policy*, no. 19 (1975): 125.
[78] Zubok 2009, 291.
[79] Ibid., 298-299.
[80] Abraham S. Becker, "US-Soviet Trade in the 1980s," (Santa Monica, CA: RAND Corporation, 1987), 3.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

and restrictions on strategic goods constrained the development of economic relations between the Soviet and the West systems until the 1950s.

3.5.2 Intra-European relations as a representation of the Soviet-West economic interactions

After the Soviet Union rejected the US-proposed Marshall Plan for Europe and convinced its satellites and neighboring Finland to refuse the US aid, the economic relationships between the Western Europe and its eastern neighbors were frozen. This rejection is illustrative of the split between Eastern and Western Europe, but also between the West and Soviet systems.

Furthermore, the Western countries imposed trade restrictions further affecting the trade between the two systems; the important role was given to the Coordinating Committee on Multilateral Export Controls (COCOM), established in 1949 in order to control the trade of strategic goods.[81] COCOM prescribed three lists of controlled items: (1) the International Munitions List; (2) the International Atomic Energy List; and (3) the International (Industrial) List of dual-use items.[82] For example, the UK list of strategic goods in July 1966 amounted 580 restricted items.[83] As some scholars like Michael Mastanduno argue, the Western European countries were under the US pressure when followed the US policy to restrict trade with Eastern European countries; in this case, economic aid was used by the United States as a coercive instrument.[84] Nevertheless, up to the end of the 1960s, such restrictions had a limited effect on functioning of the Soviet system.[85]

The situation started changing in the 1970s: the Soviet Union along with its allies became more interested in trading with the West.[86] These changes originated from the ongoing Sino-Soviet tensions and technological shortage required for stimulating Soviet economic growth through higher labor efficiency.[87] The Soviet countries exported raw

[81] Jari Eloranta and Jari Ojala, "Introduction: East-West Trade and the Cold War as a Research Topic," in *East-West Trade and the Cold War*, ed. Jari Eloranta and Jari Ojala (Jyväskylä: University of Jyväskylä, 2005), 14.
[82] Richard T. Cupitt and Suzette R. Grillot, "COCOM Is Dead, Long Live COCOM: Persistence and Change in Multilateral Security Institutions," *British Journal of Political Science* 27, no. 3 (1997): 264.
[83] J. Wilczynski, "Strategic Embargo in Perspective," *Soviet Studies* 19, no. 1 (1967): 78.
[84] Michael Mastanduno, "Trade as a Strategic Weapon: American and Alliance Export Control Policy in the Early Postwar Period," *International Organization* 42, no. 1 (1988): 133-134.
[85] Wilczynski 1967, 79-84.
[86] Yergin 1977, 521.
[87] Ibid.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

materials to Western Europe and imported agricultural products and machinery.[88] The trade with the developed countries of the West system amounted 31 percent of the total Soviet trade in 1975.[89]

In order to deal with increasing volume of trade with the West, the Soviet countries joined an international banking system by extending their bank networks to Western Europe and other regions and allowing to set up representative offices of Western banks in Moscow and other capitals of Eastern European countries. In the second half of the 1960s, the Soviet Union signed agreements with Western European banks to receive long-term loans and credits. Since the 1970s, the Soviet banks actively participated in consortiums to lend money to Communist and non-Communist countries.[90] Furthermore, the Soviet-owned banks began establishing joint companies with the Western counterparts to promote trade between the countries. For example, Moscow Narodny Bank (MNB) and Morgan Grenfell Bank & CO. in London founded a jointly owned company, East-West Trading, for promoting and financing leasing operations.[91] However, the total assets of the Soviet banks in 1974 were not large and amounted approximately $10 billion USD of the Soviet Union's banks and $1 billion USD for Eastern European countries.[92]

In the late 1970s, poor investment, the Polish crisis, and other financial setbacks increased skepticism over the creditworthiness of the Soviet countries.[93] These economic difficulties pushed Eastern European countries to restrict import from the West while receiving subsidies from the Soviet Union.[94] Therefore, even though since the 1970s there was significant improvement of economic relations between Eastern European countries and the developed West, the relations were unstable and subject to changes due to unpredictable international environment.

3.6 Summary

For the analysis of economic interactions, I used countries' bilateral trade as an illustrative example of economic interactions between units. Furthermore, I added the data on

[88] Jacqueline McGlade, "COCOM and the Containment of Western Trade and Relations," in *East-West Trade and the Cold War*, ed. Jari Eloranta and Jari Ojala (Jyväskylä: University of Jyväskylä, 2005), 56-58.
[89] Yergin 1977, 522.
[90] "Soviet and East European-Owned Banks in the West," (Virginia: Central Intelligence Agency, 1975).
[91] Ibid.
[92] Ibid., 3-4.
[93] "The Changing Role of Soviet-Owned Banks in the West," (Virginia: Central Intelligence Agency, 1985).
[94] Keith Crane, "The Creditworthiness of Eastern Europe in the 1980s," (Santa Monica, CA: RAND Corporation, 1985).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

economic aid and loans, which were employed by great powers as a vital political tool to attach the beneficiary countries to their systems.

By analyzing bilateral trade and other aspects of economic interactions, I verified my hypothesis H1 that after WWII there were formed two international systems that had strong economic interconnectedness within the systems and relatively weak interactions between them. The West system in the course of time expanded and covered the largest part of the world. Throughout the time, the US relative power within the system declined nonetheless remained present (Table 3.2 and Table 6.1). This supports the hypothesis H2, with respect to the US unipolarity. Unlike the West system, the Soviet system collapsed in 1991 due to the breakup of the unipole – the Soviet Union; this confirms the hypothesis H3. Due to the Soviet increased dependency on the economic relations with the West and a heavy burden of foreign politics, the Soviet system collapsed with the breakup of the Soviet Union (H4).

The quantitative and qualitative analysis demonstrated that the countries in Western Europe and other regions had a high level of economic interactions, which formed the West system. In order to maintain in the long term the dominance obtained after WWII, the United States established the international order, based on the Bretton Woods institutions, essential to the economic growth of its allies and itself as well and enabled regional powers to enjoy the dominant positions in their regions. Although the Bretton Woods system dissolved in the beginning of the 1970s, the US dominance, the US dollar position, and the US-led institutions still exist, therefore the US unipolarity in the West economic system is still present as well (H2). In line with the hypothesis of this dissertation, the study of hierarchy by David A. Lake also demonstrates that the US dominancy in the West system has existed throughout the CW and post-CW periods; furthermore, the proposed *indices of security hierarchy* and *of economic hierarchy* were estimated to be higher in the CW than in post-CW period.[95] Nevertheless, some scholars argue that today rising powers, like China, challenge the US unipolarity, and the international system is currently shifting to bipolarity or multipolarity, other scholars on the contrary argue that the contemporary unipolarity would last long.[96]

[95] David A. Lake, *Hierarchy in International Relations* (Ithaca, New York: Cornell University Press, 2009), 82-92.

[96] Scholars, like Ikenberry and Wohlforth, argue that the contemporary unipolarity would last long, while others, such as Layne and Posen, suggest the rising powers, like China, challenge the US unipolarity. See: Christopher Layne, "This Time It's Real: The End of Unipolarity and the Pax Americana," *International Studies Quarterly* 56, no. 1 (2012); Posen 2011; Zakaria 2008; Brooks and Wohlforth 2015/16.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Like the West system, the Soviet system was also unipolar: the Soviet Union was the strongest power in the system and all other countries were under its control in terms of economic development (H3). Although revolts and protests against the communist governments and the Soviet domination occurred occasionally, the Soviet supremacy over its allies remained until the end of the 1980s.[97] Nevertheless, the structure of the Soviet system was different from the West system: the USSR established a hegemonic order.[98] Unlike the United States in the West system, the Soviet Union as a unipole was the only economic and financial donor to its allies and other developing countries. However, in the 1980s, the Soviet Union's economy required structural changes and Gorbachev determined to transform the Soviet political and economic systems and opened the Soviet Union to the world.[99] His reforms facilitated the destruction of the Soviet system.[100]

I speculate that the Soviet system could be more stable and would exist longer if Moscow did not have tremendous defense expenditures and preserved the geographical scope of the system within the original borders created after WWII. If to compare with the ancient times described in Chapter 2, the two CW international systems were geographically close to each other. This proximity seriously limited the possibility of independence and self-sustainability. For this reason, the ancient Eurasian systems lasted much longer than the CW international systems.

I assume that a crucial factor of the Soviet instability was geographic proximity to the developed West. Soviet relative economic independence existed prior to the 1970s secured the stability of the system. However, expanded trade with the Western world revealed its potential political costs, viz. "political costs of interdependence;" in other words, under interdependence each side had a greater degree of direct and indirect influence on the opposite side.[101] In the West-Soviet relations, the Soviet dependency upon the West was much greater than vice versa. Therefore, economic dependence on the trade and technology transfer from the developed West determined the Gorbachev's policies of détente in the

[97] Some scholars argued that the Soviet position in Eastern Europe was fragile and unstable. See: Roberts 1999, 30.
[98] According to Gilpin, a *hegemonic order* is a type of the structure, in which "[a] single powerful state controls or dominates the lesser states." However, Gilpin does not distinguish hegemony and unipolarity. Other theorists, such as Ikenberry and Wilkinson, on the contrary distinguish the two concepts by emphasizing that *hegemony* refers to "highly unequal political or politico-military influence relationship," while *unipolarity* is related to the distribution of material capabilities. See: Gilpin 1981, 29; Ikenberry, Mastanduno, and Wohlforth 2011, 5; Wilkinson 1999, 142-143.
[99] Zubok 2009, 302.
[100] Ibid., 307.
[101] Yergin 1977, 523-524.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

1980s.[102] As a result, structural factors, such as the Soviet increased dependence on the economic relations with the West and a heavy burden of foreign politics led to the collapse of the Soviet system with the breakup of the Soviet Union as a unipole.[103]

[102] Roberts 1999, 94.
[103] Besides the structural factors, Vladimir Zubok included Gorbachev's personal qualities as an important factor that influenced the collapse of the Soviet Union. See: Zubok 2009, 305.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Chapter 4 The Cold War systems' geographical boundaries: political interactions

After the end of WWII, the constitution of the international systems in Europe was particularly influenced by the geopolitical arrangements done at the international conferences between the great powers.[1] At the conferences, the Big Three (United States, United Kingdom, and Soviet Union) discussed and somehow agreed on the post-war borders and domestic regimes in Europe. Washington and London agreed to certain extent on the Soviet claims to establish and maintain the Soviet influence in Eastern Europe and the Balkan region.[2] For example, in 1941, US President Franklin Roosevelt and British Prime Minister Winston Churchill came up with the proposition of the Atlantic Charter, which included the "common principles in the national policies of their respective countries on which they based their hopes for a better future for the world."[3] The Soviet government agreed to this proposition, nevertheless adding that the Soviet Union reserved the right not to follow the Anglo-American rules under certain "circumstances," such as undesirable West actions in their own sphere of influence.[4] The Yalta conference illustrated that the Big Three shared a common vision "the great powers bore the greater responsibility and … the peace should be written by the Three Powers represented at the table."[5] Furthermore, Deputy Foreign Secretary Andrei Vyshinsky stated, "Russia would never permit the small powers to judge the acts of the great powers."[6]

Consequently, the Big Three conferences realized the idea of the division of Europe into two major groups cherished by the Big Three officials: the Western group, which included the United States and Western Europe, and the Soviet group, comprising the Soviet Union and Central and Eastern Europe. USSR's Deputy Commissar for Foreign Affairs Maxim Litvinov in particular proposed a plan of dividing Europe into spheres of influence. The Litvinov's plan included Finland, Sweden, Poland, Hungary, Czechoslovakia, Romania, Turkey, and the Balkans (excluding Greece) into the Soviet sphere of influence. Litvinov was

[1] During WWII, there was a series of international conferences mostly between the United States, United Kingdom, and Soviet Union to discuss the post-war future of Europe and the division of Europe into spheres of influence. In particular, the discussions were taken in the Tehran Conference of 1943, the Fourth Moscow Conference of 1944, the Yalta and Potsdam Conferences of 1945.
[2] Gardner 1993, 265; Plokhy 2010, 139-151.
[3] "1941: The Atlantic Charter," United Nations, http://www.un.org/en/sections/history-united-nations-charter/1941-atlantic-charter/index.html.
[4] Gardner 1993, 103.
[5] Plokhy 2010, 121.
[6] Gardner 1993, 228-229.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

not the only one who considered such division acceptable; George F. Kennan, US diplomat in Moscow, also thought that a compromise to "divide Europe frankly into spheres of influence" would preserve peace and order.[7] This idea was also not alien to the British policy-makers.[8] However, other politicians, such as Cordell Hull and Charles E. Bohlen, disagreed with the concept of spheres of influence.[9] Nevertheless, by the end of the 1940s, the United States and Great Britain eventually accepted the Soviet actions in the Balkans, Eastern and Central Europe, because they occurred within the boundaries of the spheres of influence agreed upon by the Big Three. Consequently, these agreements gave birth to two coexisting international systems in Eurasia.

Based on the hypotheses of this study, interactions between and within the two systems delineate the geographic boundaries of the two systems. Therefore, this chapter analyzes political interactions within the international systems in the CW period. In order to do so, I analyze the quantitative data on political interactions: membership in IGOs and alliances (Sections 4.1 and 4.2). Then, I study the political interactions within the West and Soviet systems separately in order to analyze the structure and units' interactions within these systems in Sections 4.3 and 4.4 respectively. Finally, I assess the interactions between the systems (Section 4.5).

4.1 Methods for the quantitative analysis of *political systems*

The quantitative data of political systems uses two databases: IGOs and alliances datasets, which are both provided by the COW project spanning from 1815 to 2012. The method follows three steps: In the first step, I selected the most appropriate years. Then, I combined the two datasets and ran a hierarchical cluster analysis to group countries based on the similarity of their patterns. Finally, I analyzed the level of interactions between the clusters in order to determine the boundaries of the *political systems* using a self-developed index of political interactions. The *index of political interactions* is a combined measure of two kinds of political interactions: the IGOs' membership and the participation in alliances. To that regards, the measure differs from the economic data that originated from a single dataset. Therefore, the index of political interaction varies from "0" (the total absence of

[7] Plokhy 2010, 149-151.
[8] Gaddis 1987, 50.
[9] David Reynolds, "The European Dimension of the Cold War," in *Origins of the Cold War: An International History*, ed. Melvyn P. Leffler and David S. Painter (New York; London: Routledge, 2005), 171; Gaddis 1987, 52.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

interaction on both indices) to "2" (the highest level of interaction on both indices).[10] In addition, I measured the significance of the level of political interactions within the systems *vs.* between the systems.

The datasets used to determine the boundaries of the political systems are the COW databases, the first one covers the countries' participation in IGOs within the 1815-2005 period. I first transformed the database originally in a country-IGO form into a dyadic form (country-country). Inasmuch as the IGOs database covers only intergovernmental organizations, political interactions between the communist regimes is not reflected, i.e. duality of their political structures, in which a dominant political party has own separated apparatus and exercises foreign policy through party-party links.[11]

The second database describes the political alliances formed by two and more countries within 1815-2012 period. In order to analyze this dataset, I also transformed it into a dyadic (country-country) form. In addition, political alliances provided by the COW project are classified into four types: defense pact, neutrality pact, non-aggression pact, and entente (consultations between states in the alliance if a crisis occurred). I attributed a score for the strength of each alliance: "4" for defense pact, "3" for neutrality pact, "2" for non-aggression pact, and "1" for entente.

Since I selected 1948, 1957, 1973, and 1989 for analyzing economic interactions (Section 3.1), I attempted to use the same years for the study of political interactions. However, the data for years 1948 and 1957 are not available. Therefore, in this study, years 1950, 1960, 1973, and 1989 were examined because the IGOs dataset only includes quinquennial data within the 1815-1965 period and yearly data after. For each selected year, the datasets are composed of a large range of countries: the sample includes from 75 countries for year 1950 to 161 countries for the larger sample of year 1989.

Next, I combined the two datasets and ran a hierarchical cluster analysis. In order to combine the two databases, I standardized values for each dataset to give them equal value and added them. Then, I ran a hierarchical clustering, as was done for the study of trade relations (Section 3.1). For each studied year, the software produced the distance between countries in terms of patterns of political interactions, which is reflected in a dendrogram (Appendix G). I hypothesize that the United States and the Soviet Union throughout the CW

[10] Each type of political interactions varies from "0" to "1."
[11] This phenomenon is discussed in details in the following sections.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

period differed in their patterns of political interactions. Furthermore, I assume that the Eastern European countries were closer to the Soviet Union than to the United States in terms of political exchanges. Therefore, they would form a separate cluster with the Soviet Union, differing from other countries. Furthermore, I expect more region-based clusters since a big number of IGOs were created to deal with regional development or regional problems.

Then, I measure the index of political interactions, which includes (an index of IGOs and an index of alliances) for each dyad. Each index (IGOs and alliances) is weighted by the total number of IGOs (and alliances respectively) involved by the considered country. For example, the United Kingdom participated in 65 IGOs, while the Soviet Union only in 16 in 1950. Among these, Moscow and London are together in 14 organizations. The USSR shared 14 out of 16 organizations with the United Kingdom (14/16=0.88), while the United Kingdom shared 14 organizations out of 65 (14/65=0.22) with the Soviet Union. It means that in 1950 the share hold by the United Kingdom in the total number of IGOs involved by the Soviet Union is much higher (0.88) than the reverse (0.22). The same calculation is conducted for alliances (UK-Russia 4/28=0.14 and Russia-UK 4/43=0.09). Finally, the two indices are summed up: political interactions of the USSR with the United Kingdom equal 0.97 and UK interactions with the Soviet Union equal 0.36.

Finally, I mapped the level of political interactions between clusters using a heatmap for each of the considered years. The heatmap represents the averaged index of political interactions for all countries in "cluster A" with respect to all countries in "cluster B." The averaged index between clusters therefore varies between 0 and 2. A high level of political interactions between two clusters (index greater than 1) would indicate that they belong to the same political system. Reversely, if two clusters have a low level of political interactions they should belong to two different systems. The heatmap provides a visual representation of the scores obtained within the clusters and between clusters and delineates the boundaries of each political system. Finally, each cluster is represented in figures 4.2, 4.4, 4.6, and 4.8, according to its averaged index scores shared with the USSR-led cluster on the X-axes and the scores with the US-led cluster on the Y-axes. As a final point, I did countries' pairwise comparison within the political systems versus between the systems, measuring the significance with 95% of confidence.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

4.2 Results on *political systems*' boundaries

The analysis is conducted year by year. For each year, the list of countries in each cluster, the heatmaps of political interactions between and within clusters, and finally, the graphic representation of the clusters' distance to the Soviet system and to the West system are provided.

The 1950 dataset includes 74 countries.[12] The cluster analysis divided these countries into 11 clusters. The list of the countries included in each cluster for the analyzed years is provided in Appendix F. The political interactions between these clusters indicate they coalesce into five different groups: American (*America*), Rest (*Asia*, *AU*, *NZ*, *ES*, *Europe*, and *AF*), Middle East (*MidEast*), Soviet (*AL* and *Soviet*), and outliers (*CN-FL-MN)*, illustrated in Figure 4.1.

1950	Asia	AF	AU	NZ	MidEast	CN-FIN-MN	Europe	ES	Soviet	AL	America
Asia	0.57	0.47	0.90	0.66	0.48	0.23	0.80	0.62	0.53	0.23	0.58
AF	0.93	0.00	1.00	1.00	0.90	0.29	0.95	0.75	0.81	0.50	0.94
AU	0.44	0.21	0.00	1.77	0.30	0.17	0.65	0.36	0.35	0.15	0.40
NZ	0.44	0.24	1.91	0.00	0.31	0.18	0.66	0.42	0.38	0.18	0.39
MidEast	0.70	0.58	0.84	0.75	1.24	0.26	0.86	0.69	0.61	0.34	0.75
CN-FIN-MN	0.30	0.18	0.44	0.41	0.22	0.00	0.48	0.36	0.52	0.06	0.29
Europe	0.39	0.18	0.54	0.47	0.27	0.18	1.49	0.57	0.41	0.13	0.42
ES	0.42	0.18	0.42	0.42	0.29	0.22	0.86	0.00	0.57	0.12	0.44
Soviet	0.48	0.24	0.56	0.52	0.34	0.26	0.76	0.75	0.91	0.29	0.48
AL	0.65	0.57	0.86	0.86	0.59	0.24	0.79	0.57	1.00	0.00	0.60
America	0.37	0.23	0.47	0.38	0.31	0.15	0.55	0.44	0.36	0.13	1.67

Figure 4.1. Heatmap of political interactions between clusters in 1950. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line).

[12] I removed North Korea due to the absence of its interactions with any other countries.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

As hypothesized, the Soviet group, which included *AL* and *Soviet* clusters, was highly integrated between themselves (greater than 1) and therefore was separated from other groups, although there was still quite high interconnectedness with *Europe* and *ES* cluster (0.76 and 0.75 respectively). This allows concluding that by 1950 there was a delineation between the Soviet political system and the rest of the world. In addition, regional political interaction is observed in Europe, Middle East, and South America: although these three groups do not qualify as "systems" for the reasons delineated below, their strong political interaction appears in the analysis. I note that South American countries were highly integrated within the continent and separated from the rest of the world, with the exception of the United States. However, the relative importance of the South American continent to the United States was much higher than for any other region. The *MidEast* and *Europe* were similarly highly integrated within the same clusters. Figure 4.2 represents the relative importance of each cluster with respect to the two groups: US-led and Soviet, and graphically demonstrates how separated in terms of political interactions the West system and the Soviet system were in 1950.

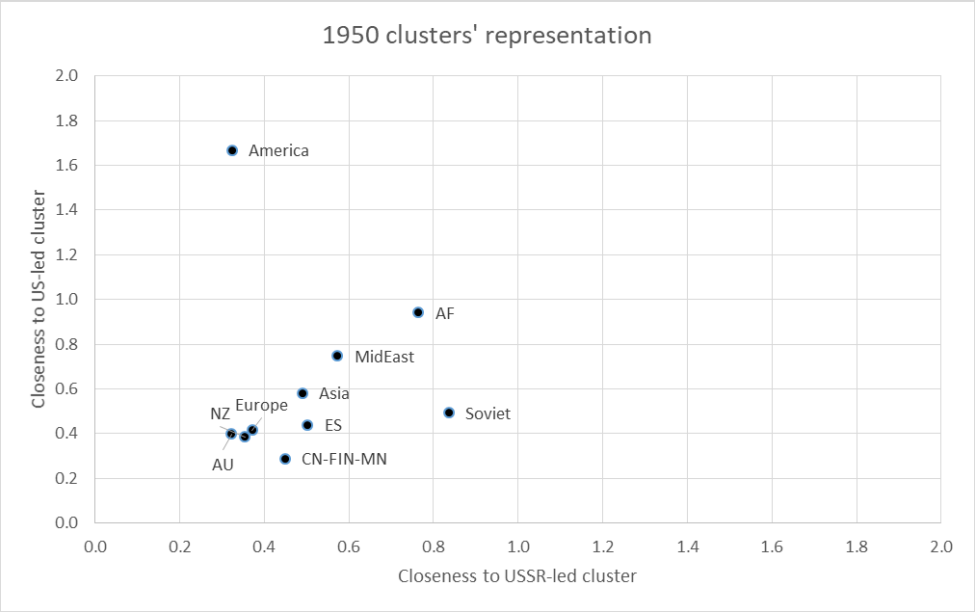

Figure 4.2. 1950 political clusters' representation. The X-axis represents the relative closeness of each cluster to the Soviet system; the Y-axis represents the relative closeness of each cluster to the West system.

In 1950, the division between the West and the Soviet systems was already clear. However, the level of political interactions for the Soviet system with the rest of the world was relatively high (between 0.32 and 0.76). This situation probably reflected the pre-war and

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

wartime arrangements. For example, the number of organizations in which the Soviet countries participated remained the same between 1935 and 1950, while the total number of IGOs in the world almost doubled from 58 in 1935 to 94 in 1950.[13]

The 1960 dataset includes 107 countries (Appendix F). Compared with 1950 (Figure 4.1), the Soviet political system in 1960 showed a dramatic decrease in connectedness with the outside world and became highly integrated within the system (Figure 4.3). The cluster analysis first indicated that the *Soviet* cluster dealt with itself (0.83), while had a low level of political interactions with the rest of the world (0.38). The *America* cluster again displayed a high integration within the cluster (1.63), while the *Rest* had quite low interconnectedness with other clusters.

1960	Rest	Soviet	America
Rest	0.60	0.33	0.59
Soviet	0.38	0.83	0.38
America	0.41	0.23	1.63

Figure 4.3. Heatmap of political interactions between clusters in 1960. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line).

The results indicate that the *Soviet* cluster was already separated *politically* from the rest of the world in 1960. At the same time, the Americas were still disconnected from other continents, especially with the *Soviet* and *Rest* clusters. Figure 4.4 illustrates the separation of all three clusters from each other.

[13] Jon C. Pevehouse, Timothy Nordstrom, and Kevin Warnke, "The COW-2 International Organizations Dataset Version 2.0," *Conflict Management and Peace Science* 21 (2004).

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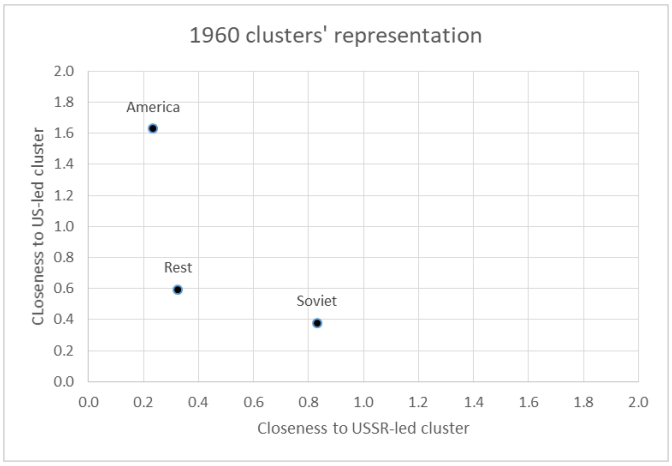

Figure 4.4. 1960 political clusters' representation. The X-axis represents the relative closeness of each cluster to the Soviet system; the Y-axis represents the relative closeness of each cluster to the West system.

In 1973, the data sample incudes 141 countries (Appendix F); the cluster analysis provided six clusters. The results of 1973 are different from the previous years. First, the United States shifted from the *America* cluster into *Europe*, signifying a US shift to worldwide policies and a higher level of political interactions between the United States and Western Europe. Second, the *Soviet* cluster while is integrated within the cluster (1.02) strengthened its interactions with the outside world, especially *Europe* (0.74). These results are characteristics of was the détente period occurred in the 1970s. Third, regional political interaction is observed in Europe, Middle East, and South America.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

1973	Rest	Europe	Soviet	DPRK	MidEast	America
Rest	0.54	0.69	0.50	0.01	0.55	0.54
Europe	0.34	1.28	0.44	0.00	0.32	0.38
Soviet	0.40	0.74	1.02	0.05	0.40	0.43
DPRK	0.05	0.00	0.86	0.00	0.00	0.00
MidEast	0.54	0.65	0.49	0.00	1.39	0.56
America	0.40	0.64	0.40	0.00	0.42	1.64

Figure 4.5. Heatmap of political interactions between clusters in 1973. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line).

Political connectedness between the US-led and USSR-led clusters was however asymmetrical: the West dealt mostly within the West (1.28), while the Soviet political system started interacting with the West (Figure 4.5).

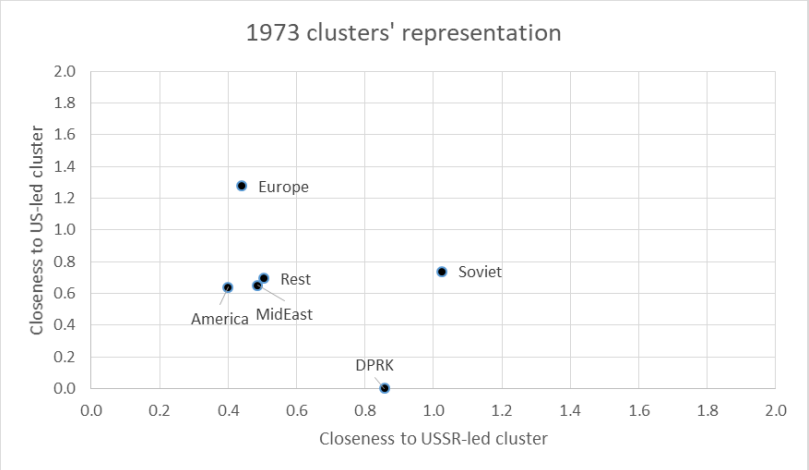

Figure 4.6. 1973 political clusters' representation. The X-axis represents the relative closeness of each cluster to the Soviet system; the Y-axis represents the relative closeness of each cluster to the West system.

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In 1989, the number of the countries available in the dataset increased to 161 (Appendix F). The analysis displayed the results similar to those of year 1973. The Soviet openness to the world further increased, to Europe in particular (0.75), while the level of interactions within the *Soviet* cluster stayed stable (1.02).

1989	Rest	Africa	Soviet	Europe	MidEast	America
Rest	0.52	0.59	0.47	0.67	0.52	0.49
Africa	0.46	1.49	0.35	0.52	0.52	0.42
Soviet	0.43	0.42	1.02	0.75	0.44	0.41
Europe	0.34	0.34	0.34	1.44	0.33	0.36
MidEast	0.43	0.57	0.34	0.53	1.48	0.42
America	0.41	0.45	0.30	0.64	0.41	1.47

Figure 4.7. Heatmap of political interactions between clusters in 1989. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line).

The regionalization of political interactions deepened in the *MidEast*, *America*, *Europe*, and *Africa*, which became more integrated within themselves.

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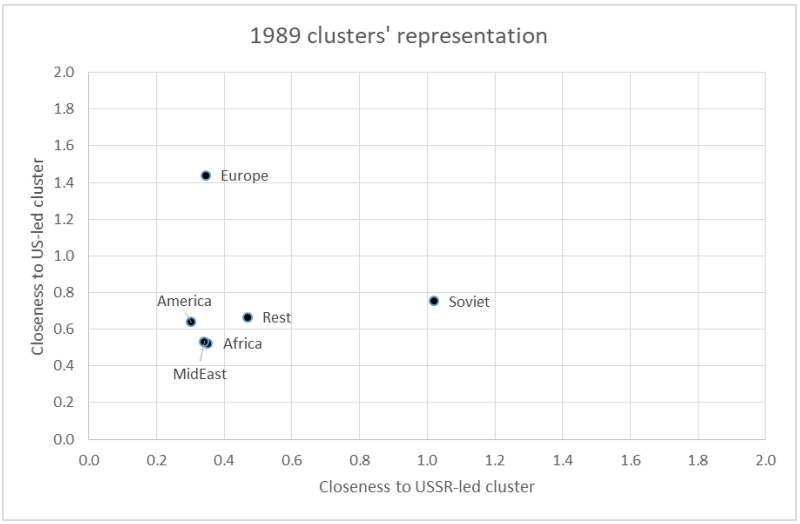

Figure 4.8. 1989 political clusters' representation. The X-axis represents the relative closeness of each cluster to the Soviet system; the Y-axis represents the relative closeness of each cluster to the West system.

For countries belonging to the West system, the index of political interactions they have with other countries within the political system is statistically significantly higher with 95% confidence than the index of political interactions they have with countries of the Soviet system.[14] These results support the hypothesis that the West political system is independent from the Soviet system in terms of political interactions. For countries belonging to the Soviet political system, the index of political interactions within the system is statistically significantly higher with 95% confidence than the index of political interactions with the West political system.[15] These results also support the hypothesis that the Soviet political system is independent from the West system in terms of political interactions.

In sum, the year-to-year analysis of political interactions from 1950 to 1989 confirms the hypothesis that throughout the CW period, the world was not a single integrated system. Furthermore, some observations were noticed: First, political regionalization was observed in South America, Europe, Africa, and Middle East. These results differ from the analysis of bilateral trade, which showed more economic integration among these regions. The second observation is the US shift from the *America* cluster into the *Europe* cluster; it represents the transformation of US foreign policies from the Monroe doctrine to the global level.[16] Finally,

[14] $ps < 0.001$ for each studied year.
[15] $ps \leq 0.010$ for each studied year.
[16] Lawrence S. Kaplan, "The Monroe Doctrine and the Truman Doctrine: The Case of Greece," *Journal of the Early Republic* 13, no. 1 (1993).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

as predicted, the Soviet system was separated from the outside world throughout the whole CW period. This political isolation almost disappeared at the end of the 1980s and the members of the Soviet system gradually joined the West system.

4.3 Political interactions within the West system

Analyzing the quantitative and qualitative data on political interactions within the West system, I observed that the system was going through some changes although the unipolarity remained unchanged. In the first decade of the CW period, the United States built an international order based the Bretton Woods financial system as a foundation of the US dominancy within the West system. The United States utilized 'carrots and sticks' policies toward other members of the West system: in particular, the United States initiated a series of international organizations and bilateral agreements (or 'carrots') for attaching countries to the US-led international order. These policies are reviewed in Section 4.3.1. The United States also used the 'sticks' toward the unsubordinated members (Section 4.3.2). However, with respect to regional powers, the US policy was quite different: they enjoyed a certain level of autonomy to pursue their own national interests (Section 4.3.3). In a final section, I summarize the particular characteristics of the West system that enable it to last longer than the Soviet system (Section 4.3.4).

4.3.1 The US 'carrots' toward the allies

Political interactions within the West system were directly associated with the US foreign policies. The United States had the highest material capabilities and hence was the strongest power within the West system (Section 3.3.1). First, the United States established a series of international economic and financial organizations, starting from the agreements signed and ratified after the UN Monetary and Financial Conference, which formed the Bretton Woods financial system and the IBRD and the IMF. Washington also furnished multilateral and bilateral economic assistance through international institutions, such as Marshal Plan, Colombo Plan, as well as to individual countries in the Middle East, Europe, and the Asia-Pacific (Appendix E). Second, the White House built a political order by creating a series of region-based political organizations and mutual defense agreements and setting itself as a hub of these defense agreements. In particular, the United States along with

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many American states in 1947 signed the Rio Pact, the first of the CW mutual security agreements. Then, in order to secure the European allies, the United States and its Western European counterparts established a collective defense system in 1949 by signing a multilateral mutual defense agreement – NATO.

The same policy was exercised by the United States to secure its political influence in the Asia-Pacific and thereby to contain the Soviet influence in the region. From 1947 to 1951, the United States followed a policy of "defensive perimeter," the main purpose of which was to maintain the security of offshore islands in the Asia-Pacific.[17] In the beginning of the 1950s, the US policies by the National Security Council Report 68 (NSC-68) were transformed into a more comprehensive containment strategy against communism that emphasized the military means.[18] The policy of containment became global with setting the US role as a "world policeman, committing resources and manpower all over the world."[19] For this purpose, the United States initiated a series of multilateral and bilateral mutual security agreements in the Asia-Pacific. In 1951, Australia, New Zealand, and the United States signed the ANZUS Treaty. In 1954, in Manila there was signed the Southeast Asia Collective Defense Treaty, or Manila Pact, which gave birth to SEATO.

Besides the multilateral organizations, the United States signed a series of bilateral agreements in the 1950s with the Philippines, Japan, South Korea, and the Republic of China (ROC). These agreements allowed the United States to station its troops in these countries in exchange of security guarantee against external attacks. They were also employed as part of the US alliance architecture in the Asia-Pacific.

The United States operated in other regions as well. In order to avoid the burst of revolutions that started occurring in the Middle East, such as in Egypt in 1952 and in Iran in 1953, the United States initiated a Middle East version of NATO. In 1955, Iran, Iraq, Pakistan, Turkey, and the United Kingdom signed the Middle East Treaty or the Baghdad

[17] Gaddis 1987, 73-75.

[18] There are two major views on this document: the first perspective (presented by John Lewis Gaddis) argues that NSC-68 was based on exaggerated military threats posed by the Soviet Union, while the other perspective (presented by Beatrice Heuser) justifies NSC-68 as based on quite realistic threat-perceptions. Visit, John Lewis Gaddis and Paul Nitze, "NSC 68 and the Soviet Threat Reconsidered," *International Security* 4, no. 4 (1980); Beatrice Heuser, "NSC 68 and the Soviet Threat: A New Perspective on Western Threat Perception and Policy Making," *Review of International Studies* 17, no. 1 (1991); Michael Cox, "Western Intelligence, the Soviet Threat and NSC-68: A Reply to Beatrice Heuser," ibid.18 (1992).

[19] John Lewis Gaddis, "Was the Truman Doctrine a Real Turning Point?," *Foreign Affairs* 52, no. 2 (1974): 386.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Pact, which created the Middle East Treaty Organization (METO)[20] or more known as CENTO. To evade being directly involved in the Israeli-Arab conflict, the United States determined not to participate but to "cooperate with" CENTO. Nevertheless, the United States signed bilateral agreements with each CENTO member.[21] Besides building peace in the Middle East, CENTO had the other important purpose of linking NATO with SEATO. This was done by establishing a defense organization with Turkey, a NATO member, and Pakistan, a SEATO member, thereby creating a line of containment against the expansion of the Soviet system. CENTO and SEATO like other defense treaties and organizations spread the Doctrine Monroe to the global level covering the Asia-Pacific and the Middle East.[22] In other words, all collective defense systems built by the United States served a dual purpose: attaching the countries to the US-led order through economic, military, and technical assistance and limiting the Soviet influence in these various regions and their possible interactions with the Soviet system.

Furthermore, other great powers also signed the treaties with their former colonies or friendly nations to secure their interests in these regions. For example, the United Kingdom signed the Anglo-Malayan Defense Agreement in 1957 in order to protect Malaya from external aggression and maintain the status of Great Britain as a great power.[23] In West Asia, the United Kingdom joined Iran, Iraq, Pakistan, and Turkey to establish CENTO. Besides, the United Kingdom maintained its influence in the world by creating the Commonwealth, which included most of its former colonies.[24] Therefore, a network of organizations led by the United States and its allies was formed. This network enabled the regional great powers to protect their national interests, while secured the US interests as well.[25]

In addition, the United States since the 1970s also financed conservative and pro-business non-governmental organizations (NGOs) to respond to the rise of left-leaning NGOs, movements that challenged US-backed governments.[26] Washington utilized different

[20] After Iraq pulled out of METO in 1959, the organization was renamed CENTO.
[21] LaFeber 1980, 159.
[22] Ibid., 196-197.
[23] Peter Busch, "The Origins of Konfrontasi: Britain, the Cold War and the Creation of Malaysia, 1960–1963," in *Cold War Britain, 1945–1964: New Perspectives*, ed. Michael F. Hopkins, Michael D. Kandiah, and Gillian Staerck (London: Palgrave Macmillan, 2003), 184.
[24] Krishnan Srinivasan, *The Rise, Decline and Future of the British Commonwealth* (New York: Palgrave Macmillan, 2005), 28.
[25] James W. Peterson, *American Foreign Policy: Alliance Politics in a Century of War, 1914-2014* (New York; London: Bloomsbury, 2014), 45.
[26] Ronald W. Cox, "US Foreign Policy, Business NGOs and Low-Intensity Democracy," *Class, Race and Corporate Power* 4, no. 2 (2016): 7.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

organizations, such as US Agency for International Development (US AID) to channel assistance to NGOs. Overall, besides economic and political incentives, the United States employed soft power for preserving the US-led order, which involved culture, education, and public diplomacy. Soft power, for example, was used in the Middle East and in Latin America.[27]

Overall, on the one hand, the United States through various defense agreements guaranteed security in the regions and to individual countries. On the other hand, the unipole established numerous governmental and non-governmental organizations, through which projected its power upon other countries and provided public goods to the members of the West system.

4.3.2 The US 'sticks' toward the insubordinates

The United States established an international order, which brought prosperity to its allies in exchange for accepting the US dominancy. However, few countries challenged the US supremacy and attempted to pursue independent from the US policies. As a response, the US government was resolved to use coercion or covert actions to interfere in domestic affairs of these unsubordinated nations. For example, the United States involved in Guatemala against the democratically elected president Jacobo Árbenz in 1954.[28]

Compared to the Guatemalan case, the case of Cuba illustrates a failed US attempt to maintain a country within its influence. In 1959, Cuba shook the US-led order by revolting against a pro-US government and revising the course of the island's economic development: the new regime implemented an agrarian reform and confiscations of the foreign property, both aimed at diminishing American influence.[29] The United States reciprocated with economic sanctions, political isolation of the island, and military coercion. This crisis

[27] Rasmus Gjedsse Bertelsen, "The University as a Transnational Actor with Transnational Power: American Missionary Universities in the Middle East and China," *PS: Political Science and Politics* 47, no. 3 (2014); Jason William Cronin, "Soft Power and Its Impact on US Influence in Latin America" (Master's thesis, Naval Postgraduate School, 2004).

[28] N. S. Ivanov, "Latinskaya Amerika i SSHA: Nezavisimost protiv "Blokovoy" Diplomatii. (Opyt Mnogostoronnih Otnosheniy v 1940-e - 1970-e gg.)" [Latin America and the USA: Independence against the "Bloc" Diplomacy (Experience of Multilateral Relations in the 1940-1970s)], in *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], ed. N. I. Egorova, et al. (Moscow: Universitet Dmitriya Pozharskogo, 2012), 109-112.

[29] Young and Kent 2013, 147-148.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

resulted in a Cuban shift to the Soviet sphere of influence.[30] The Cuban revolution revealed the US covert policies of exploiting the paramilitary forces in politically unstable countries or unfriendly regimes to intervene directly in the domestic affairs of those countries.[31] In order to prevent the spreading the Cuban-like revolutions across the American continent, the United States established the Alliance for Progress in 1961, which aimed at boosting economies, supporting democracies, and improving the life conditions of people in Latin America through the US aid programs.[32]

The Middle East and the Asia-Pacific also became platforms to pursue the US foreign policies with the help of the Central Intelligence Agency (CIA). For example, the agency supported the coup d'états in Syria in 1949 and 1956, in Iran in 1953, in Lebanon in 1958, and in Indonesia in 1955.[33] Lindsey A. O'Rourke accounted more than 72 covert actions realized by the CIA abroad in the 1947-1989 period.[34] Interference into domestic affairs of independent countries was one of the means to retaliate against insubordinates' policies and hence maintain the US supremacy.

4.3.3 The US policy toward regional powers

The United States used another type of instruments to preserve its dominancy with regard to regional powers. Washington gave more autonomy to regional great powers in their respective zones of influence. This policy followed the decolonization process. Within the first few years of the CW, the former great powers reduced the commitments to their former colonies. For example, Great Britain abandoned the Palestine mandate, pulled out of India, ended financial aid to Greece and Turkey, and asked the United States to take responsibility for the eastern Mediterranean.[35]

[30] "The Cold War (1945–1989)" 2016, 17.
[31] LaFeber 1980, 218-219.
[32] Ibid., 217-218.
[33] Douglas Little, "Mission Impossible: The CIA and the Cult of Covert Action in the Middle East," *Diplomatic History* 28, no. 5 (2004); David P. Forsythe, "Democracy, War, and Covert Action," *Journal of Peace Research* 29, no. 4 (1992).
[34] Lindsey A. O'Rourke, "The U.S. tried to change other countries' governments 72 times during the Cold War," *The Washington Post*, December 23, 2016, https://www.washingtonpost.com/news/monkey-cage/wp/2016/12/23/the-cia-says-russia-hacked-the-u-s-election-here-are-6-things-to-learn-from-cold-war-attempts-to-change-regimes/?utm_term=.1f32a6e16fe2.
[35] Reynolds 2005, 173.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

However, after the restoration of Western European economies, major powers restarted extending their power in other regions. The United Kingdom and France projected their influence upon their former colonies by institutionalizing communications channels and through economic, military, and technical assistance.[36] All these programs established by the great powers aimed at preserving developing countries into the great powers' orbit and within the West system as well.[37] In the Asia-Pacific, Japan since the 1960s pursued rapprochement policies by furnishing economic assistance and actively participating in regional development, for example, the establishment of the ADB, the Ministerial Conference for the Economic Development of Southeast Asia, and the Asian and Pacific Council.[38] By these means, major powers exercised their power to protect the national interests, meanwhile securing the US interests and pursuing the policies in line with those of the United States.

Although great powers aligned themselves with the United States, some of them inclined to pursue more independent from Washington policies. By the end of the 1950s, the commencement of the Western European economic integration and comeback of French President Charles de Gaulle initiated changes within the West system in Europe, resulting in a decrease in economic dependency on the United States and a higher level of political independence. At the same time, economic relations with the Soviet system were improved.[39] Political elites in Europe, particularly in France, were determined to acquire more independence from the United States and to regain a great power status. For this reason, France refused to participate in the Geneva Disarmament Conference and held its first nuclear test in September 1960.[40] Furthermore, France under de Gaulle withdrew from the NATO structures as part of its non-alignment policy.[41] Nevertheless, as quantitative analysis showed, France did not shift rather kept close economic and political relations with the West system's members. Furthermore, other powers, like the United Kingdom, Japan, and West Germany, enjoyed strong ties with Washington, while pursuing their own national interests.[42]

[36] Gordon D. Cumming, *Aid to Africa: French and British Policies from the Cold War to the New Millennium* (London: Taylor & Francis, 2017).
[37] Ibid., 81-82.
[38] Sueo Sudo, "Japan-ASEAN Relations: New Dimensions in Japanese Foreign Policy," *Asian Survey* 28, no. 5 (1988): 509.
[39] LaFeber 1980, 208-209.
[40] Ibid., 221.
[41] Władysław Wszebór Kulski, *De Gaulle and the World: The Foreign Policy of the Fifth French Republic* (New York: Syracuse University Press, 1966), 153-154.
[42] Charles S. Maier, "Hegemony and Autonomy within the Western Alliance," in *Origins of the Cold War: An International History*, ed. Melvyn P. Leffler and David S. Painter (New York; London: Routledge, 2005); V. V. Panova, "Deyatel'nost' "Gruppy Semi" v Gody Kholodnoj Vojny" [Activities of the "Group of Seven" in the

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

In the Asia-Pacific, the United States gave more autonomy to Japan, which since the 1960s projected its economic power on the countries in the region.[43] Through strong political, economic, and military links, the United States secured the attachment of Japan to the West system. Tokyo established a multilateral bank (ADB) as part of its 'charm offensive' policy. Overall, Japan did not challenge the US political and economic superiority, it rather enjoyed the status of regional power and accepted the dependency upon the United States from a military perspective.[44]

Overall, despite the rise of capabilities of Western European countries and Japan, the structure of the West system remained unipolar. The United States still had the largest material capabilities compared to other great powers. However, after the 1970s the relative share of the US material capabilities and economic power within the West system began to decline (Table 3.2). The economic growth of the Western European countries started encouraging them to pursue their own agendas under the US leadership. This autonomy made the US actions to appear less dominating, less constraining and therefore probably more acceptable to other countries.[45]

One of the pillars of the West system's stability was the US policy labelled "first among equals," under which Washington maintained its dominancy, while also providing a forum for discussions among great powers. The establishment of the Group of Seven or G7, which included the United States, United Kingdom, Germany, Japan, Italy, France, and Canada in 1975, aimed at maintaining and strengthening solidarity within the West system by giving an opportunity of direct negotiations between the countries' leaders. The G7 resulted from changes in the capabilities' distribution in the 1970s: the US-led system became more interconnected economically and politically, thereby blurring the limits between domestic and foreign policies.[46]

Years of the Cold War], in *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], ed. N. I. Egorova, et al. (Moscow: Universitet Dmitriya Pozharskogo, 2012).

[43] Sudo 1988.

[44] Wan 1995, 514.

[45] Reynolds 2005, 223.

[46] Panova 2012, 293-294.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

4.3.4 Characteristics of the West political system

The United States as a unipole furnished a large amount of economic, military, and technical aid to its allies (Appendix E). First, Washington directly supported more than 120 individual countries. The United States also financed various projects, like the Marshall Plan, the Colombo Plan, etc. Furthermore, Washington nurtured international organizations in the economic (e.g. Bretton Woods institutions), political (e.g. OAS) and military spheres (e.g. NATO, SEATO, CENTO). Besides sponsoring numerous IGOs, the United States funded many NGOs within the West system. As a result, Washington was able to influence the course of domestic politics in a number of countries through different kinds of assistance.

Besides these 'carrots,' the United States also employed a range of 'sticks,' such as economic sanctions, military coercion, and covert actions to influence the domestic policies and hence secure the country's attachment to the West system under the US leadership. Through these multiple ways, the superpower could oppress any independent (or anti-American) movements and politicians in other countries, for example in Latin America.

However, regarding regional powers, such as West European countries and Japan, the White House used a rather different policy. With respect to these countries, the United States allowed a certain degree of autonomy to pursue national interests, even if their policies sometimes contrasted the US interests.[47] Running policies against their US patron was not always needed: the US-led order provided enough incentives in terms of economic prosperity, defense, and political autonomy to protect their power, while preserving the order. It seems that the flexibility of policies in relations with other countries determined the long existence of the West system since major units did not challenge the dominant power. According to Gilpin, the system can be changed by the rising powers if "the expected benefits [of challenging the unipole] exceed the expected costs."[48] A cost-benefit analysis demonstrates that the CW period was not only highly beneficial for the rising powers in the West system, but also the costs associated with changing the structure would have been too high.[49] Therefore, during the CW, no country rose enough power to challenge the United States.

Another important feature of political interactions within the West system turned to be a close relationship between foreign politics and the private business, in particular the

[47] Maier 2005; Mastanduno 2009.
[48] Gilpin 1981, 10.
[49] Ibid.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

relationship between the US government and the US businesses.[50] The economic interests of US private business determined the preservation of Latin America within the US sphere of influence and the former's dependency upon the developed nations, the United States in particular. [51] The US government employed covert actions against the Guatemalan government in 1954, when the land reform implemented by Árbenz touched US multinational corporation United Fruit Company, which enjoyed close relationships with the Eisenhower administration.[52] Overall, during the CW, transnational corporations (TNCs) not only became one of the non-state actors in IR, but also turned into being important instruments of foreign policies. In this regard, TNCs played an important role in interconnecting countries within the West system and securing the US dominancy.[53]

4.4 Political interactions within the Soviet system

As the West political system, the Soviet system's structure was unipolar with the Soviet Union as unipole (Section 3.4.1). The Soviet Union also used 'carrots and sticks' policies toward the members of the system. In this regard, the Moscow's policies were similar to the Washington's ones. The Soviet Union provided a large amount of assistance to its allies and established a series of governmental and non-governmental organizations to strengthen the contacts between the countries not only in political, economic, and military spheres, but also in the spheres of culture and education (Section 4.4.1). On the other hand, the Kremlin used 'sticks' policies, such as economic sanctions, expulsion from the international communist movement, military invasion, coercion, and covert actions, in order to punish the subordinates (Section 4.4.2). Despite some similarities with the West system, the Soviet system still was quite different. Peculiarities of the Soviet system are discussed in Section 4.4.3.

[50] Jeffrey E. Garten, "Business and Foreign Policy," *Foreign Affairs* 76, no. 3 (1997): 69; Ivanov 2012, 104-105, 109-110.
[51] Susanne Bodenheimer, "Dependency and Imperialism: The Roots of Latin American Underdevelopment," *Politics & Society* 1, no. 3 (1971): 351.
[52] Lars Schoultz, *Beneath the United States: A History of US Policy toward Latin America* (Cambridge, Massachusetts; London: Harvard University Press, 2009), 337-338; Ivanov 2012, 109-110.
[53] Joseph S. Nye, "Multinational Corporations in World Politics," *Foreign Affairs* 53, no. 1 (1974): 155-159.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

4.4.1 Soviet 'carrots' toward its allies

Like the United States, the Soviet Union pursued the 'carrots and sticks' policies toward its allies. Besides, the bilateral trade and economic aid discussed in Chapter 3, the Soviet Union time to time was reducing or cancelling the debts of its allies. For example, Moscow annulled the East German debt in order to pacify unrests in East Berlin in 1953, and it called off $538 million USD in Polish debt in 1956.[54] Furthermore, the Soviet Union was buying frequently unnecessary products from its allies at prices above the world market levels, and was selling fuel at prices below the market, in order to support the allies' economies.[55]

In addition, the USSR established governmental and non-governmental organizations to strengthen bilateral and multilateral connections between the countries within the Soviet system. First, in order to restore economies of Eastern European countries after the WWII, Moscow established Comecon and other multilateral economic and financial institutions. These policies resulted in reducing dependence on the trade outside of the Soviet system and increasing interconnectedness within the Soviet system.[56] As an outcome of the economic policies, a Soviet-specific financial system that coexisted with the US-led Bretton Woods system.[57]

Besides the economic ties, the Soviet Union attached its allies by concluding bilateral defense agreements with Finland in 1948, Hungary, Bulgaria, and Romania in 1949. Moscow also signed few treaties with Asian allies, such as China in 1950, North Korea in 1961, India in 1971, and Vietnam in 1978. Some of bilateral agreements were signed during WWII, such as with Czechoslovakia in 1943, Poland and Yugoslavia in 1945.

Furthermore, in addition to the bilateral defense agreements, the Kremlin strengthened the alliance by signing the Warsaw Pact in 1955, which included the USSR, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Romania. For some researchers, the Warsaw Pact was a response toward the external threat, i.e. acceptance of West Germany into NATO in May 1955.[58] However, other scholars emphasize the

[54] Ted Hopf, *Reconstructing the Cold War: The Early Years, 1945-1958* (New York: Oxford University Press, 2012), 214, 219.
[55] For example, Cuban sugar was bought by the Soviet Union in prices above the market levels in exchange for Cuban purchases of Soviet machinery and manufactured goods. See: Peter Zwick, *Soviet Foreign Relations: Process and Policy* (New Jersey: Prentice Hall, 1990), 221.
[56] Visit Chapter 3 for detailed information.
[57] Li and Zhang 2017, 18.
[58] "The Cold War (1945–1989)" 2016, 12.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

significance of the Pact to the member-countries. In particular, the pact allowed Moscow to secure forward-basing of Soviet troops in the allies' territories, which became a valuable instrument of control.[59] Smaller nations, meanwhile, seized a chance to influence to some extent the decision-making and thereby obtained a certain degree of independence. For example, when Moscow proposed to increase the military budgets in 1979-1980 and to contribute a larger share to the organization, Warsaw and Budapest disagreed, while Bucharest even reduced its defense spending.[60] Therefore, the agreement aimed at further integration of the signed countries within the Soviet system.

In addition to the IGOs, the Soviet Union strengthened the party-to-party links between the countries. For this purpose, the Communist Information Bureau (Cominform) was organized in October 1947, including the communist parties from the USSR, Yugoslavia, France, Italy, Poland, Bulgaria, Czechoslovakia, Hungary, and Romania. Cominform aimed to consolidate the communist parties under Moscow's control through channeling the activity information from the individual parties to Moscow and the policy directives in the opposite direction.[61] Cominform was used as a political tool to increase Joseph Stalin's control over the activities within the system and outside, as well as to reinforce the USSR's dominance over Eastern Europe. A month before the first Cominform meeting, after a purge of left-wing anticommunist political leaders, the Soviets rigged elections in Hungary.[62] Later at the Cominform meeting, Andrei Zhdanov formally announced new Soviet policies emphasizing the 'two-camp' view of the world.[63] In general, throughout its short existence, Cominform became a key "propaganda instrument … to provide public guidance and information to the leadership of various national Communist parties."[64] After the dissolution of Cominform in 1956, which was also a framework for meetings for the international Communist movement, party leaders were meeting occasionally in Moscow; for example, leaders of the communist (ruling and non-ruling) parties were invited to participate in celebrations of the 1917 October

[59] Zwick 1990, 194.
[60] Ibid., 195.
[61] A. S. Stykalin, "KPSS i Mirovoe Kommunisticheskoe Dvizhenie" [The CPSU and the World Communist Movement], in *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], ed. N. I. Egorova, et al. (Moscow: Universitet Dmitriya Pozharskogo, 2012), 390-391.
[62] Young and Kent 2013, 49.
[63] LaFeber 1980, 71.
[64] Bernard S. Morris, "The Cominform: A Five-Year Perspective," *World Politics* 5, no. 3 (1953): 368.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Revolution.[65] Through such meetings, the Kremlin exercised the control over the communist parties and their actions within the relevant countries.

Aside from the cross-border communist organizations, the Soviet Union strengthened the security and stability of communist regimes within each individual country as well. For some Eastern European communist parties, the Soviet support was a major factor of their regimes' stability. The Warsaw Pact was a guarantee of communist parties' power, in particular in East Germany, Poland, and Czechoslovakia, when their leaders struggled with popular riots.[66] In the Cuban case, without the Soviet patronage and contribution, Cuba was unlikely to survive the pressure from the United States.[67] Although Moscow signed no defense treaty with Havana, and despite Cuba did not join the Warsaw Pact, the Soviet Union stationed a 2,500-2,800 troop combat brigade and about 5,000 support and intelligence personnel in Cuba since the 1970s.[68] Furthermore, the USSR provided Cuba with modern Soviet weapons, such as an air-defense system and surface-to-surface missiles that were capable of carrying nuclear warheads.[69]

The Soviet Union permitted its allies to project their influence on other countries and secure their own national interests. Cuba in this regard illustrates a good example. Fidel Castro desired to expand the revolution to other countries, inasmuch as he perceived himself as a "world revolutionary."[70] For this purpose, he provided support to revolutionist movements in Africa, sending troops, military support, and advisors to Nigeria, Angola, Ethiopia, Mozambique, and other African countries.[71] As Peter Zwick observed, Cuba was not just a "puppet" of the Soviet Union, but their relations rather were "one of mutual benefit and cost."[72] Other allies were in the same intricate situation: playing both roles as sovereign actors and instruments of the Soviet policies. For instance, Bulgarian military and technical support to the National Liberation Front in Algeria, which fought against France, displayed

[65] Stykalin 2012.
[66] Zwick 1990, 193.
[67] Ibid., 221.
[68] Ibid.
[69] Ibid., 222.
[70] Ibid., 218.
[71] Gordon Adams, "Cuba and Africa: The International Politics of the Liberation Struggle: A Documentary Essay," *Latin American Perspectives* 8, no. 1 (1981): 115.
[72] Zwick 1990, 222.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

this duality: Bulgaria delivered the assistance approved by Moscow to the independence movement, while such aid enhanced the Bulgarian significance in the Warsaw Pact.[73]

Overall, the Soviet Union provided enormous economic and political benefits to the allies, which aimed at keeping the countries loyal to the Soviet dominancy. However, occasionally the Kremlin faced challenges, such as political unrests in individual countries against unpopular reforms, or disobedience, in which cases Moscow used the 'sticks' policies, discussed in the next section.

4.4.2 The USSR's 'sticks' toward the insubordinates

The Soviet Union, like the United States, used various ways to control its allies not only by providing economic and political benefits, but also by retaliating against the insubordinates' policies. This section discusses different mechanisms of the USSR's 'sticks.'

At the emergence of the Soviet system, Stalin used criticism as a political instrument applied to Eastern and Central European leaders to punish deviations from the Soviet model. This way Stalin increased pressure on the allies and influenced their domestic affairs. For example, in 1947 Polish leader Wladyslaw Gomulka was criticized for following a "Polish national path" to build socialism. A year later, Yugoslavia, then Hungary, Poland and Czechoslovakia were condemned for nationalist deviations.[74] Intolerance to nationalist variations of communism was a main feature of the Soviet system throughout the whole CW period; this led to other alternative measures to suppress the unsubordinated countries.

If the criticism did not work, the Soviet leaders could remove disgraced leaders of the countries. The sovereignty of individual countries was limited by the Soviet vision of system's stability. Disappointed with Gomulka, the Soviet leadership in 1948 advised the Polish Central Committee plenum to remove him from the Politburo, which was completed immediately, then, Gomulka was also expelled from the Polish communist party. A year later, in a similar way Hungarian foreign minister Laszlo Rajk was removed.[75] Often such punishments of the leaders were not individual and were followed by purges within the

[73] A. A. Ulunian, "Osobennosti Oboronnoy Politiki Balkanskih Chlenov Varshavskogo Pakta (Vtoraya Polovina 50-h gg. XX v.)" [Peculiarities of the Warsaw Pact Balkan Members' Defense Policies (The Second Half of the 50s in the XX century)], in *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], ed. N. I. Egorova, et al. (Moscow: Universitet Dmitriya Pozharskogo, 2012), 185-186.
[74] Hopf 2012, 84.
[75] Ibid., 91-92.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

parties. The case of Rudolf Slansky, General Secretary of the Czechoslovakian communist party, exemplifies the type of punitive measures applied by Moscow against a group of disgraced leaders; according to the Yugoslavian radio, there were in total 3,000 defendants in the Slansky Affair.[76] Czechoslovakian purges were not unique: similar trials against leaders occurred in all Eastern and Central European countries. In all trials, the Soviet influence played a crucial role: Stalin was personally sending telegrams to remove one or another official from his post.[77] The influence of the USSR was also seen in oppressing local unrests, although officially it did not directly intervene: during the Polish crisis of 1980–1981, the Polish authorities with the recommendation from Moscow crushed the Solidarity movement, imprisoned its leaders, and launched martial law in December 1981.[78]

A special role was given to the USSR's Committee for State Security (KGB) and its counterparts in the communist regimes as another tool to control the population within the Soviet system. For this purpose, an enormous apparatus of secret police was created in all allied countries. Only in East Germany, the personnel of the Ministry for State Security (Stasi) went from 4,000 employees (excluding informers) in 1950 to over 91,000 employees in 1991.[79] The Soviets educated and trained the East German agents. The whole system of spying relied on "everyone is watching everyone else."[80] The East German system was not unique; Czechoslovakia had a similar structure of the secret police.[81] Furthermore, a System of Joint Acquisition of Enemy Data (SOUD) was created in 1979, combining the databases of intelligence services of the Soviet Union, Bulgaria, Czechoslovakia, East Germany, Cuba, Mongolia, Hungary, Poland, and Vietnam.[82]

One extreme type of 'sticks' was the exclusion from the Soviet system. For Yugoslavia, whose leader Josip Broz Tito was determined to pursue his own national interests away from the Soviet course, the punitive measure of expulsion from the international communist movement was implemented, together with economic sanctions.

[76] Galina P. Murashko and Albina F. Noskova, "Repressii kak Element Vnutripartiinoi Bor'by za Vlast'" [Repressions as an Element of the Intraparty Struggle for Power], in *Moskva i Vostochnaia Evropa. Stanovlenie Politicheskikh Rezhimov Sovetskogo Tipa (1949-1953): Ocherki Istorii* [Moscow and Eastern Europe. Formation of the Soviet-type Political Regimes (1949-1953): Historical Sketches], ed. Tatiana V. Volokitina, et al. (Moscow: ROSSPEN, 2002), 561.
[77] Ibid., 560.
[78] Roberts 1999, 67.
[79] John C. Schmeidel, *Stasi: Shield and Sword of the Party* (London; New York: Routledge, 2008), 16.
[80] Ibid., 40.
[81] Bedrich Bruegel, "Methods of Soviet Domination in Satellite State," *International Affairs* 27, no. 1 (1951).
[82] Romania did not join due to tense relations with the Soviet Union in the 1960-1970s. See: Schmeidel 2008, 116.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Tito's actions represented a danger to the Soviet dominancy in Central Europe. For this reason, Stalin expelled the former ally from all communist organizations and structures and cut economic relations. Meanwhile, the control over domestic affairs within the Soviet Union and its allies was reinforced.[83]

The final instrument used to maintain the structure of the Soviet system was military invasion. It was used in two ways: first, in order to intervene in an unfavorable domestic political process and second, to support unpopular leaders. As an example of changing the course of national development, the Soviet Union used military invasion in Hungary in 1956 and Czechoslovakia in 1968. The reforms engaged in Hungary during the Khrushchev's Thaw went to the extent of withdrawing the country from the Warsaw Pact, with a risk of total withdrawal from the Soviet system. This state of affairs was seen in the Kremlin as undesirable: in order to prevent a loss of the ally, the Soviet troops entered Budapest. This massive invasion resulted in intense fighting with some 25,000 casualties, including 5,000 dead. Moscow suppressed the Hungarian revolution and installed a new pro-Soviet government headed by Janos Kadar.[84] Earlier in 1953, the Soviet tanks were used on the streets of Eastern Berlin to oppress the revolts in East Germany. German workers protested against unpopular economic policies of GDR's leaders. The Soviet Union restored order with force, resulting in the death of 200 civilians and the arrest of some 10,000 Germans.[85]

Applying all the measures discussed above, Moscow consolidated its absolute control and attached the member countries to the Soviet system economically, politically, and militarily. However, after the death of Stalin in 1953, the USSR's leaders loosened control to certain extent, which undermined the system's stability, resulting in the protests in East Germany, Poland, and Hungary and the loss of China and Albania as Soviet allies. Therefore, since the mid-1950s, the Soviet Union maneuvered to maintain the system's stability between maintaining tight control of the domestic processes within member states on the one hand and allowing them some independence on the other hand. Nevertheless, Moscow faced a number of challenges since some members had Stalinist regimes, while others tended to pursue more liberalization and to acquire autonomy from the unipole.

[83] Roberts 1999, 28-30; Thorp 1957, 275.
[84] Roberts 1999, 49.
[85] Hopf 2012, 218.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

4.4.3 Characteristics of the Soviet political system

From the early stages of the Soviet system's formation, Moscow used various economic, political, and military tools not only to attach countries to its sphere of influence but also to obtain total control over the countries' political life. This was stipulated by the specificity of the USSR's political regime: communism required a complete change of the political and economic systems of individual countries. Occasionally such changes were free-willed and democratic; in other cases, they were forced. The Czechoslovakian coup d'état of 1948 in this regard illustrates such involuntary and undemocratic joining to the Soviet system.

At the formation of the Soviet system, the allies were under the control of the Soviet Union to the extent of consulting with Moscow regarding the foreign policy. In 1949, for example, Romanian ambassador G. Valdescu-Rakoas asked Soviet deputy minister of foreign affairs Valerian Zorin for the "Soviet attitude" toward Romanian participation in international organizations and meetings.[86] Beijing in the early 1950s also discussed with Moscow the content of its foreign policy.[87] The Soviet control was also denoted in helping to restructure communist parties based on the USSR's model and in appointing the USSR's officials in Central Committees and Politburo meetings of individual countries.[88]

Furthermore, in order to increase control, the Soviet Union fought against the Western influence, not only in economic or political spheres, but also in culture. For this purpose, in the end of the 1940s, the Soviet Union launched an anti-cosmopolitan or anti-Western campaign inside the USSR and in its allies. By 1949, the Soviet Union requested to close all Western cultural and information centers in Eastern and Central Europe; the control was to the extent that only one American movie was played in Poland between 1949 and 1958.[89] Although the control over cultural and social life was loosened later, it to certain extent existed until the end of the Soviet system.

In the mid-1950s, the control was reduced: allies' autonomy in decision-making and Western influence slowly reentered the Soviet system. The decrease in control was chiefly

[86] Ibid., 91.
[87] Ilya V. Gaiduk, "OON v 1950 Godu: ot Sovetskogo Boykota k Koreyskoy Voyne" [The UN in 1950: from the Soviet boycott to the Korean War], in *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], ed. N. I. Egorova, et al. (Moscow: Universitet Dmitriya Pozharskogo, 2012), 19.
[88] Tatiana V. Volokitina, "Istochniki Formirovaniya Partijno-Gosudarstvennoj Nomenklatury – Novogo Pravyashchego Sloya" [Sources of the Party-State Nomenclature Formation – New Ruling Stratum], in *Moskva i Vostochnaya Evropa. Stanovlenie Politicheskih Rezhimov Sovetskogo Tipa (1949-1953), Ocherki Istorii* [Moscow and Eastern Europe. Formation of the Soviet-type Political Regimes (1949-1953): Historical Sketches], ed. Tatiana V. Volokitina, et al. (Moscow: ROSSPEN, 2002), 166-167; Hopf 2012, 105.
[89] Hopf 2012, 89.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

associated with Stalin's death and Nikita Khrushchev's policy. In February 1956, Khrushchev delivered a speech at the Twentieth Congress of the Communist Party of the Soviet Union, in which he denounced Stalin's personality cult and dictatorship. As part of the Khrushchev's policy of peaceful coexistence with non-socialist countries, the Cominform was dissolved in April 1956.[90] This policy coincided with the Khrushchev's Thaw, reducing repressions and censorship in the Soviet Union. However, the policy encouraged the vocal calls for changes in Eastern and Central Europe, Hungary and Poland in particular, which resulted in the Hungarian revolution of 1956 oppressed by the Soviet tanks.[91] Even though the revolts were suppressed, the Khrushchev's Thaw and peaceful coexistence policy opened a gate between the West and the East for the Soviet Union and its allies as well. More importantly, the Soviet system's member states started to gain some level of autonomy from the Soviet total control.[92] Those who opposed new policies were expelled from the Soviet system in the 1960s, for example, Albania was pushed out partly due to the Soviet rapprochement with Yugoslavia and the Sino-Soviet split. Other Soviet system's members maintained their allegiance to the Soviet Union and supported the Khrushchev's decision, despite their attempts to become more autonomous from the Soviet Union.[93]

The Sino-Soviet split undoubtedly originated from a number of serious disagreements between the respective communist parties, as well as between Khrushchev and Mao personally. The Khrushchev's speech on the personality cult initiated a crucial difference on the foreign policy between Khrushchev and Mao: peaceful coexistence *vs.* spreading communism through revolutions and wars.[94] This divergence was further deteriorated by other disagreements with respect to China's "Great Leap Forward" program, the cross-strait relations, Sino-Indian conflicts, and Cuban missile crisis.[95] In the second half of the 1960s, the Sino-Soviet split was complete and ended with the China's total separation from the Soviet system followed by a number of military clashes along the Sino-Soviet frontier.

[90] Although after 1950, there were no Cominform meetings, the Cominform to some extent functioned up to 1956. Under the conditions of normalizing the Soviet-Yugoslav relationship and improving relations with non-communist countries, the Cominform was announced as "it has exhausted its functions" and was dismissed. See: Stykalin 2012.
[91] Janos Radvanyi, *Hungary and the Superpowers. The 1956 Revolution and Realpolitik* (Stanford: Hoover Institution Press, 1972), 6-9; LaFeber 1980, 185-192.
[92] LaFeber 1980, 229.
[93] H Gordon Skilling, "National Communism in Eastern Europe since the 22nd Congress," *Canadian Journal of Economics and Political Science* 30, no. 3 (1964): 326-327.
[94] Km Vimla Saksena, "Sino-Soviet Rift," *The Indian Journal of Political Science* 25, no. 2 (1964): 68-69.
[95] Roberts 1999, 52-58; LaFeber 1980, 201-202, 229; Saksena 1964, 70.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

However, the changes related to Khrushchev's Thaw policies and his critique of the personality cult brought unpleasant results for the unipole and the system's stability. The Hungarian revolution of 1956, the Sino-Soviet and Soviet-Albanian splits displayed the results of such changes, in which certain members did not desire any changes, while others demanded more freedom. Consequently, the unipole was required to use various means, including military invasion, in order to maintain the system's stability.

Overall, despite many similarities, there were differences between the West and Soviet systems. A major difference between the two systems was interconnectedness between the parties and respective governments; such closeness was only observed in the Soviet system. The communist countries had a dual political structure, in which both the government and a political party worked in parallel. Therefore, the political relations between the communist parties were crucially important in understanding the stability and interdependence of the Soviet system. Within the Soviet system, Moscow set up inter-party organizations, which connected the political elites of each country with the USSR's communist party.[96] This way the Kremlin shaped the domestic and foreign policies of its allies. The Politburo in Moscow, for example, was giving orders to the USSR's Ministry of Foreign Affairs on behalf of the Soviet government. Through this channel, the governments of Poland, Czechoslovakia, PRC, Romania, Bulgaria, Hungary, Albania, and Mongolia were requested to support the Soviet positions to the UN Security Council (UNSC) Chairman and to the UN General Secretary with respect to particular international topics, such as the Korean War.[97]

Furthermore, party's structure and government institutions were not separated. The same individual could occupy major positions within the government and the communist party. For example, Vyacheslav Molotov occupied the posts of the USSR's foreign minister and the Central Committee Secretary for foreign affairs.[98] The government officials in each country were part of the communist party's nomenclature and therefore under the control of Politburo and, consequently, the USSR's communist party. Tatiana V. Volokitina, for example, provided a thorough analysis of the parties' structures and respective nomenclatures established at the formation of the Soviet system.[99]

[96] Bruegel 1951, 33-35.
[97] Gaiduk 2012, 31.
[98] Hopf 2012, 99.
[99] Volokitina 2002.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

In conclusion, the structure of the Soviet system was unipolar with absolute control of the unipole over domestic and foreign policies of its allies for most of the CW period. This control required enormous spending on military affairs, secret police, and economic assistance to the allies.[100] However, in the 1970s, the USSR's economy became stagnated and it required major structural reforms.[101] For this purpose, Mikhail Gorbachev carried out economic and political changes, which resulted in the collapse of the unipole, the weakening of the links between the units that have been existing for four decades, and finally the disintegration of the Soviet system.

4.5 Political interactions between the systems

WWII played a vital role in establishing the post-war international systems. By the end of WWII, the United Kingdom and France lost their positions as great powers and the United States, which expanded its sphere of influence at the expense of the former colonial empires, was able to obtain support from these countries to control their respective historical zones of influence.[102] Meanwhile, the USSR was also determined to use the power vacuum left by WWII to strengthen its positions and secure its own national interests outside of the Soviet Union: "because of its war-time sacrifices and geographical location," the Soviet Union justified the expansion of its sphere of influence, covering Central Europe and the Middle East, the Dardanelles in particular.[103] Therefore, the competition between the two superpowers was inevitable.[104] This competition was enhanced by ideological confrontation between the capitalist West and the communist East, which was reflected in the 'two-world' perceptions.[105]

This section discusses political interactions between the two systems. In Section 4.5.1, I analyze the participation of the systems' members in same IGOs and the technological progress that pushed the Soviet countries not only to participate in international organizations, but also to open themselves to the rest of the world. Then, I examine the US-USSR

[100] Bunce 1991, 225-226; Zubok 2009, 298-300.
[101] Sakwa 2005, 339-340; Zubok 2009, 299-300.
[102] Plokhy 2010, 139-140.
[103] LaFeber 1980, 37.
[104] Phil Williams, "US-Soviet Relations: Beyond the Cold War?," *International Affairs* 65, no. 2 (1989): 294; Mearsheimer 1990, 12-13.
[105] In the 1940s, the Soviet and US officials conceptualized the perceptions of each other's systems. The two worldviews mirrored each other: Washington's 'two-world' views contrasted 'two-camp' view of the world. See: LaFeber 1980, 71-72.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

interactions as an example of Soviet-West interactions (Section 4.5.2). The final section reviews the decolonization wave and the NAM as an assembly of countries that attempted to pursue an equidistant policy with respect to the superpowers (Section 4.5.3).

4.5.1 Participation in IGOs

The major organization in the post-war period has been the UN, established in 1945, which incorporates the absolute majority of the sovereign countries and therefore is a unique global organization, whose major goal is to "maintain international peace and security."[106] However, during the CW period, the UN was quite inefficient in dealing with military conflicts.[107] Furthermore, the UNSC, representative organ of great powers and victors of WWII, was often blocked by the vetoes of opposing countries. From this perspective, the UN was utilized as a platform for the struggle between the Soviet Union and the United States. For example, the organization did not condemn any interference in domestic affairs of the sovereign countries exercised by the superpowers.[108] The Soviet Union participated in few IGOs within the UN system of international organizations, such as the International Labor Organization, the Economic and Social Council, the World Health Organization, the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the International Atomic Energy Agency, although it did not join economic and financial organizations, while permitting its allies to participate in such institutions.[109]

International organizations in general represent "arenas for acting out power relationships," and they are utilized for cooperation and competition among the countries-participants. [110] From this perspective, I examine the UN and other governmental organizations, in which the member-countries of the West and Soviet systems participated. Eastern European countries and the Soviet Union in particular, were interested to use the UN system of organizations to attract developing countries and technical organizations. The review of the IGOs database demonstrates this trend. For example, among the 94 IGOs

[106] "Charter of the United Nations," United Nations, http://www.un.org/en/sections/un-charter/chapter-i/index.html.
[107] John Gerard Ruggie, "The United States and the United Nations: Toward a New Realism," *International Organization* 39, no. 2 (1985): 347.
[108] John Lewis Gaddis, *The Cold War: A New History* (New York: Penguin Books, 2005), 159-161.
[109] Kazimierz Grzybowski, "International Organizations from the Soviet Point of View," *Law and Contemporary Problems* 29, no. 4 (1964): 887-888.
[110] Tony Evans and Peter Wilson, "Regime Theory and the English School of International Relations: A Comparison," *Millennium* 21, no. 3 (1992): 330; Mearsheimer 1994-1995, 12.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

existed in 1950, there were 42 international organizations (among of which 12 were part of the UN system), in which the countries of both systems participated. In addition, the majority of these 42 IGOs were established in the pre-war period and chiefly focused on specific technical, cultural, or trade issues.[111]

As mentioned above, Moscow also permitted its allies to participate in some IGOs in which it did not take part. For example, Czechoslovakia was a founding member in the GATT. Later, since the end of the 1960s, Poland, Romania, and Hungary joined the GATT, although the relationships between the West and Soviet systems were still limited by existing political and economic constrains.[112] This was chiefly associated with the softened Soviet criticism towards the GATT.[113]

The two systems increased their interactions in the 1970s, as part of the détente process: 35 nations from the two systems organized a Conference on Security and Cooperation in Europe (CSCE) in 1973. The conference resulted in the Helsinki Act, which contained three major "baskets" involving a) political and security questions; b) cooperation in economics, science and technology; and c) humanitarian and cultural cooperation.[114] Overall, the act "did little more than accept[ing] existing territorial realities" as the aftermath of WWII. The Act nevertheless institutionalized new channels of cooperation between the two systems in the forms of the second and third baskets.[115]

Besides the political and security institutions, the United States and the Soviet Union utilized the IGOs to negotiate issues related to the technological progress. In 1962-1963, the Committee on the Peaceful Uses of Outer Space created by the UN General Assembly discussed in vain the possibility of satellite reconnaissance: the Soviet Union rejected the US-proposed "Open Skies" plan, which would permit "the use of artificial satellites for the collection of intelligence information in the territory of foreign states."[116] Nevertheless, these technological developments brought the two systems closer to each other: both unipoles enhanced their capabilities to spy in other's territory with the help of new technologies. This served not only as a force to increase the level of communication between the sides but also

[111] The calculations are based on the database "Intergovernmental Organizations (v2.3)." Visit, Pevehouse, Nordstrom, and Warnke 2004.
[112] Kostecki 1979, 134-139.
[113] Ibid., 14.
[114] Dante B. Fascell, "The Helsinki Accord: A Case Study," *The Annals of the American Academy of Political and Social Science* 442 (1979): 71.
[115] Young and Kent 2013, 310.
[116] Gaddis 1987, 203.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

as the cause of peace.[117] The technology also made each system more transparent, principally the closed Soviet system, and forced the systems to start interacting in order to regulate this openness.[118]

4.5.2 US-USSR relations as a representation of Soviet-West interactions

Due to a lack of interactions between the two systems and the close proximity to each other, the two systems were highly suspicious of other's intentions. This resulted in numerous discussions regarding the possible war between the two superpowers, including the usage of nuclear weapons.[119] The discussions related to the Soviet-US rivalry became a dominant aspect in the analysis of the CW period.[120] However, in the given study prevention of nuclear war and deterrence exemplify *possible*, rather than *actual* interactions between the countries. As discussed in Chapter 1, the study of international system can only be done through analyzing the level of *actual* interactions between the units and therefore mere *possibilities* of interactions are not considered in the given research. The Soviet-US relations after WWII can be described as "of mutual *in*dependence" since the countries do not enjoy neither political nor economic interdependence.[121] In this regard, the interactions between the two units were limited and often *ad hoc* as in the Cuban crisis.[122] Mutual independence allowed the both countries to establish their own spheres of influence, which were quite self-sufficient and separated from each other, thereby forming two independent systems.

Despite few interactions existed between the two systems, especially in Europe, each side tacitly respected the other side's boundaries. The United States never attempted to undermine seriously Soviet control in Eastern Europe and the Balkans. Moscow reciprocated by tolerating Washington's influence in Western Europe, Latin America, and the Middle East. Both countries however utilized propaganda to weaken the other's order.[123] Furthermore, the other side was readily taking advantage of the defection of members of the opposite system, such as Yugoslavia, Cuba or China, but only after a clear indication that the first would not

[117] Ibid., 196.
[118] Ibid., 233.
[119] Ibid., 142-143.
[120] Daniel Deudney and G. John Ikenberry, "Who Won the Cold War?," *Foreign Policy*, no. 87 (1992); Young and Kent 2013, xxiii-xxxi.
[121] Gaddis 1987, 225-226.
[122] Roberts 1999, 20.
[123] The United States established Radio Liberty and Radio Free Europe to broadcast to the Soviet system, while the Soviet Union financed the World Peace Council and other left-leaning organizations.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

reassert its control over the defected country. In many cases, neither the United States nor the Soviet Union got openly involved into the revolts or domestic instability movements that were occurring in the opposite system, e.g., in Hungary in 1956, in Czechoslovakia in 1968 or in Iran in 1953, in Guatemala in 1954, and in the Dominican Republic in 1965.[124] The US non-action contravened the proposals of "liberation of these captive people" in Central and Eastern Europe.[125] Therefore, the two superpowers tacitly agreed upon the existence of the two systems.

Despite the acceptance of the other's sphere of influence, the attitude toward each other was hostile throughout the CW period. Although the first reforms within the Soviet Union occurred after Stalin's death, the United States did not change its hostile position toward the USSR.[126] The United States considered the Soviet Union as a threat to its world domination and determined to maintain its own position as a leader of the capitalist world or in other words a unipole in the West system. The United States feared that in the 1950s the Western countries would seek peace in Europe by bringing the USSR into a single united international system, in which Washington would no longer be a single unipole rather coexist with the Kremlin in a bipolar system. Therefore, the United States strongly opposed a reconciliation or "immediate detente" with the Soviet Union unless it occurred under the US conditions.[127] Accepting the status quo occurred within few post-war years in Europe was an explicit example of the US policies to limit actual interactions between the West and Soviet systems. Furthermore, Washington used any opportunity to present a conflict between the West and Soviet systems to all nations as "irreconcilable."[128] In other words, the United States nurtured and utilized a fear against communism as a political tool to maintain its dominance within the West system.

The USSR's attitude toward the United States did not differ from the US assertiveness. The Soviet leaders considered the United States as "inherently hostile" since the US "imperialist elites" perceived socialism as a threat to their interests and hence sought "to wage a total war against the Soviet Union."[129] In the international arena, the Kremlin argued that the United States turned the UNSC into an instrument for suppressing freedom-loving

[124] Gaddis 1987, 239.
[125] LaFeber 1980, 153.
[126] Ibid., 151.
[127] Ibid., 155.
[128] Ibid., 151.
[129] Morton Schwartz, *Soviet Perceptions of the United States* (Berkeley: University of California Press, 1978), 35.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

peoples and for keeping peoples in colonial slavery.[130] Therefore, even when there was détente in the US-USSR relations in the 1970s, in the Soviet view, "a genuine reconciliation between the two systems" could not happen.[131]

Due to such mutual hostility, prior to the 1970s, the US-USSR relations were characterized primarily by their limited *ad hoc* interactions during political crises, due to little communication between the two superpowers and therefore very little comprehension of how the other's system worked.[132] The improvement of relations came with détente in the 1970s: arms-control negotiations, people-to-people exchanges, a joint space mission in 1975, etc.[133] The level of interactions increased when the superpowers realized that a nuclear war became useless if both could destroy each other. This understanding resulted in signing the Strategic Arms Limitation Talk Agreement (SALT I) and the Anti-Ballistic Missile (ABM) Treaty in 1972.

Despite the great improvement of the bilateral relations in the 1970s, only with Gorbachev coming to power and signing the Stockholm agreement in 1986, did the relations between the United States and the Soviet Union start to change.[134] Further interactions between the two sides occurred in a larger extent only after the dissolution of the Soviet system.

4.5.3 Decolonization wave and the Non-Aligned Movement

The decolonization process that occurred after WWII characterizes the CW period, along with the superpowers' confrontation. After their struggle for independence, new nations often needed economic assistance. They faced a dilemma to choose a side in the ideological competition between the capitalist and socialist models of development. The two superpowers were willing to provide economic, military, and technical assistance to these

[130] S. V. Mazov, "Kongolezskiy Krizis i Poziciya SSSR v OON. 1960 g." [The Congolese Crisis and the USSR's position in the UN. 1960], in *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], ed. N. I. Egorova, et al. (Moscow: Universitet Dmitriya Pozharskogo, 2012), 61.
[131] Schwartz 1978, 150.
[132] Yergin 1977, 519.
[133] Ibid.
[134] O. A. Grinevskiy, "Stokgol'mskaya Konferenciya 1984-1986 gg. i Razryadka v Mezhdunarodnykh Otnosheniyah" [The Stockholm Conference of 1984-1986 and Détente in International Relations], in *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], ed. N. I. Egorova, et al. (Moscow: Universitet Dmitriya Pozharskogo, 2012), 292.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

new members; however, the newly independent nations could not accept the aid from both sides.[135] They had to make a choice: for example, after new Iranian leader Mohammed Mossadegh negotiated a Soviet-Iranian loan in 1953, the United States cut all aid to Iran, as according to the US officials, the country went "to the Soviet orbit."[136]

The competition between the superpowers intensified by the mid-1950s partly because the survivability of their systems depended on "winning" the newly emerging nations.[137] By the end of 1956, Khrushchev signed fourteen economic and military agreements with nations in the Asia-Pacific and the Middle East. For many new nations, the Soviet Union provided economic aid and loans under more favorable conditions than the West due to different domestic structures and procedures.[138] Furthermore, the Soviet programs were self-proclaimed as "disinterested without strings," while the Western assistance was presented by the Soviet side as being "militaristic, imperialistic, and set about with conditions."[139] Through economic and technical assistance, the Soviet Union gained the political advantage and managed to attach several developing nations, such as Egypt and Afghanistan, to the Soviet system.

The United States also employed trade, arms transfers, and economic aid as its premier foreign policy instruments toward decolonized countries. During the CW period, the US assistance was conditioned to the containment of the Soviet expansion and support to Western security interests.[140] Furthermore, since the 1970s, the allocation of economic aid was directly related to the level of development: the less economically developed a nation was, the more likely it was to receive aid.[141] Other great powers also provided assistance to developing countries that enabled to attach the latter to the West system. Furthermore, developing countries joined the Western international institutions established to connect the countries economically, politically, and militarily.

However, in some cases Washington's position toward independence movements was ambiguous, which pushed the latter to seek assistance from the other superpower. For

[135] Neutrality was considered as "an immoral and short-sighted conception." Furthermore, the principle of "who is not with me is against me" seemed to be applicable to the CW period. See: LaFeber 1980, 173.
[136] Ibid., 157-158.
[137] Ibid., 173.
[138] Thorp 1957, 279; LaFeber 1980, 179-180.
[139] Thorp 1957, 279.
[140] Richard Grant and Jan Nijman, "Historical Changes in U.S. and Japanese Foreign Aid to the Asia-Pacific Region," *Annals of the Association of American Geographers* 87, no. 1 (1997): 35-36.
[141] Tijen Demirel-Pegg and James Moskowitz, "US Aid Allocation: The Nexus of Human Rights, Democracy, and Development," *Journal of Peace Research* 46, no. 2 (2009): 191.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

example, the United States refused to grant assistance to independence movements, which pushed the latter to search for help in the Soviet Union. This happened in Mozambique with FREELIMO and in Portuguese Guinea with the African Party for the Independence of Guinea and Cape Verde (PAIGC).[142]

Sometimes, developing countries were shifting between the United States and the Soviet Union for obtaining greater assistance. For example, the United States supported Ethiopia in the 1960s, while the Soviet Union financed neighboring Somalia. However, by the end of the 1970s, the new Ethiopian government engaged with the Soviet Union, while the United States started to support Somalia.[143]

As part of their global policies, the superpowers developed special relations with the neighbor countries that were engaged in a regional conflict, like in a case of India and Pakistan. Both superpowers used the Indo-Pakistan conflict to expand their influence in the region: they both attempted "to cultivate and then police a largely dependent and subservient client."[144] India, although the founder and active member of the NAM, was then forced to choose a side in the superpower rivalry. The hostile relations with neighboring China and Pakistan determined the Indian shift from being non-aligned to seeking a close relationship with the Soviet Union. Consequently, Moscow provided colossal economic, technical, and military aid to New Delhi that culminated in signing the Indo–Soviet Treaty of Peace, Friendship and Cooperation in 1971.[145] Other developing countries also faced the challenge of staying non-aligned: many African newly independent countries despite their belonging to the NAM had to choose and tended to interact mostly with one system.[146] Even if the NAM members did not join military alliances, they maintained close economic and political relations with one system or another. The Commonwealth illustrates an example of close relationships between major powers of the West system and the NAM members.[147]

The NAM countries had a peculiarity to shift between the two systems, as Egypt did in the 1970s. Due to internal threats, President of Egypt Anwar Sadat after the 1973 October

[142] Elizabeth Schmidt, *Foreign Intervention in Africa: From the Cold War to the War on Terror* (Cambridge: Cambridge University Press, 2013), 89-92.
[143] David Shinn, "U.S. Policy towards the Horn of Africa," *International Policy Digest*, October 13, 2011, https://intpolicydigest.org/2011/10/13/u-s-policy-towards-the-horn-of-africa/.
[144] Gregory S. Sanjian, "Cold War Imperatives and Quarrelsome Clients: Modeling U.S. And USSR Arms Transfers to India and Pakistan," *The Journal of Conflict Resolution* 42, no. 1 (1998): 98.
[145] Harsh V. Pant and Julie M. Super, "India's 'Non-Alignment'conundrum: A Twentieth-Century Policy in a Changing World," *International Affairs* 91, no. 4 (2015): 753.
[146] Patrick J. McGowan, "Africa and Non-Alignment: A Comparative Study of Foreign Policy," *International Studies Quarterly* 12, no. 3 (1968).
[147] Schaufelbuehl et al. 2015, 909.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

War with Israel lifted his alignment with Moscow to the United States. As Steven R. David argues, omnibalancing, balancing against both external and internal threats, provides a better explanation to such shifts in alignments among developing nations.[148]

The quantitative analysis of this study displays that the NAM countries did not create a united bloc that would be equidistant from the superpowers and their systems. Conversely, despite their desire to keep distance, they tended to take a side and develop relations mostly with one system.

4.6 Summary

According to some realist scholars, the CW period is characterized by a bipolar structure of the international system, staging the superpower rivalry.[149] However, in this chapter, I argue that the superpower rivalry existed, not due to bipolarity, but rather because of the existence of two international systems that were geographically close, and that aimed at expanding their further borders. The strong intensity of interactions within each of the two systems supports the hypothesis (H1) regarding the existence of two parallel systems.

Furthermore, the Soviet and West systems represented a set of different values and each of them had dissimilar understanding of the world development.[150] The two systems constituted the two parallel worlds that were able to see each other but for the most part did not interact: most of activities within the systems were occurring independently from each other. Each of these two systems were unipolar, although their structures were quite different. In the Soviet system, the Soviet Union was an absolute hegemon that enjoyed a total control over its allies.[151] Conversely, the United States was a unipole but not a hegemon in the West system.[152] In particular, after the 1970s, the US share of the total material capabilities in the West system shrank, as the economies of Germany, Japan, France, and the United Kingdom

[148] Steven R. David, "Explaining Third World Alignment," *World Politics* 43, no. 2 (1991): 255-256.
[149] Williams 1989, 274.
[150] The Soviet and West systems had different interpretation of the word 'democracy,' both systems claimed to be democratic and representative of own people's wish. See: Plokhy 2010, 352.
[151] According to Gilpin, a *hegemon* is "[a] single powerful state [that] controls or dominates the lesser states." However, Gilpin does not distinguish hegemony and unipolarity. Other theorists, such as Ikenberry and Wilkinson, on the contrary distinguish the two concepts by emphasizing that *hegemony* refers to "highly unequal political or politico-military influence relationship," while *unipolarity* is related to the distribution of material capabilities. See: Gilpin 1981, 29; Ikenberry, Mastanduno, and Wohlforth 2011, 5; Wilkinson 1999, 142-143.
[152] Wilkinson studies the post-CW system and concludes that it is 'nonhegemonic unipolarity.' See: Wilkinson 1999, 144.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

grew. This resulted in the US position as a "first among equals" and the establishment of the G7, a forum of great powers established within the West system.

The division of the world into the two systems occurred at the aftermath of WWII. While Stalin was negotiating war and post-war arrangements with Roosevelt and Churchill, the Soviet troops were advancing in the heart of Europe. The USSR "liberated" Eastern European countries, thereby creating a "protective buffer zone" through communist propaganda and military presence.[153] The Soviet Union then solidified both its presence and its influence by spreading communist principles and shaping political life of the "liberated" countries through establishing Soviet-friendly governments. Furthermore, Stalin strengthened the ideological solidarity by removing any divergent ways of thinking that contrasted to the Soviet dogmas.[154] The Soviet Union also strengthened its ties with allies through economic incentives, such as economic aid, loans, technical assistance, etc. These policies were so efficient that the US officials accepted the reality of division into two worlds in 1947.[155] Other great powers could also challenge the Soviet Union, but they tacitly agreed upon the borders of the Soviet sphere of influence, which transformed into an independent Soviet system.

Regarding the West system, the United States provided enormous assistance to its allies and built a series of international institutions that established a unipolar order within the West system. On the other hand, Washington occasionally used military coercion and covert actions to punish the insubordinates and interfere in their domestic affairs. One particular way to maintain its dominance in different regions relied on regional powers by providing them public goods and sharing the responsibilities for regional stability. This flexibility may be crucial to the stability of the US-led system. As I argue in Chapter 3, the US-led economic system exists since the end of WWII. Similarly, pillars of political interactions created for the West system during the CW, such as international institutions and defense agreements are present today. These observations support the hypothesis (H2) that the US-led unipolarity, which started after the end of WWII, continues to exist.

Like the West system, the Soviet system had a unipolar structure. However, unlike the West system, the Soviet system was mainly regional and covered Eurasia. Due to the proximity with its allies and due to the absence of other strong powers, the Soviet Union

[153] "The Cold War (1945–1989)" 2016, 8.
[154] For example, the Politburo censured Eugene Varga, a leading Russian economist who was arguing (in opposition to Marxist theories) that the Western economies would not collapse over time. See: LaFeber 1980, 72.
[155] Gaddis 1987, 57.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

established a hegemonic order. Economic, technical, and military assistance was furnished. On the other hand, Moscow used coercive means to suppress the revolts and preserve the stability within the system. All the allies were under the control of the Kremlin in terms of economic development, foreign policy, and ideology. However, not all of them supported the Kremlin' involvement in domestic affairs, sometimes resulting in alienation and partition. Although revolts and protests against the communist governments and the Soviet domination occurred occasionally, the Soviet supremacy over its allies remained strong until the end of the 1980s.[156] In the late 1980s, Gorbachev implemented a series of economic and political reforms, which ended in the collapse of the communist regimes in almost all countries and the breakup of the Soviet Union. The USSR's disintegration symbolized the termination of the Soviet system (H3).

The collapse of the Soviet system leads to the question of its stability. I speculate that the Soviet system could be stable and could have lasted longer if, first, Moscow did not have tremendous defense expenditures and was determined to preserve the geographical scope within the original borders created after WWII. The attempts to extend the system to newly decolonized countries required colossal expenses.[157] Nevertheless, the USSR's foreign policies seriously weakened the Soviet economy, although Moscow considered these foreign policies politically worth its financial cost and ideologically.[158] Second, the Soviet system was heavily centralized, and decision-making process in the Soviet allies was completely dependent on the Kremlin. This led to large apparatus, which was rigid and suspicious of any changes within the system.

Nevertheless, the USSR's economic crisis could be hidden behind the 'Potemkin facade' and therefore the system could exist longer if Gorbachev was not determined to implement reforms targeting the Soviet opening to the world and the West in particular.[159] For this reason, I argue that the economic interdependence between the systems enhanced after the 1970s seriously disrupted the Soviet system's sustainability, since the Soviet dependence upon the trade with the West was significantly higher than vice versa. In addition, the economic interactions were associated with political changes. The signing of the Helsinki Accords in 1975 for example revealed the dilemma for the Soviet government, viz.: a higher

[156] Some scholars however argued, "the Soviet and communist position in eastern Europe was fragile and unstable." See: Roberts 1999, 30.
[157] Ibid., 94.
[158] Ibid., 65.
[159] Zubok 2009, 307-308.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

level of economic interactions led to a higher level of political interactions, which resulted in growing political interdependence between the two systems.[160] The small political concessions accepted by Moscow in this agreement, in terms of protecting human rights, forced Moscow to handle its dissidents more cautiously in order to receive expanded economic relations.[161] In other words, the Soviet system due to increased dependency on the West system collapsed faster since the openness to the world was required in order to improve relations with the West, receive new technologies, loans, and benefit from the economic growth of the West system.[162]

Compared with the ancient times as described in Chapter 2, the two international systems in the CW period were geographically close to each other. This proximity seriously limited the possibility of independence and self-sustainability and increased a level of economic, political, and military interactions between the systems. The CW international systems lasted much shorter than the ancient Mediterranean and Asian systems did. The absence of direct borders between the ancient systems, limited mutual knowledge seriously disrupted the faster growth of economic, political, and military interactions. With technological development, the distance between systems shortened and the physical constraints on interstate interactions largely disappeared.[163] In this regard, the technological progress not only incited the CW systems to interact with higher intensity, but also triggered a faster pace of globalization. As such, the possibility of two independent systems is quite difficult to expect in the future.

[160] Yergin 1977, 525.
[161] Ibid., 526.
[162] Brooks and Wohlforth 2000/2001.
[163] Buzan and Little 2000, 295-296.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Chapter 5 The Cold War systems' geographical boundaries: military interactions

The CW period is not characterized by major wars, but rather by a number of military conflicts between the superpowers. Therefore, the Berlin crisis, the Cuban missile crisis, the Korean and the Vietnam wars often symbolize the hostile atmosphere of the CW period and tense military interactions between the superpowers. However, these conflicts are just a small part of numerous military conflicts occurred in the CW period. Therefore, in this study, I take into account *all* military conflicts that occurred in the given period.

In order to define the boundaries of international system(s), I analyze units' interactions. In this chapter, I focus on military interactions among all states, in particular, two types: first, the number of military conflicts; and second, military aid and arms transfers between countries.

As example of military interactions, military conflicts between countries are considered. Some studies have shown interstate wars are more likely to occur between neighbors or among those who enjoy a high level of economic interconnectedness.[1] I therefore expect to observe such trend. In addition to direct participation in interstate conflicts, many countries choose a side by providing weaponry to some belligerents. Military aid and arms transfers are also used by great powers as a tool to attach countries to their spheres of influence and impact regional and domestic affairs of the countries-recipients. For aforementioned reasons, I selected both military conflicts and arms transfers to represent military interactions. Consequently, I hypothesize military conflicts along with arms transfers would outline the boundaries of the *military systems*. To confirm this hypothesis, I first describe quantitative methods for analyzing military interactions in Sections 5.1 and provide results in Section 5.2. Then, I use a qualitative approach to describe military interactions within the West (Section 5.3) and the Soviet (Section 5.4) systems respectively. Finally, in Section 5.5, I describe military interactions between the systems, focusing on military conflicts and political crises.[2]

[1] Gaddis 1987, 224.
[2] The difference between military conflicts and political crises lies in absence of fatalities and non-military solution of crises.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

5.1 Methods for the quantitative analysis of *military systems*

In this chapter, I study two aspects of military interactions: military conflicts and arms transfers. For the analysis of military conflicts, I use a database called the "Militarized Interstate Dispute Data" provided by the COW project spanning from 1816 to 2010. For examining arms transfers, I use SIPRI Arms Transfers Database created by the Stockholm International Peace Research Institute (SIPRI).

The method for the quantitative analysis of *military systems* follows three steps: In the first step, I selected the most appropriate years. Then, I combined the datasets and ran a hierarchical cluster analysis to group countries based on the similarity of their patterns of interactions. Finally, I analyzed the level of interactions between the clusters in order to determine the boundaries of the *military systems* using a self-developed index of military interactions. The *index of military interactions* is a combined measure of two kinds of military interactions: militarized interstate disputes (MIDs)[3] and arms transfers. In that regard, the measure differs from the economic data that originated from a single dataset, but is rather similar to the index of political interactions, which also originates from two different datasets. Therefore, the index of military interactions varies from "0" (the total absence of interaction on both indices) to "2" (the highest level of interaction on both indices).[4] In addition, I measured the significance of the level of military interactions within the systems *vs.* between the systems.

First, I transformed the data of the databases of military conflicts into a dyadic form (country-country) and standardized the acquired values. In order to reduce the absence of military interactions, I added the data from the one prior or one following year. The same process was done in dealing with the arms transfer database. For military conflicts, I attributed different scores depending on a number of fatalities in a certain MID for each dyad: "0" if there is no conflict observed, "1" if there is unknown or zero fatality, "2" if there is between 1-25 deaths, "3" if between 26-100 deaths, "4" if between 101-250 deaths, "5" if between 251-500 deaths, "6" if between 501-999 deaths, "7" if more than 999 deaths. For the arms transfers, I attributed a score for its existence for each dyad: "1" if a transfer from one country to another was present and "0" if there is no interaction observed. Since I studied the

[3] In this research, militarized interstate disputes (MIDs) are defined as "united historical cases of conflict in which the threat, display or use of military force short of war by one member state is explicitly directed towards the government, official representatives, official forces, property, or territory of another state." Visit, Daniel M. Jones, Stuart A. Bremer and J. David Singer, "Militarized Interstate Disputes, 1816-1992: Rationale, Coding Rules, and Empirical Patterns," *Conflict Management and Peace Science* 15, no. 2 (1996): 163.

[4] Each type of military interactions varies from "0" to "1."

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

years 1948, 1957, 1973, and 1989 for analyzing economic interactions (Section 3.1), the same years are chosen for the study of military interactions.

Next, I combined the two datasets and ran a hierarchical cluster analysis. In order to combine the databases of military conflicts and arms transfers, I standardized values for each dataset to give them equal value and I added them. Then, I ran a hierarchical clustering, as was done for the study of trade relations (Section 3.1) and political interactions (Section 4.1). For each studied year, the software produced the distance between countries in terms of patterns of military interactions, which is reflected in a dendrogram (Appendix I). I hypothesize that the United States and the Soviet Union throughout the CW period differed in their patterns of military connections. Furthermore, I assume that Eastern European countries would be closer to the Soviet Union than to the United States in terms of military interactions. I assume these countries would form a separate cluster with the Soviet Union, differing from other countries. I also expect more region-based clusters since many conflicts occur among neighbors.

Then, I measured the index of military interactions, which includes (an index of MIDs and an index of arms transfers) for each dyad. Each index (MIDs and arms transfers) is weighted by the total number of MIDs (and arms transfers respectively) involved by the considered country. For example, the United Kingdom participated in six military conflicts, while the Soviet Union in five in 1948. Among these, Moscow and London were together only in one. The USSR shared 1 out of 5 MIDs with the United Kingdom (1/5=0.20), while the United Kingdom shared 1 out of 6 MIDs with the USSR (1/6=0.17). It means that in 1948 the share hold by the United Kingdom in the total number of conflicts involved by the Soviet Union is little higher (0.20) than the reverse (0.17). The same calculation is conducted for arms transfers (UK-Russia 0/2=0 and Russia-UK 0/1=0). Finally, the two indices are summed up: military interactions of the Soviet Union with the United Kingdom equal 0.20 and the UK interactions with the Soviet Union equal 0.17.

Finally, I mapped the level of military interactions between clusters using a heatmap for each of the considered years. The heatmap represents the averaged index of military interactions for all countries in “cluster A” with respect to all countries in “cluster B.” The military interactions between clusters therefore varies between 0 and 2. A high level of military interactions between two clusters (index greater than 1) would indicate that they belong to the same military system. Reversely, if two clusters have a low level of military

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

interactions they should belong to two different systems. The heatmap provides a visual representation of the scores obtained within the clusters and between clusters and delineates the boundaries of each military system. However, because the cluster analysis provided more than a hundred of clusters for some studied years, in this chapter, I presented only the heatmap of 1948 in Figure 5.1, while the heatmaps for 1957, 1973, and 1989 are added as Appendices J, K, and L, respectively. Finally, each cluster is represented in figures 5.2-5.5, according to its percentage of the scores shared with the USSR-led cluster on the X-axes and the scores with the US-led cluster on the Y-axes. As a final point, I did countries' pairwise comparison of military interaction within the military systems versus between the systems, measuring the significance with 95% of confidence.

5.2 Results on military systems' boundaries

The analysis is conducted year by year. For each year, the list of countries in each cluster, the heatmap of military interactions between and within clusters, and the graphic representation of the clusters' distance with respect to the USSR-led cluster and to the US-led cluster are provided since the Soviet Union and the United States are strongest powers.[5]

The 1948 dataset includes 60 countries. The cluster analysis divided these countries into four clusters. The list of the countries included in each cluster for the analyzed years is provided in Appendix H. The military interactions between these clusters *Soviet, Rest, UK*, and *Russia* are illustrated in Figure 5.1.

1948	Soviet	Rest	UK	Russia
Soviet	0.04	0.01	0.02	1.00
Rest	0.01	0.05	0.57	0.04
UK	0.02	0.29	0.00	0.17
Russia	0.75	0.03	0.20	0.00

Figure 5.1 Heatmap of military interactions between clusters in 1948. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line).

[5] Visit Sections 3.3 and 3.4 for measures of units' capabilities.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

As hypothesized, the Soviet group, which included *Russia* and *Soviet* clusters, was highly integrated (greater than 1.0) and was separated from other groups, with an interaction with other clusters of only 0.06. I thus conclude that by 1948 the frontier was already delineated between the Soviet military system and the rest of the world. In addition, the *UK* appeared to be a separated cluster in 1948. Figure 5.2 represents the relative importance of each cluster with respect to the US-led (*Rest*) and the USSR-led (*Russia*), and graphically demonstrates how separated in terms of military interactions the West system and the Soviet system were in 1948. Unlike the Soviet system, the West system was not fully integrated and countries in this system had rather weak military interactions between each other.

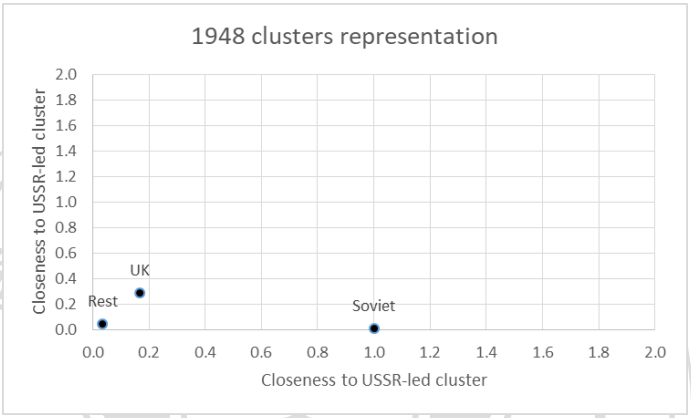

Figure 5.2 1948 military clusters' representation. The X-axis represents the relative closeness of each cluster to the USSR-led cluster; the Y-axis represents the relative closeness of each cluster to the US-led cluster.

The 1957 dataset includes 93 countries (Appendix H). Compared with 1948 (Figure 5.2), the cluster analysis in 1957 showed more patterns of military interactions: creating 78 different clusters (Appendix J). As Figure 5.3 and Appendix J illustrate, 21 clusters had a high level of interactions with the Soviet Union (index greater than 1), among which the averaged index for the Warsaw Pact countries is even higher (1.29). The results indicate that Eastern European countries were quite separated *militarily* from the rest of the world in 1957. Some other European countries (Norway, Austria, and Finland), Middle East and African countries (Sudan, Iraq, Egypt, Syria, etc.) and Asia-Pacific countries (China, North Korea, and Mongolia) also engaged into a rather high level of military interactions with the Kremlin.

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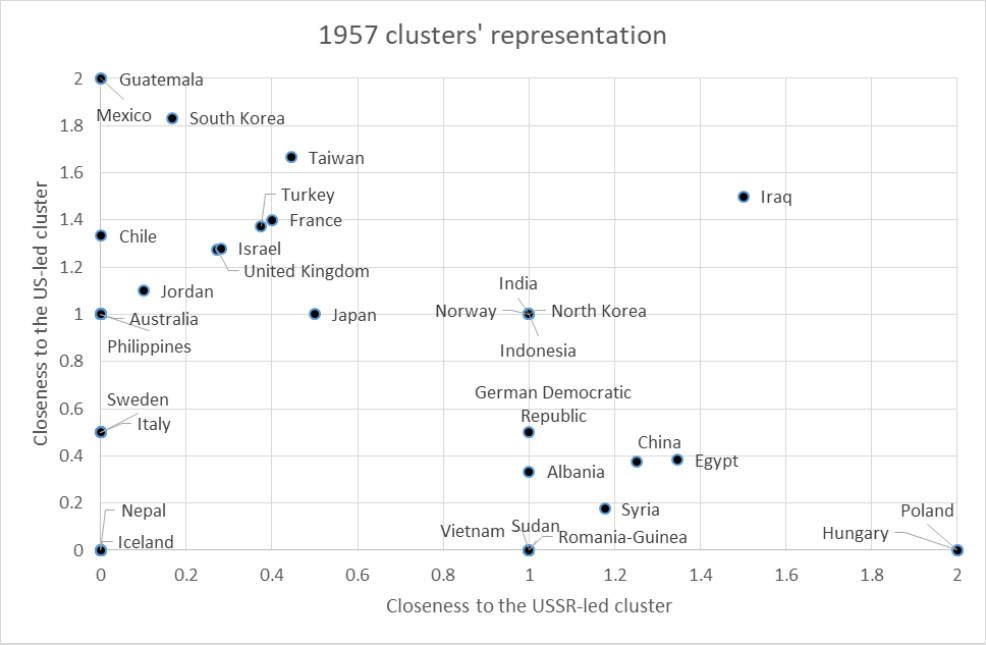


Figure 5.3 1957 military clusters' representation. The X-axis represents the relative closeness of each cluster to the USSR-led cluster; the Y-axis represents the relative closeness of each cluster to the US-led cluster.

However, some of these clusters also interacted with the United States: eight clusters-countries shared a high level of interactions with both superpowers (Austria, Czechoslovakia, Finland, Norway, Iraq, North Korea, India, and Indonesia). Three of these countries (Iraq, India, and Indonesia were participants of the 1955 Bandung Conference and founding members of the NAM. Therefore, they tried to pursue equidistant policies with respect to the superpowers. Austria and Finland were two neutral countries in Europe that had special relations with the Soviet Union, although not being part of the Soviet system as the aftermath of WWII and the Soviet-Finnish war of 1939-1940. Czechoslovakia, Norway, and North Korea represent cases of military conflicts with the superpower.

In the same year, 51 clusters shared a high level of military interactions with the United States, among which 43 clusters simultaneously had a low level of interactions with the Soviet Union. These clusters-countries are from the Americas (Canada, Mexico, Bolivia, Cuba, etc.), Europe (France, UK, Spain, and Denmark, etc.), the Asia-Pacific (Taiwan, Japan, South Korea, Pakistan, etc.), the Middle East (Turkey, Israel, Jordan, Saudi Arabia, etc.), and Africa (Ethiopia, South Africa, and Tunisia). They clearly leaned toward the West system.

Few clusters-countries do not have a high level of interactions with either superpower; they rather interact with their neighbors or former colonial powers, for example, Costa Rica

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

with Nicaragua, the Netherlands with Sweden and Italy, West Germany with Switzerland and Italy, Morocco with France and Spain, Nepal with China.

In 1973, the data sample incudes 138 countries; the cluster analysis provided 125 clusters (Appendix H). The analysis displayed the results similar to those of year 1957. Thirty-nine clusters had high-level military interactions with the Soviet Union, among which 17 clusters enjoyed strong military interconnectedness with both superpowers. East European and Middle East countries maintained their high level of interactions with the Soviet Union (Appendix K).

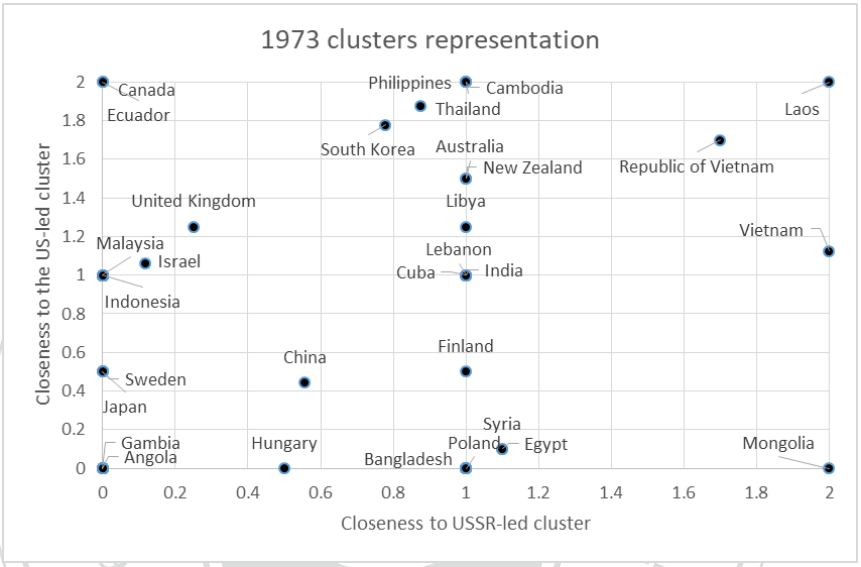


Figure 5.4 1973 military clusters' representation. The X-axis represents the relative closeness of each cluster to the USSR-led cluster; the Y-axis represents the relative closeness of each cluster to the US-led cluster.

The year 1973 is characterized by a growth of arms transfers to the Third World countries, which expanded the frontiers between the two military systems, a change that led the two sides to interact more often. Furthermore, the Vietnam War introduced another 'window' between the communist and capitalist worlds.[6] Figure 5.4 illustrates these increasing interactions between the two systems; more clusters compared to 1957 interacted with both superpowers, and the share of countries interacting with the United States increased as the United States provided large military aid and was more involved in military conflicts. In total, 71 clusters interacted with the United States (Appendix K).

[6] The Vietnam War case is discussed in Section 5.5.2.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

In 1989, the number of the countries available in the dataset increased to 140; the cluster analysis provided 116 clusters (Appendix H). Thirty clusters-countries engaged in a high level of military interactions with the Soviet Union, among which 19 were engaged only with this system. Eastern European countries and Indochina were among those who had high-level military interactions with the Kremlin. As for the United States, 65 cluster-countries from Europe, America, Asia-Pacific, and Middle East had strong military interconnectedness with Washington (Appendix L). The results of 1989 are quite different from the previous years. Compared with figures 5.3 and 5.4, Figure 5.5 displays a higher dispersion of countries. First, the number of clusters that had a high level of military interactions with the Soviet Union decreased. Then, the level of interactions declined: the index of military interactions with the *Russia* cluster reached a maximum of 1. Finally, the number of countries that did not have strong military interconnectedness with either superpower increased.

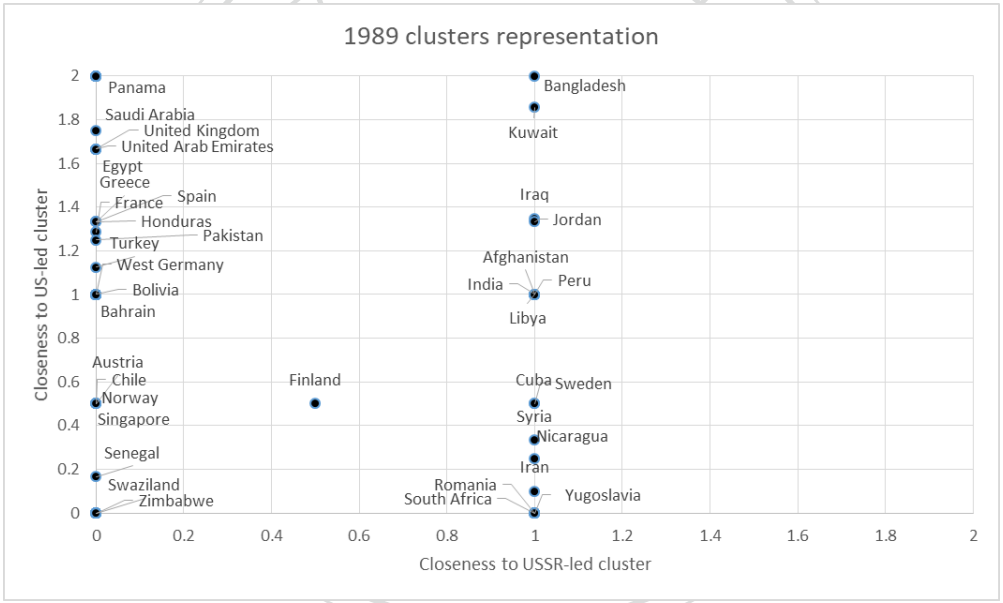


Figure 5.5 1989 military clusters' representation. The X-axis represents the relative closeness of each cluster to the USSR-led cluster; the Y-axis represents the relative closeness of each cluster to the US-led cluster.

For countries belonging to the West system, the index of military interactions they have with other countries within the military system is statistically significantly higher with 95% confidence than the index of military interactions they have with countries of the Soviet system.[7] These results support the hypothesis that the West military system is independent from the Soviet system in terms of military interactions. For countries belonging to the Soviet

[7] $ps \leq 0.005$ for each studied year, except year 1973, which was not significant ($p = 0.203$).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

military system, the index of military interactions within the system is statistically significantly higher with 95% confidence than the index of military interactions with the West military system.[8] These results also support the hypothesis that the Soviet system is independent from the West system in terms of military interactions.

In sum, the year-to-year analysis of military interactions from 1948 to 1989 provided quite perplexing results: on the one hand, I observe that the Soviet Union had a high level of military interactions with the countries that were within its economic and political systems. However, some of the same countries interacted militarily with the West system's members as well. The US-led cluster also interacted with a great number of countries-clusters that were located in the West economic and political systems. The next subchapters that describe in details the military interactions within the West and Soviet systems as well as between them shed lights on the results obtained in the quantitative analysis.

5.3 Military interactions within the West system

Although the literature on the CW tends to focus on clashes between the West and the Soviet, such as the Cuban crisis, this and the following sections describe the very large number of conflicts that occurred within the systems. Military interactions within the West system were shaped by three major factors: first, the existence of multilateral and bilateral mutual defense agreements covering all regions in the world; second, a great number of military conflicts that occurred within this system; and third, a high level of military aid and arms transfer between countries.

The post-war years revealed the inevitable competition between the United States and the Soviet Union founded on the division of Europe and the rest of the world into two international systems. In order to secure stability within the West system, the United States established a series of multilateral and bilateral interconnected mutual defense arrangements in different regions, such as NATO, Rio Pact, CEATO, and CENTO. The multilateral and bilateral mutual defense agreements established by the United States and its allies were created in the first decade of the CW period and most of them still exist, with the exception of CENTO and SEATO, which were dissolved in the second half of the 1970s. The collective defense systems built by the United States served the dual purpose: of (1) attaching the

[8] $ps \leq 0.014$ for each studied year.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

countries to the US-led order through economic, military, and technical assistance and (2) limiting the Soviet influence in the regions and the possibility of the countries' interactions with the Soviet system. Furthermore, the defense alliances with the United States or other great powers promoted bilateral trade since military cooperation tends to boost commercial exchange.[9] Although these defense agreements influence military interactions, in the given study, they are analyzed as part of political interactions along with international organizations in Chapter 4.

In addition to the defense agreements, military conflicts constitute an important part of military interactions per se. In the 1947-1991 period, there were approximately 1200 MIDs in total.[10] Despite such a large number of conflicts, it is important to note that not all conflicts involved a military action: many MIDs were political crises, in which both sides restrained from the use of force. For example, Dominican Republic-Haiti interactions are characterized by five MIDs with no fatalities in the CW period.[11] Furthermore, some conflicts exemplify a series of MIDs: e.g., the Arab-Israeli conflict in total embraces more than 100 MIDs, in which different Middle East and North African countries, bilaterally or multilaterally, have fought against Israel, as well as sometimes involved major powers. Great powers were also actively engaged in MIDs: for example, the United States in total participated in 175 MIDs, the United Kingdom in 79 MIDs, and France in 40.[12]

Overall, the CW military conflicts in the West system can be analyzed through three major factors: a) conflicts emerging from the decolonization process and occurring between colonial powers and former colonies; b) conflicts due to strained relationships between neighbors for obtaining resources or delimiting frontiers; and c) conflicts due to foreign intervention into internal conflicts of other states. In the first group, we can add such conflicts as the Algerian war for independence, the First Indochina war, the Angolan War of Independence, the Mau Mau Uprising in Kenya, etc. The second group includes the conflicts such as the Arab-Israeli conflict, the Indo-Pakistan conflict, the Falklands War, etc. The conflicts that comprise the third group are the Malayan Emergency against the Malayan Communist Party, the Bay of Pigs invasion, and the Vietnam War.

[9] Andrew G. Long, "Defense Pacts and International Trade," *Journal of Peace Research* 40, no. 5 (2003): 550.
[10] The calculations are based on the database "Militarized Interstate Disputes (v4.01)." Visit, Correlates of War Project, "Militarized Interstate Disputes (v4.1)," http://www.correlatesofwar.org/data-sets/MIDs.
[11] Ibid.
[12] Ibid.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Besides direct interference in interstate conflicts, countries in the West system utilized military aid and arms transfers as a way to participate indirectly in military conflicts. Arms transfers mostly occurred within the developed West and from the developed West to developing countries. The United States in this regard was the largest exporter of weaponry within the West system and, according to SIPRI accounted for one-third of world arms transfers throughout the CW period.[13]

This subchapter therefore reviews military interactions within the West system by analyzing separately military interactions within the developed West and the developing West, then between them. The quantitative analysis demonstrated that these two groups were different with respect to how they interacted between themselves: while the developed West enjoyed an absence of military conflicts within the group, the developing West actively engaged into military disputes. This difference is analyzed in the following subsections.

5.3.1 Military interactions within the developed West

Europe or the developed West in general was usually considered as a peaceful region that enjoyed four decades of peace.[14] John J. Mearsheimer explains European peace by three major causes: first, bipolar distribution of military power; second, presence of two superpowers armed with roughly equally large nuclear arsenals; third, decline of nationalism in European countries.[15] However, this study shows that the unipolar distribution of power within Western Europe and post-war conferences between the Big Three are the major factors that shaped European peace.[16] The Big Three arrangements not only divided Europe into two major groups: the Western group, which included the United States and Western Europe, and the Soviet group, comprising the Soviet Union and Central and Eastern Europe, but also delineated the frontiers between two international systems in Europe.[17] Furthermore, the US hegemonic position in NATO mitigated the effects of anarchy in Western Europe and

[13] Stockholm International Peace Research Institute, "SIPRI Arms Transfers Database," https://www.sipri.org/databases/armstransfers.
[14] Mearsheimer 1990, 10.
[15] Ibid., 6-7.
[16] During WWII, there was a series of international conferences mostly between the United States, United Kingdom, and Soviet Union to discuss the post-war future of Europe and the division of Europe into spheres of influence. In particular, the discussions were taken in the Tehran Conference of 1943, the Fourth Moscow Conference of 1944, the Yalta and Potsdam Conferences of 1945.
[17] These post-war arrangements are discussed in Chapter 4.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

facilitated cooperation and integration among the countries, which grew into the EEC.[18] The US military presence in West Germany also reduced the French concerns on German remilitarization and potential aggression and therefore diminished a fear of Germany reappearing as aggressor, which had been a cause of the two world wars.[19]

Besides Western European countries, the United States enjoyed close military relationships with developed countries of the Asia-Pacific, such as Japan and Australia. Besides the defense agreements signed with these countries, the United States enjoyed access to military bases and military presence in Japan and Australia.[20]

In addition to the US strong presence in the regions, strong military ties through mutual defense agreements and arms transfers united the countries. Western European countries since 1950s regularly delivered military equipment and issued licenses, allowing the arms to be produced or assembled by the recipient, within the group.[21] The United States was the largest arms exporter in the CW period: more than 40 percent of total US arms transfers went to its Western European partners.[22] In particular, in the first decade of the CW period, Western Europe (excluding Greece and Turkey) was the largest recipient of US military aid, which amounted approximately 20 billion USD in the 1945-1991 period. In the mid-1960s, the US military aid shifted to Asia-Pacific and Middle East countries.[23] The developed West also supported each other against independence movements and jointly participated in military interventions. In particular, France and West Germany provided armored vehicles and weapons and collaborated with the Portuguese secret police in order to suppress liberation movements in Portuguese colonies.[24] Australia assisted the United Kingdom to suppress the Malayan emergency against the communist party.[25]

Besides the arms transfers, throughout the CW period, the countries shared military technologies, particularly between the United States and its Western European allies. The primary goal of such transfers was to develop and expand the allies' defense industries. In

[18] Josef Joffe, "Europe's American Pacifier," *Foreign Policy*, no. 54 (1984): 68-69.
[19] Mearsheimer 1990, 26.
[20] Nigel Thalakada, *Unipolarity and the Evolution of America's Cold War Alliances* (Basingstoke; New York: Palgrave Macmillan, 2012), Chapters 3 and 5.
[21] SIPRI.
[22] Ibid.
[23] *Statistical Abstract of the United States 1985*, US Census Bureau, Table 1436, p. 808; *Statistical Abstract of the United States 1990*, US Census Bureau, Table 1401, p. 802; *Statistical Abstract of the United States 1994*, US Census Bureau, Table 1320, p. 816, https://www.census.gov/library/publications/time-series/statistical_abstracts.html.
[24] Schmidt 2013, 82.
[25] Peter Edwards, "The Australian Commitment to the Malayan Emergency, 1948–1950," *Historical Studies* 22, no. 89 (1987).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

particular, the technology transfer between the United States and West Germany started in the late 1950s revived the German defense industry and turned GFR into an attractive supplier and technology partner for collaborative European and other programs.[26] Some countries enjoyed a 'special relationship' with the superpower, which resulted in greater exchange of information, technology, and even fissile materials. One of such countries was the United Kingdom that received privileged access to the US nuclear secrets and weapons in the late 1950s.[27] Even though the UK-US relationship changed since then, the nuclear relationship and the intelligence alliance were preserved.[28]

The absence of military conflicts within the developed West is reflected in the relatively low index of military interactions between these countries obtained in the quantitative analysis (Section 5.2). The establishment of defense alliances among these countries prevented the possibility of military conflicts within this group of nations.

5.3.2 Military interactions within the developing West

The level of military interactions among developing countries of the West system (or developing West), during the CW was much higher than that of the developed West. This state of affairs can be explained by the large amount of military conflicts. Furthermore, 13 out of 20 most intensive military conflicts occurred between developing countries.[29] Many conflicts occurred without the great powers' participation and ideological competition cannot explain their origins, since most of them were related to decolonization and growth of nationalism in newly emerged nations.[30] Furthermore, the developing countries' growing desire for independence, power, and wealth, combined with their relative weakness

[26] Joachim Rohde, "The Transfer of American Military Technology to Germany," in *The United States and Germany in the Era of the Cold War, 1945-1990: A Handbook*, ed. Detlef Junker, et al. (Cambridge: Cambridge University Press, 2004), 166-167.
[27] David Reynolds, "A 'Special Relationship'? America, Britain and the International Order since the Second World War," *International Affairs* 62, no. 1 (1985): 12-13.
[28] William Wallace and Christopher Phillips, "Reassessing the Special Relationship," *International Affairs* 85, no. 2 (2009), 269-270; David Reynolds 1985, 16.
[29] Seven out of twenty most intensive MIDs (with fatality greater than 999 deaths) occurred with participation of great powers. Visit, Correlates of War Project, "Militarized Interstate Disputes (v4.1)."
[30] Mohammed Ayoob, "State-Making, State-Breaking and State Failure: Explaining the Roots of 'Third World' Insecurity," in *Between Development and Destruction: An Enquiry into the Causes of Conflict in Post-Colonial States*, ed. Luc van de Goor, Kumar Rupesinghe, and Paul Sciarone (London: Palgrave Macmillan, 1996).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

domestically and on the international scene,[31] which brought instability and opportunity for other states to intervene.

Because 80 percent of the MIDs usually occur between neighbors, we can argue that the developing West is no exception and the majority of military conflicts happened due to geographic proximity and a high level of interactions.[32] The Arab-Israeli and Indo-Pakistani conflicts can be seen from this perspective. Although there was certain involvement of major powers, the roots of the conflicts came from the pre-war arrangements. The Arab-Israeli conflict for example arouse from the tensions between Palestinian and Jewish settlements started in the first half of the 20th century and escalated after the establishment of Israeli state. The Indo-Pakistani conflict lies in the partition of British India and territorial claims over the disputed areas between the newly emerged nations.

Occasionally, regional powers intervened in international or domestic conflicts. Regional powers in third-party intervention within the developing West participated in one-third of all third-party interventions.[33] Along with direct involvement, different countries provided weaponry to help one or another side in the conflict, like Saudi Arabia in the Arab-Israeli conflict, whose role was mainly, if not exclusively, to provide financial assistance to the frontline states and the Palestinians.[34] Saudi Arabia presents a case, when regional powers provided military aid and arms transfers as a way to interact with developing countries militarily. Other regional powers, like China, were also involved in other ways of military interactions with developing countries. China, for instance, played an important role in spreading the revolutionary ideas. Beijing after the reconciliation with the West enhanced its support to developing countries, arguing that it is part of the developing West.[35] China, not only delivered economic and technical assistance, but also provided military training, advisors, and weapons for African independence movements; in particular, Zimbabwe African National Union and Mozambique's Front for the Liberation of Mozambique

[31] Stephen D. Krasner, *Structural Conflict: The Third World against Global Liberalism* (Berkeley: University of California Press, 1985), 3-4.
[32] John A. Vasquez, "Why Do Neighbors Fight? Proximity, Interaction, or Territoriality," *Journal of Peace Research* 32, no. 3 (1995): 279.
[33] Patrick M. Regan, "Conditions of Successful Third-Party Intervention in Intrastate Conflicts," *The Journal of Conflict Resolution* 40, no. 2 (1996): 345.
[34] Gawdat Bahgat, "Saudi Arabia And The Arab-Israeli Peace Process," *Middle East Policy Council*, no. 14 (2007), http://www.mepc.org/journal/saudi-arabia-and-arab-israeli-peace-process.
[35] George T. Yu, "China and the Third World," *Asian Survey* 17, no. 11 (1977): 1036.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

(FRELIMO) benefited from Chinese military training and employed Maoist guerilla strategies.[36]

Overall, due to inequality in terms of the material capabilities' distribution among developing countries and the existence of domestic threats that the newly emerged nations faced the military relationships with the developing West were complicated. One the one hand, they shared arms and military training and strategies with each for fighting colonialism and protecting national sovereignty. On the other hand, as many of these countries suffered domestic instability, their weakness gave opportunity for the neighbors and other stronger powers to project their own power.

5.3.3 Military interactions between the developed West and the developing West

Unlike the relations within the developed West, military interactions between developed and developing countries were characterized by a relatively high number of military conflicts partly due to decolonization. The end of WWII triggered a wave of independence movements in colonial powers. The experience of successful pioneer liberation movements further instigated the spread of decolonization. The United Kingdom, France, Portugal, Belgium, and the Netherlands were involved in armed conflicts with their former colonies. Furthermore, territorial disputes were also a common cause of military interactions between developed and developing nations, e.g. the Falklands War between Argentina and the United Kingdom.

Another source of the conflicts between developed and developing countries was the interference of great powers into domestic affairs of developing nations. Patrick M. Regan calculated that nearly 40 percent (76 cases) of all third-party intervention in intrastate conflicts in the 1944-1994 period were carried out by major powers: the United States accounted for the 35 instances of interventions, while France and the United Kingdom were involved in 10 and 9 interventions respectively.[37] Another study shows that France and the United Kingdom were regularly involved in military interventions within their former empires and into other independent states: the United Kingdom and France militarily

[36] Schmidt 2013, 28.
[37] Regan 1996, 345.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

intervened in 61 and 36 cases respectively in the 1945-1985 period.[38] Superpowers however were only involved in 4 percent of all cases; other states' intervention, newly emerged nations in particular, on the contrary contributed to three-quarters of all interventions. The United States conducted 16 foreign overt military interventions (2.7 percent) in the 1945-1985 period.[39] Central America became a region of particular interest to the United States in the 1980s.[40] The US interventions, for example, in El Salvador, Dominican Republic, and Guatemala, represent the US desire to maintain its hegemony over the region, using the Soviet threats to US interests as a justification to exercise interventions.[41]

Besides, direct interventions and interstate conflicts, the developed West furnished large amounts of military aid and arms transfers to developing nations. In particular, the United States as a unipole in the international system provided extensive military aid worth $146 billion USD to its allies and those countries of strategic value due to advantageous geographical location (e.g. Turkey).[42] The United States also exploited arms transfers as a political tool to influence the recipients' policies, like in cases of the 1973 Arab-Israeli war and 1975 arms embargo against Turkey, when the White House used arms as instruments to reinforce the countries' self-restraint and cease armed actions.[43] Other great powers also furnished military aid to developing countries. The United Kingdom and France offered large military assistance to their former colonies as part of their commonwealth policies; however, military aid was not limited to the former colonies rather expanded and covered the vast majority of developing countries by the end of the CW period.[44] Besides major powers, the regional powers such as Israel also delivered direct military assistance to African states.[45]

[38] Herbert K. Tillema, "Foreign Overt Military Intervention in the Nuclear Age," *Journal of Peace Research* 26, no. 2 (1989): 184.
[39] Ibid., 186.
[40] Steven C. Poe and James Meernik, "US Military Aid in the 1980s: A Global Analysis," *Journal of Peace Research* 32, no. 4 (1995).
[41] Robert H. Johnson, "Exaggerating America's Stakes in Third World Conflicts," *International Security* 10, no. 3 (1985): 66-67.
[42] The study shows that allies and nations that share borders with Communist countries were statistically more likely to receive US aid and increased amounts of assistance during the CW period. See: James Meernik, Eric L. Krueger, and Steven C. Poe, "Testing Models of U.S. Foreign Policy: Foreign Aid During and after the Cold War," *The Journal of Politics* 60, no. 1 (1998): 77-78.
[43] John Sislin, "Arms as Influence: The Determinants of Successful Influence," *The Journal of Conflict Resolution* 38, no. 4 (1994): 665-666.
[44] Gordon D. Cumming, "French Development Assistance to Africa: Towards a New Agenda?," *African Affairs* 94, no. 376 (1995): 384-385; Alain Rouvez, Michael Coco, and Jean-Paul Paddack, *Disconsolate Empires: French, British and Belgian Military Involvement in Post-Colonial Sub-Saharan Africa* (Lanham, Maryland: University Press of America, 1994).
[45] Abel Jacob, "Israel's Military Aid to Africa, 1960-66," *The Journal of Modern African Studies* 9, no. 2 (1971).

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

However, the geostrategic importance of military aid since the 1970s gave way to economic considerations: military grants, which were dominant in the great powers' policies in the 1950-1960s, were replaced by commercial arms sales. Developing countries purchased the largest part of these weapons produced by developed nations, 66 percent in 1970 and 85 percent in 1973.[46] US foreign sales of weaponries increased from about $1 billion USD in 1970 to $10 billion USD in 1975. For France, the armaments production became a leading export industry.[47]

In sum, although military interactions between developed countries in the West system were peaceful, equal, and mutually beneficial, which led scholars to characterize the CW as a peaceful period, the situation was not similar for the remaining countries that belonged to the West system. First, military interactions between developing countries was characterized by a high level of tension and armed conflicts. Second, the relationships between developed and developing nations within the West system were tainted with power asymmetry, leading to the military involvement of the more developed countries into regional conflicts and the dependency of developing countries upon military aid and arms transfers from the developed West.

5.4 Military interactions within the Soviet system

Unlike the West system, the Soviet system experienced only eight military conflicts, in most of which the USSR participated. The main cause of these conflicts appeared to be related to the opposition to the USSR's dominance. Throughout the CW, there were several instances, in which the Soviet Union suppressed the movements and protests formed in different countries within the system. One of the largest opposition movement appeared in Hungary in 1956: the eruption displayed the danger of pluralism to the very existence of the Soviet system. In February 1956, Nikita Khrushchev delivered a speech at the Twentieth Congress of the Communist Party of the Soviet Union, in which he denounced the personality cult and dictatorship of Joseph Stalin. This speech triggered vocal calls for changes in Eastern Europe, Hungary and Poland in particular. In order to maintain the stability of the Soviet system and preserve its dominance, the Soviet Union with the support of other satellite

[46] André Gunder Frank, "Arms Economy and Warfare in the Third World," *Third World Quarterly* 2, no. 2 (1980): 230.
[47] Ibid.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

countries intervened in domestic affairs in Hungary in order to oppress the revolution.[48] Czechoslovakia suffered a similar fate during the Prague Spring of 1968, which was also oppressed by the Soviet Union and other Warsaw Pact countries.[49]

Starting from WWII, Moscow had signed bilateral defense agreements with Central and Eastern European nations in order to secure its frontiers. Furthermore, it signed a multilateral treaty, Warsaw Pact, with the same countries in 1955. In addition, the Warsaw Pact members shared intelligence, military technologies, and weaponry.[50] The Soviet Union provided advanced military technologies to not only the Warsaw Pact countries but also other allies. For example, Mao's China received the technology for the medium-range R-12 missile and cruise missiles as wells as the complete know-how for the construction of atomic weapons in the late 1950s.[51]

Besides European allies, the Soviet Union had several allies among the Third World countries. The Soviet policy toward developing nations was quite similar to the US policy within the West system: in particular, the Soviet policy was to ensure the regime's dependency on the Soviet economic, military, and technical assistance. Ongoing domestic conflicts were also in favor of Soviet interests, like in case of Ethiopia, which was fighting against Eritrean rebels, or in the case of the Yemen People's Republic, which suffered coup d'états and changing leaderships.[52] However, unlike the United States, the Soviet Union was less involved in foreign interventions: Regan calculated 13 interventions in the 1944-1991 period, while Tillema counted eight foreign overt military interactions in 1945-1985.[53] Therefore, participation of the Soviet Union in conflicts of the Third World was quite limited; the Soviet Union took the position of "caution, restrain, and low-risk taking."[54] Throughout the CW period, Moscow maintained the position of avoiding direct confrontation with Washington. Therefore, all military interventions except Afghanistan were low-cost and low-risk operations.[55]

[48] Radvanyi 1972, 6-9; LaFeber 1980, 185-192.
[49] Young and Kent 2013, 222-224.
[50] A. Ross Johnson, "The Warsaw Pact: Soviet Military Policy in Eastern Europe," (Santa Monica, CA: Rand Corporation, 1981); "Military Technology and the Warsaw Pact," *Global Security*, https://www.globalsecurity.org/military/world/int/warsaw-pact-13.htm; Schmeidel 2008, 116.
[51] Zubok 2009, 136.
[52] Zwick 1990, 322-324.
[53] Regan 1996, 353-357; Tillema 1989, 184.
[54] Ibid., 306.
[55] Ibid., 307.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Despite rare involvement in military conflicts, the Soviet Union provided large military aid to different countries. The USSR was the largest exporter of weaponry within the Soviet system, according to SIPRI accounted for 36 percent of world arms transfers in the 1950-1991 period, 31 percent of which went to the Warsaw Pact countries, while the rest was delivered to the Third World allies.[56] The Soviet military aid to its allies among the Third World countries served strategic and political interests of the Soviet Union, economic interests being at most secondary.[57] Although aid was a high burden on the Soviet Union's economy, Moscow was willing to bear the cost because of the strategic importance attached to maintaining its presence in the Third World in general, and in certain countries, like Egypt in 1955-1973, in particular.[58] However, since the mid-1970s, economic considerations started playing a more important role: arms sales became profitable for the Soviet Union.[59] Moscow began selling the weaponry to oil-rich pro-West Arab countries (Saudi Arabia and Kuwait) in order to afford military aid to Soviet allies (Egypt, Syria, and Iraq).[60] Nevertheless, 67 percent of Soviet arms transfers in the 1950-1991 period went to top ten countries, among which six were developing nations.[61]

Although the Soviet Union provided sophisticated modern weaponry to its Third World allies, it was careful not to alter the status quo with the West system. For this reason, the USSR refused to sell Egypt weapons capable of defeating Israel.[62] Besides providing weapons, the Soviet Union and East European allies trained military personnel, offered military advisors and planners, and lent logistical support during the conflicts.[63] The main recipients were the same countries that received arms transfers.

Overall, due to geographic proximity and the strategic importance of the region, the Kremlin was able to maintain tight control over Eastern European countries and therefore avoid military conflicts with the developed West. However, Third World countries were harder to control. The Kremlin became involved in military conflicts with the West system and the United States in particular, on the soil of developing countries. Nevertheless, due to superpowers' reluctance to confront each other, Moscow and Washington managed to limit

[56] SIPRI.
[57] Moshe Efrat, "The Economics of Soviet Arms Transfers to the Third World. A Case Study: Egypt," *Soviet Studies* 35, no. 4 (1983): 437.
[58] Ibid., 454.
[59] Zwick 1990, 300-301.
[60] Ibid., 301-302.
[61] Top ten countries-recipients of Soviet military aid were India, Poland, Syria, China, Iraq, East Germany, Czechoslovakia, Egypt, Libya, and Bulgaria. Visit, SIPRI.
[62] Zwick 1990, 304.
[63] Ibid., 304-305.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

the number of military conflicts, which otherwise could arose to a major powers' war and destabilize both systems.

5.5 Military interactions between the military systems

This subchapter analyzes military interactions between the two systems. Section 5.5.1 analyzes the military interactions between the West and the Soviet system in the developed world and the German question in particular. Then, Section 5.5.2 analyzes military interactions between the two systems within the developing West.

5.5.1 Military interactions between the two systems in the developed world

Regarding the Soviet-US relationship, there were only few cases of direct engagement in political crises, e.g. the 1948 Berlin blockade, the construction of the Berlin Wall in 1961, and the Cuban missile crisis in 1962. Overall, the two sides restrained themselves and their allies from a greater military clash against each other, as well as direct military engagement of the superpowers.[64] This can be explained by the desire of both superpowers to maintain the status quo and therefore the stability of their unipolar orders. Furthermore, technological progress in weaponry assured the mutual destruction in case of direct conflict, and the direct confrontation was thus avoided. This situation forced the superpowers to start negotiations on particular items, such as satellite reconnaissance, establishment of the Moscow-Washington hotline, no-proliferation of nuclear weapons, etc. In this regard, nuclear weapons played a stabilizing role, preventing political disagreements from escalating into an armed conflict.[65]

Despite an absence of direct confrontation between the superpowers, their relations can be characterized as hostile; potential military threats posed to each other were exaggerated for maintaining domestic and international stability.[66] Nevertheless, Moscow and Washington were occasionally locked in political crises, such as the Berlin and Suez crises, Cuban missile crisis, and in the Asia-Pacific (Korean War, Vietnam War, and the Cross-Strait relations), which are analyzed in the following section.

[64] Gaddis 1987, 240.
[65] Francis J. Gavin, "Same as It Ever Was: Nuclear Alarmism, Proliferation, and the Cold War," *International Security* 34, no. 3 (2009): 12.
[66] Young and Kent 2013, xxiii-xxxii.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

German question

As stated above, the post-war arrangements peacefully divided Europe into two parts, reflecting the two international systems in Europe. Therefore, Europe was free from military conflicts between major powers. However, major powers were occasionally engaged into political crises, such as those related to the status of Berlin and the German question in general, which originated at the aftermath of WWII due to different positions on the German future. This disagreement led to division of Germany into two independent entities and its transformation into a main frontier post between the two international systems.

The German question originated from the post-war division and occupation of Germany by four major powers. The unification of three parts controlled by the British, French, and US forces in 1948 further complicated the relations between major powers and the aggravated disagreements between the Soviet Union and other allies. This situation led to the Soviet blockade of all ground travel to Berlin.[67] The Berlin question further intensified in 1955, when the United States included West Germany in NATO. Although major powers attempted to resolve peacefully the Berlin crisis of 1958, the negotiations lasted until 1961 with no results; and as a response, East Germany built a wall in the city.[68] The famous Berlin Wall became a symbol of the CW, representing a "mute and bloody" agreement between the West and the Soviets regarding the divided Germany.[69] More importantly, it symbolized the existence and acceptance of the status quo by the two separated international systems.

The Berlin crisis presents a unique case, in which major powers were locked in political confrontation due to the post-war arrangements. This crisis displayed significant political disagreements between major powers, and in particular, their diverging positions on the post-war German reconstruction. In addition, the conflict revealed not only the nature of the emerging Soviet and West economic and political international structures, but also the difference between them by the establishment of capitalist West Germany and communist East Germany. Increasing mutual mistrust and separation played an important role in the Berlin crisis and in the future relations between the two systems.[70] Nevertheless, the crisis revealed another important feature of the relations between the two systems, i.e. an absence or avoidance of direct military confrontation.

[67] Charles F. Pennacchio, "The East German Communists and the Origins of the Berlin Blockade Crisis," *East European Quarterly* 29, no. 3 (1995): 310.
[68] LaFeber 1980, 206, 209-210.
[69] Ibid., 220.
[70] Pennacchio 1995.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Although the German question was one of the most crucial political crises in the CW period, there were several other MIDs between the two systems: USSR-Norway and USSR-Japan territorial disputes exemplify low-intensity military interactions between the two systems. [71] Furthermore, these cases provide an example of the self-restraint and unwillingness to escalate by the parties. This tendency however prevailed in powers' minds only with respect to military conflicts between the developed West and the Soviet system. The Third World on the contrary became a platform of the major powers' game.

5.5.2 Military interactions between the two systems within the Third World

Unlike the relationship between the systems in Europe, which was quite peaceful, their relationship in the Third World was more complicated despite their reluctance to be engaged in a direct military clash. This section introduces five cases of military conflicts, in which the superpowers were forced to engage due to their allies' policies (e.g. the Cross-Strait relations, Indochina crises, and Suez crisis) and miscalculations (the Korean War and the Cuban crisis).

Cross-Strait relations

During and after WWII, major powers while discussing the post-war arrangements held different opinions regarding the China's future. While the United States desired China to become a stable power and an "Asian policeman," the United Kingdom and the Soviet Union preferred "a chaotic, divided China," so it would not challenge UK colonial interests and would not present a danger to Soviet frontiers in the Asia-Pacific.[72] However, the Mao's victory in the mainland changed the powers' considerations.

The Chinese civil war revealed the typical pattern of decolonized countries: they faced a difficult decision to choose their path of development and alignment to one or another system. The Mao's victory in mainland China determined the country's socialist path and consequently, the Soviet assistance and leadership. However, as many leaders of newly emerged nations, Mao did not want to be dependent on the Soviet Union; thereby he behaved quite independently and without prior consultations with the Kremlin with respect to the

[71] Arnfinn Jorgensen-Dahl, "The Soviet-Norwegian Maritime Disputes in the Arctic: Law and Politics," *Ocean Development & International Law* 21, no. 4 (1990); Andrew Mack and Martin O'Hare, "Moscow-Tokyo and the Northern Territories Dispute," *Asian Survey* 30, no. 4 (1990).
[72] Kimie Hara, *Cold War Frontiers in the Asia-Pacific: Divided Territories in the San Francisco System* (London; New York: Routledge, 2007), 53; LaFeber 1980, 31-32.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

cross-strait relations.[73] Therefore, Moscow was concerned to be involved in confrontation across the Taiwan Strait against its wish.[74] For this purpose, the Soviet Union signed a mutual defense agreement with China, which protected the Kremlin from engaging in military conflicts absent an official declaration of war.[75] Although the Soviet Union was not directly involved in the conflict, the Sino-Soviet agreement played a deterring effect on the potential escalation.[76]

The aggressions of communist China toward Taiwan also made Washington to interfere and pushed US President Dwight D. Eisenhower and ROC President Chiang Kai-shek to sign a US-ROC mutual defense treaty in 1954. It served a purpose of protecting Taiwan under the control of Chiang Kai-shek from the communist attack while limiting the possible provocative ROC's acts.[77]Consequently, the treaty further connected Taiwan with the United States and limited potential interactions across the Taiwan Strait.

Overall, despite assertive actions across the Taiwan Strait, the Taiwan crises in the 1950s and the Cross-Strait relations in general demonstrated the superpowers' reluctance to escalate the conflict and their desire to maintain the status quo in the Taiwan Strait.

Indochina crises

In the end of the 1950s, the US-supported government in Laos faced a strong opposition backed by the Soviet Union. In order to prevent the escalation of the guerilla war, Washington and Moscow came to agreement to neutralize Laos and create a coalition government.[78] However, a similar solution was not found for Vietnam, which was divided into two countries because of the Geneva Conference of 1954. As tensions between North Vietnam and South Vietnam escalated, the US support to the Southern regime increased dramatically. In the first half of the 1960s, the United States with its allies got directly involved in the Vietnam War, which lasted more than a decade and ended with the defeat of

[73] Michael M. Sheng, "Mao and China's Relations with the Superpowers in the 1950s: A New Look at the Taiwan Strait Crises and the Sino–Soviet Split," *Modern China* 34, no. 4 (2008): 497-498; Sergei N. Goncharov, John Wilson Lewis, and Litai Xue, *Uncertain Partners: Stalin, Mao, and the Korean War* (Stanford University Press, 1993), 81.
[74] Goncharov, Lewis, and Xue 1993, 118.
[75] Ibid., 117-118.
[76] Aleksey Klitin, "Taivanskie Krizisy 1954-1955 i 1958 godov" [Taiwan Crises of 1954-1955 and 1958], *Istoriya SSHA: Materialy k Kursu* [US History: Materials for the Course], December 2, 2010, https://ushistory.ru/populjarnaja-literatura/424-tajvanskie-krizisy-1954-1955-godov-i-1958-goda.
[77] Gaddis 1987, 135.
[78] LaFeber 1980, 221-222.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

US army: "tactical success and strategic failure."[79] Despite the US participation, this conflict was at the periphery of the Soviet system and did not destabilize any system.

The aggressive actions and strong nationalist ideas among North Vietnamese political elites, as well as US participation caused many worries in the Kremlin, which was caught in the crossfire. One the one hand, Moscow was eager to avoid direct confrontation with the United States. On the other hand, leaving North Vietnam without help would undermine the USSR' credibility as a reliable ally and therefore damage its position as a security provider in the Soviet system.[80] The United State faced the same dilemma: lose its South Vietnamese ally or try to save it by the mean of a military intervention.[81] With the US direct participation in the Vietnam War, the Soviet Union resolved its dilemma by providing large military aid and public support to the North, without directly intervening.

Suez crisis

The Suez crisis represents both conflicts: one between colonial powers and their former colonies (UK-Egypt) and the Arab-Israeli conflict. It originated in nationalization of the Suez Canal by Egyptian President Gamal Abdel Nasser in 1956 and the following Israeli attack on Sinai; later French and British forces joined Israel.

The Suez crisis of 1956 displayed a high possibility of a direct military clash between the Soviet Union and the US allies: France, Israel, and the United Kingdom.[82] In order to avoid direct confrontation, the United States pushed its allies to pull back from the Suez Canal and accept the Nasser's nationalization. The Suez crisis demonstrated that smaller nations could reshape the power balance at the expense of great powers.[83] On the other hand, Washington and Moscow realized that without the control their satellites could pull the superpowers into a major war.

Korean question

The Korean question arose at the aftermath of WWII due to Japanese occupation of the Korean peninsula. The superpowers agreed to set a dividing line between the Soviet and

[79] Vincent H. Demma, "The US Army in Vietnam," in *American Military History* (Washington, DC: Center of Military History, 1989), 693.
[80] Ilya V. Gaiduk, "Soviet Policy Towards US Participation in the Vietnam War," *History* 81, no. 261 (1996): 45.
[81] Interview with Robert McNamara, "Episode 11: Vietnam," *CNN*, June 14, 2008, https://web.archive.org/web/20080614065921/http://www.cnn.com/SPECIALS/cold.war/episodes/11/interviews/mcnamara/.
[82] Eichler 2017, 94.
[83] LaFeber 1980, 192.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

American occupation zones on the 38th parallel. This partition along with domestic disunity among different political forces played a decisive role in the Korean division and future conflicts in the peninsula.[84] The Korean War itself started as an "inevitable 'war of national liberation'," in which the communist North did not expect and thereby miscalculated the US interference: Kim Il-sung expected a victory, similar to that of Mao over the Kuomintang.[85] The United States also misjudged the existing state of affairs by neglecting the vital importance of the Southern part of the peninsula and further miscalculated the strength of North Korean forces and the scope of the Chinese intervention.[86]

The Korean question and the Korean War in particular displayed miscalculations on both sides and a lack of direct interactions between parties, which may have allowed the sides to negotiate a non-military solution. On the other hand, the Korean War played an important role in strengthening the Soviet international system in the Asia-Pacific since the USSR compelled China to enhance the alienation with the West system and widen cooperation with the Soviet Union.[87] Furthermore, the Kremlin managed not to get involved in direct military confrontation with the United States by boycotting the UNSC in 1950, and rather acting through its allies.[88]

Cuban crisis

After Cuba shifted from the West system to the Soviet, the United States actively observed the island's political and military activities. In August 1962, a US reconnaissance plane reported the first Soviet surface-to-air missile site in October; it captured the picture of a launch pad under construction. Based on these reports, US President John F. Kennedy declared that the Soviet Union had started the construction of military bases on the island and announced that it would impose "a strict quarantine on all offensive military equipment under shipment to Cuba."[89] Soviet leader Khrushchev replied that the Soviet ships would ignore the

[84] William Stueck, "The United States, the Soviet Union, and the Division of Korea: A Comparative Approach," *Journal of American-East Asian Relations* 4, no. 1 (1995): 27.
[85] Mineo Nakajima, "The Sino-Soviet Confrontation: Its Roots in the International Background of the Korean War," *The Australian Journal of Chinese Affairs*, no. 1 (1979): 29-32.
[86] Ibid., 20-27.
[87] Ibid., 38-29.
[88] William Stueck, *The Korean War: An International History* (Princeton: Princeton University Press, 1995), 44; Gaiduk 2012, 28-29.
[89] "Radio and Television Report to the American People on the Soviet Arms Buildup in Cuba, October 22, 1962," John F. Kennedy Presidential Library and Museum, October 22, 1962, https://www.jfklibrary.org/Asset-Viewer/sUVmCh-sB0moLfrBcaHaSg.aspx.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

US orders.[90] Following a tense exchange of messages in the following days, Kennedy and Khrushchev agreed that the Soviet missiles would be withdrawn in exchange for a US promise not to invade Cuba and removal of the US Jupiter missiles from Turkey.[91]

The Cuban missile crisis is considered as one of the most significant political crises of the CW period as it has displayed potential outcomes of direct military confrontation.[92] However, this crisis exemplifies possible rather than actual interactions. Furthermore, the USSR's intention was not to provoke the United States and engage in confrontation, but rather to protect Cuba from a possible US invasion and, more importantly, to secure Khrushchev's authority within the Soviet system.[93] Overall, the Cuban crisis grew from miscalculations and failures: first, the installation of missiles in Cuba was supposed to be a secret operation coded "Anadyr," but was captured by the U-2 surveillance planes. Second, the Soviet leadership miscalculated the initial American reaction: Khrushchev expected a secret negotiation, but Kennedy went public, thereby escalating tensions.[94] Nevertheless, the two sides used *ad hoc* negotiations to solve the political crisis and increased interactions between the countries.

Overall, the five CW military conflicts described in this subsection occurred due two major reasons: superpowers' miscalculations of each other's reaction due to a lack of direct interactions and superpowers' inability to control fully their allies. The allies tended to pursue their own policies for securing national interests: the newly emerged nations, due to the decolonization process, experienced growth of nationalism among elites and populations, which demanded a certain level of assertiveness in the international arena. Despite a unipolar order within each system, the states' nature to secure their survival in the anarchic system enabled countries to engage in regional conflicts and thereby pull great powers into the conflicts.

5.6 Summary

In this chapter, I analyzed military conflicts, arms transfers, and military aid between countries. Quantitative data presented perplexing results on military interactions: the cluster

[90] "Letter From Chairman Khrushchev to President Kennedy, October 24, 1962," John F. Kennedy Presidential Library and Museum, October 24, 1962, http://microsites.jfklibrary.org/cmc/oct24/doc2.html.
[91] Roberts 1999, 58.
[92] Eichler 2017, 98-99; Young and Kent 2013, 172-173.
[93] Zubok 2009, 143.
[94] Ibid., 146.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

analysis specified a large number of clusters for studied years, except 1948. Overall, the results showed that the countries within the Soviet system enjoyed quite strong military interactions and relatively low interactions with the rest of the world, with some exceptions though. The West system was not integrated in terms of military interactions. Such results are explained by the qualitative analysis of military interactions.

The qualitative analysis of military interactions within the West system was divided into three sections, with widely differing characteristics: (1) military interactions among developed nations, (2) military interactions among developing nations, and (3) interactions between these two groups. The analysis revealed a major difference between these groups. Developed countries had a relative absence of military conflicts between each other: they also enjoyed strong military ties, shared military technologies, and supported each other in interventions in developing countries. Conversely, developing nations, which were mostly newly emerged nations, were frequently involved in territorial disputes with their neighbors. In addition to military conflicts, some countries shared strong military ties through defense agreements and arms transfers with regional powers, such as China, Saudi Arabia, and Israel. Such regional powers projected their power in the region through interventions and military assistance.

Besides regional powers, major powers were also often involved in military conflicts in the developing world. They participated directly as one side of conflicts (e.g. in independence wars) or through foreign interventions (like in case of Malayan emergency), or by furnishing military assistance and arms to either side of conflicts. Through military aid, great powers attempted to exercise control over their spheres of influence. For example, France and the United Kingdom furnished large assistance to their former colonies, and the United States paid special attention to the Middle East, Central America, and the Asia-Pacific as regions of the strategic importance to the US national interests. In sum, military interactions within the West system occurred most particularly in the developing world, thereby confirming the boundaries of the West system, which included the developed West and the developing West (H2).

Unlike the West system, the Soviet system did not experience many military conflicts, but the system's members were interconnected through defense agreements, numerous arms transfers, and military aid (H3). The Soviet Union provided large military assistance not only to the Warsaw Pact members, but also to developing countries, such as Egypt and Syria, who

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

became important client states and members of the Soviet system. However, the Soviet Union in the 1970-1980s realized the importance of arms sales and started selling weapons not only to its allies but also to other developing nations to cover its expenses due to large concessions given to the Soviet allies. Arms sales to the developing West increased a level of military interactions between the systems, although these sales were not dominant in the USSR's arms transfers, since its largest part was delivered to the Soviet system's members.

Military interactions between the two systems overall were characterized by a number of political crises and military conflicts on the one hand and low-level military aid and arms transfers on the other hand. Furthermore, military conflicts occurred between the systems in the regions where the systems' boundaries were not clearly identified or if one side attempted to challenge the status quo. The Berlin crises, Korean and Vietnam wars in this regard are illustrative. Military conflicts that occurred between the two systems were the instances, in which superpowers were forced to engage due to their allies' policies (e.g. Suez crisis, Vietnam War, and the Cross-Strait relations) or miscalculations (Korean War and Cuban crisis). I expected less military interactions between the two systems, than within the two systems; however, results are somehow contrasted. The results imply that the CW period can be characterized, in terms of military interactions, as two distinct systems in the developed world, but less so in the developing world, where boundaries were subject to changes due to the quickly growing number of developing countries. Furthermore, newly emerged countries presented a theater for possible conflicts between the two systems. Nevertheless, the two superpowers were avoiding direct military confrontation in order to maintain the stability of their respective international systems.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Chapter 6 Conclusion

This research aimed at studying the international system(s) that existed during the CW period. Through a combined analysis of economic, political, and military interactions of states, in what follows I review main assumptions of this study, answer research questions, and confirm research hypotheses set in Section 1.3. In order to do so, I divide this chapter into the following parts: Section 6.1 discusses the main research question and confirms the research hypothesis (H1) regarding the existence of two international systems in the CW period. Section 6.2 reviews the main characteristics of the West international system, in particular its membership and polarity (H2), while Section 6.3 focuses on the Soviet international system and its polarity (H3). Then, Section 6.4 summarizes major conclusions regarding the interactions between the systems and, from this perspective, analyzes the Soviet instability (H4). Finally, Section 6.5 brings the implications of this research to the understanding of the contemporary international system.

6.1 Concluding remarks on coexisting international systems

This dissertation attempted to answer whether the international system during the CW period was single and global. For this purpose, and in line with the framework proposed in Sections 1.5 and 1.6, I analyzed economic, political, and military interactions that outlined geographic boundaries of international systems. I assumed in Section 1.3 that the CW world was not single and global, but rather was divided into two international systems: US-led and USSR-led, created by the structural changes occurred at the aftermath of WWII (H1).

In order to confirm this hypothesis, I first brought up an example of coexisting international systems in world history. Three regional (Mediterranean, East Asian, and Indic) systems located in different parts of Eurasia were quite independent and self-sustaining. The systems consisted of city-states and empires as major units, which were actively engaged with each other through bilateral and multilateral trade, political exchanges, and military conflicts, which were common within each of these systems. Such regular and intensive interactions formed the boundaries of these systems. Furthermore, assessing the capabilities of major units allowed determining the number of poles and therefore the polarity of these ancient systems. The structure of these systems was shifting from multipolar to unipolar during the period of 800s BC to 500s AD, specified in Table 2.1.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

The study of ancient systems introduced few remarkable conclusions listed below. First, by testing the concept of *international system* in a certain historical period, I confirmed the coexistence of multiple international systems. Second, after analyzing the structure of ancient systems throughout the period that lasted approximately fifteen centuries, I observed that unipolarity and multipolarity were common types of international systems, while bipolarity was not detected.[1] Third, with respect to stability of ancient systems, structural changes could come from within the system (e.g. major powers' war or the dissolution of unipolar states like Rome, Han and Magadha) or from the outside of the systems (e.g. the invasion of India by Alexander the Great or the Third Century Crisis in Rome that influenced the Indian subcontinent). This inference is further elaborated in Section 6.4. Therefore, based on a historical precedent of multiple international systems, I challenged a generally accepted existence of a bipolar global system during the CW period.

The separate analysis of economic, political, and military interactions in the previous chapters allowed me to confirm the hypothesis that two international systems coexisted during the CW (H1). The geographic boundaries of these international systems are summarized in Figure 6.1 and Appendix O, which represent the international systems' boundaries in 1948 (or 1950), 1957 (or 1960), 1973, and 1989. The list of the countries in the West and Soviet systems is provided in Appendices M and N, respectively. The maps in Figure 6.1 outline the geographic boundaries of the CW international systems and demonstrate the level of interactions between the units. The 'core' countries have a high level of interactions in all domains among each other within the systems. The 'periphery' countries however interact with other countries within the systems to a lesser extent, e.g. economically and politically for the most part but not so in the military area. Then, the 'frontier' countries are those who share a certain level of interactions with both systems, e.g. have a high level of economic and political interactions with one system but also interact militarily with the other system. In Figure 6.1 and Appendix O, the 'core' countries are marked with dark color, while 'periphery' countries are light-highlighted and the 'frontiers' are marked with diagonal stripes.

[1] Some scholars however argue that the Athens-Sparta rivalry in the fifth century BC and Han-Xiongnu relations in the second century BC are historical examples of bipolarity. Visit, Fliess 1966; Bo 2008; Sun 2007.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

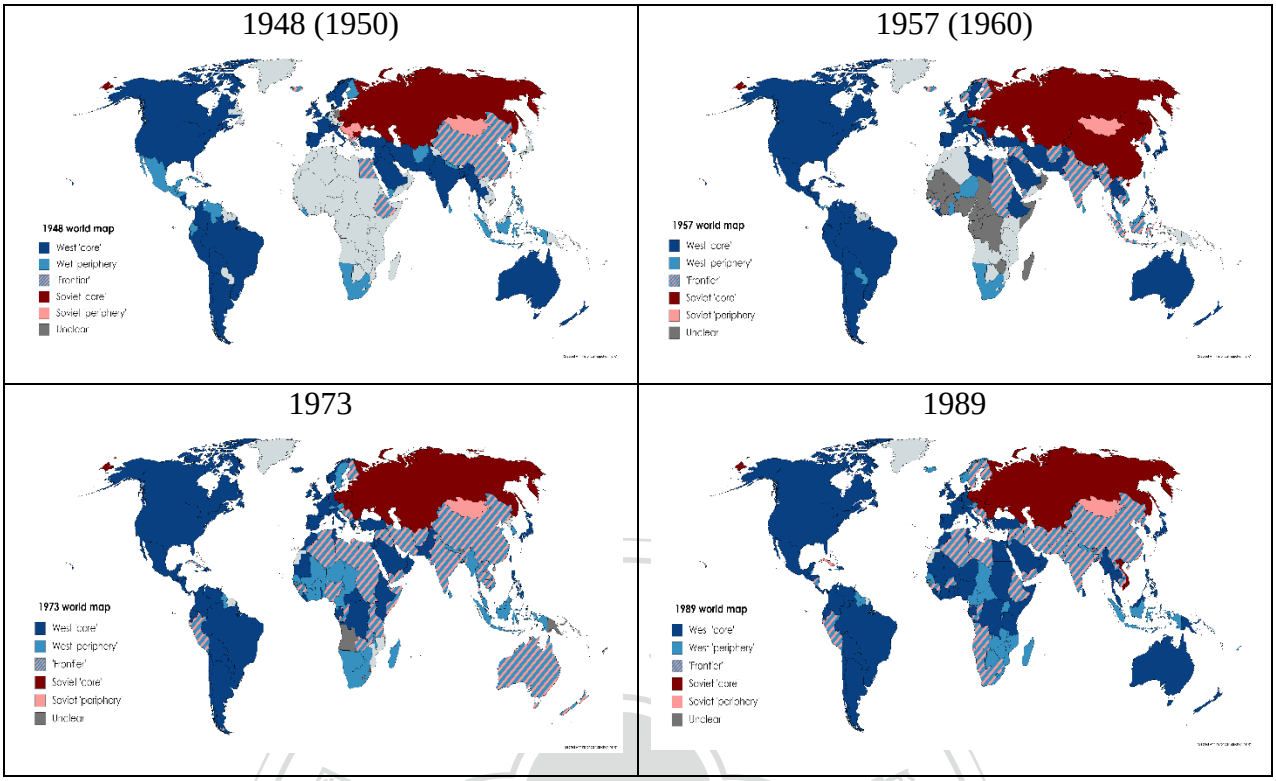


Figure 6.1 Geographical representation of the CW international systems

International systems were dynamic. As we can notice, geographic boundaries were subject to changes due to the inclusion or exclusion of certain countries. Occasionally, the systems faced changes (e.g. the countries' shift from one system to another), like in the cases of Cuba, China, and Yugoslavia. The systems also evolved in terms of the distribution of material capabilities as illustrated in the creation of G-7. However, it is important to note that changes that occurred in one system did not affect another one. In particular, Japan's rise or German economic recovery challenged the US superiority in the West system but did not influence the USSR's hegemonic position within the Soviet system. Overall, the development of these two international systems was quite similar as the strongest powers utilized all means to maintain the existing capabilities' distribution and therefore their own relative strength within the respective systems. Nevertheless, there were some differences between international orders created by the unipoles, which led to the collapse of one system. Since one of the two unipolar systems failed after 40 years of existence, we can conclude that unipolarity can be either stable or unstable; the factors of instability lies in the different structures of these unipolar systems.

Overall, the arguments on the CW era presented here and supported by the given research differs from a commonly accepted view, which depicts the CW system as global and bipolar. I argue here that the two coexisting unipolar systems can explain the CW realities

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

better than bipolarity, which is usually endorsed by neorealist scholars. In particular, if there was bipolarity, the USSR's collapse should have affected all other units within the system, however, it did not alter the structure of the West system since the two systems were separated from each other. The collapse of the Soviet system only influenced the 'frontier' countries that had certain interactions with the two systems. From this perspective, the approach proposed in this research also demonstrates that a series of civil wars in certain countries such as Yugoslavia and Angola occurred inasmuch as they belonged to the 'frontiers' due to their interactions with both systems.

Then, in order to explain the separation of the Soviet Union and the United States, neorealist scholars argue that the two countries formed 'blocs'[2] or 'camps.'[3] However, these terms are usually applicable only to the CW period, which is considered as a reference example of bipolarity.[4] The approach utilized in this research on the contrary views the CW era as just one of historic epochs in world history. Looking from this perspective, the research offers a theoretical explanation of the CW period by utilizing and operationalizing major theoretical concepts of neorealism, rather than the terms such as 'blocs' and 'camps,' which are mostly used to describe the CW.[5] By doing so, the dissertation demonstrates that the CW period is a historical era, in which the two international systems were formed, and with time, the increased level of interactions between the systems eroded national boundaries and merged the systems together.

Next, the given approach can also explain the existence of US-led institutions, which formed the US-led unipolar order. After the collapse of the Soviet Union, US-led institutions, such as NATO, the WB, and the IMF, did not cease their existence and are present today. However, based on realist logic, the US-led institutions, NATO particularly, after the collapse of the Soviet Union should have been dissolved since the threat posed by the Warsaw Pact

[2] The concept 'blocs' in neorealism differs from the Gramsci's 'historical blocs.' Visit, Serafettin Yilmaz, "China, Historical Blocs and International Relations," *Issues & Studies* 50, no. 4 (2014).

[3] Blocs are rarely defined by scholars, although David Rapkin, William Thompson, and Jon Christopherson argue that *blocs* are separate sub-systems. Roger D. Masters defines a *bloc* as "a genus or general category, describing all types of relationships between a group of nation-states." Visit, David P Rapkin, William R Thompson, and Jon A Christopherson, "Bipolarity and Bipolarization in the Cold War Era: Conceptualization, Measurement, and Validation," *Journal of Conflict Resolution* 23, no. 2 (1979): 272; Roger D. Masters, "A Multi-Bloc Model of the International System," *The American Political Science Review* 55, no. 4 (1961): 780.

[4] R. Harrison Wagner, "What Was Bipolarity?," *International Organization* 47, no. 1 (1993): 81; Kaplan 1975, 36-43; Waltz 1964, 887.

[5] Gilpin however mentions the two rival blocs led by Athens and Sparta respectively in the fifth century BC. Visit, Robert G. Gilpin, "The Theory of Hegemonic War," *The Journal of Interdisciplinary History* 18, no. 4 (1988): 598.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

disappeared.[6] NATO was formed not as a response to the Soviet threat, but rather a defense agreement that institutionalized the US dominancy among its allies. Therefore, even when the USSR collapse, the NATO's goal to preserve the US dominant position remained.

Furthermore, the importance of nuclear technology and perceived threats that arouse from possession of nuclear weapons and WMD in general dominates in the CW studies, especially in security studies.[7] The intelligence reports and numerous studies have proved the exaggeration of these threats and their usage in propaganda in order to preserve the unipolar orders.[8] Undoubtedly, the two systems were suspicious of each other due to a lack of *actual* interactions and close geographic proximity, which resulted in tensions between the systems and the unipoles in particular.

Overall, the masterpieces of the realist paradigm, like of Morgenthau and Waltz, reflect a Western perspective on the CW period. The grand theories proposed by them were created during the CW and therefore were affected by the realities of that period. Furthermore, a lack of knowledge about the other side contributed to a perception of the globality of the system and therefore its bipolarity. As Kai J. Holsti argues, the research conducted in the CW period was subject to the CW influences, in particular, the works of Waltz and Mearsheimer "reflected a not very well concealed enthusiasm for American Cold War policies."[9] Furthermore, during the CW period, the US academics, which present a US perspective on the given period, in general have dominated IR studies.[10] The end of the CW era first increased the data availability regarding the CW politics and thus instigated a critical analysis of the CW studies. Therefore, a younger generation of scholars, who view the CW period just as a historical era, can conduct a more objective research on the CW history applying a critical approach to former studies. This dissertation attempted to use such approach and conduct a research broad in content. Quantitative analysis of most of the countries that existed at those times allowed looking objectively at the research topic without taking any particular country's perspective. Although with some limitations, it confirmed the research

[6] Mearsheimer 1994-1995, 13-14.
[7] David A. Baldwin, "Security Studies and the End of the Cold War," review of Rethinking America's Security: Beyond Cold War to New World Order, Graham Allison, Gregory F. Treverton; The United States and the End of the Cold War: Implications, Reconsiderations, Provocations, John Lewis Gaddis; The End of the Cold War: Its Meaning and Implications, Michael J. Hogan; Security Studies for the 1990s, Richard Shultz, Roy Godson, Ted Greenwood, *World Politics* 48, no. 1 (1995): 123-126.
[8] Gaddis and Nitze 1980, 173; Johnson 1985, 66-67; Young and Kent 2013, xxiii-xxxii.
[9] Kal J. Holsti, "Scholarship in an Era of Anxiety: The Study of International Politics During the Cold War," *Review of International Studies* 24, no. 5 (1998): 20.
[10] Stanley Hoffmann, "An American Social Science: International Relations," *Daedalus* 106, no. 3 (1977); Holsti 1998, 28.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

hypotheses and offered an alternative vision on the CW period. The research demonstrated an illusion of the CW bipolarity.

The future studies could mitigate the limitations that this dissertation faced by adding other indicators of interactions. They can further generalize the evolution of international systems and their cycle of development, starting from the establishment to the collapse. The future studies could particularly focus on this aspect of the CW international systems. In addition, the future research could also further elaborate the impact of decolonization on the CW international systems, which was not fully analyzed, for example, the role of developing countries and the NAM in particular in increasing the level of interactions between the systems.

6.2 Concluding remarks on the West international system

While Section 6.1 has generalized main assumptions on international systems, this subchapter focuses particularly on major conclusions related to the West international system. In Figure 6.1, 'core' countries are marked with a dark blue color, 'periphery' countries are light-blue colored, and those countries that perform a role of the systems' frontiers are marked with diagonal stripes. These maps explain why Waltz and other scholars considered the CW system as global.[11] Indeed, the West international system covered most of regions of the world and the vast majority of countries existed at those times. Nevertheless, it did not include the Soviet Union and Eastern and Central European countries, as well as certain Asian and Middle East countries, which formed another independent international system. In general, the maps in Figure 6.1 and Appendix O illustrate that throughout the CW period the West system expanded significantly from 65 in 1948 to 135 countries in 1989. This expansion occurred due to decolonization: since most of these newly emerged nations were former colonies of major powers, such as the United Kingdom, France, and Portugal, they maintained close relations with their former metropolitan powers. Due to this high level of interactions, most of them became members of the West system. The list of member countries of the West system is provided in Appendix M.

[11] Bipolarity of the CW system comes from the assumption that the system has been global and reflects the Western thinking, which views the international system to expand with colonization and, consequently, become global. Visit, Waltz 1964: 882; Buzan and Little 2000, 241-242.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

The comparison of the four years' maps in Figure 6.1 yield to the observation that the West system was changing not only by membership but also by its level of interactions. In some regions, the level of interactions was not changing, e.g. the countries from the Americas and Western Europe constituted the 'core' of the system throughout the whole CW period. However, the Asia-Pacific was different: several Asia-Pacific nations, such as India, Egypt, and Iran, increased interactions with the other system and therefore were part of the 'frontiers' of the West system.

After the analysis of units' interactions that formed geographic boundaries of the West international system, its structure was examined. Based on the assessed capabilities (Appendix C), the structure was unipolar with the United States as a unipole, whose power being twice larger than that of the second power (H2). However, in the 1970s, the capabilities' distribution started changing. The US share in combined material capabilities dropped from 38 percent in 1957 to 21 percent in 1973, while Japan's share nearly doubled from five to eight percent. In the same period, the US economic power also declined from 33 percent in 1957 to 26 percent in 1973, while Japan's power significantly increased from five to nine percent in the period of 1957-1973. Furthermore, by the 1970s, Europe was integrated into one powerful bloc that represented 17 percent of material capabilities and 23 percent of world GDP in 1973 (Appendix C). These factors led to the establishment of G-7 as an economic and political forum of powerful members of the West system, in which the United States was the "first among equals."[12] The G-7 forum also represented the US desire to maintain the stability of the US-led order by involving major powers into a form of collective leadership. The US policy toward regional powers enabled the West system to last longer than the Soviet counterpart since major powers did not challenge the dominant power and the US-led order was beneficial to the members and the United States as well.

Besides the G-7 forum, the United States as a unipole provided public goods to the members of the West system in order to preserve its dominancy. Washington established the US-led international order based on the Bretton Woods financial system and a system of multilateral and bilateral alliances. However, as anarchy is a crucial ordering principle of international systems, some countries like Cuba, Iran, and Guatemala, attempted to pursue independent policies and thereby challenge the US-led order. Such attempts triggered overt and covert US interventions in domestic affairs of sovereign states. Overall, the US policies prevented the rise of revisionist powers that otherwise could change the unipolar structure of

[12] Panova 2012, 293-294.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

the West system. Therefore, despite the number of rising powers and some changes in the capabilities' distribution, no power challenged the US-led order, which secured the stability of the West system.

6.3 Concluding remarks on the Soviet international system

Unlike the West international system, the Soviet system was more regional, covering the Eurasian continent, although with some exceptions like Cuba from the 1960s and Egypt in the 1950-1970s. The visual representation of the Soviet system's membership is provided in Figure 6.1 and Appendix O, in which 'core' countries are marked with dark red color and 'periphery' countries are light red highlighted. As we can observe in the maps, throughout the CW period, the 'core' of the system was quite stable, covering Eastern and Central European countries, which had a high level of economic, political, and military interactions with each other. Other countries, like Mongolia, belonged to the 'periphery' of the Soviet system. Furthermore, the 'frontier' countries (e.g. Afghanistan and Egypt) are those that interact militarily with the West system. The list of countries that form the Soviet system is provided in Appendix N.

The Soviet international system, like the West system, was unipolar with the Soviet Union being a unipole, whose power was far above all others (H3). Throughout the CW period, the USSR's share of aggravated capabilities within the system was greater than 50 percent and was growing from 47 percent in 1948 to 63 percent in 1989 (Appendix D). This capabilities' distribution created a unipolar structure, although different from the structure of the West international system. The USSR's largely dominant power allowed it to create a hegemonic order, in which Moscow turned to be a hub of all interactions among the Soviet system's members. This situation can explain a low level of interactions between some members, such as Mongolia with other states. The quantitative results showed that Mongolia had high-level interactions with the Soviet Union, but not with other countries. Other non-European countries suffered the same fate. Only Eastern and Central European countries had a high level of interactions with each other.

The Kremlin created a hegemonic order based on Comecon and the Warsaw Pact, as well as bilateral economic, political, and military aid to its satellite-countries. By these means, Moscow consolidated its control over domestic and foreign policies of the supported regimes. Unlike the United States in the West system, which tried to influence the domestic affairs

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

when undesirable leaders came to power, the Soviet Union was greatly involved in deciding who would be a leader in one or another country within the Soviet system.[13] For this purpose, the Kremlin developed strong party-to-party links with ruling parties of the Soviet system's countries. This situation is particular to the Soviet 'core' countries.

Nevertheless, the Soviet system failed with the USSR's breakup. As discussed in Section 6.1, structural changes whether came from within the system or from outside. The distribution of capabilities within the Soviet system allows us to observe that, prior to the collapse of the system, the USSR's capabilities remained high compared to other members; there were no rising powers able to challenge the unipole. Therefore, the structural change could come only from outside. However, there were no military conflicts between the two systems in the late 1980s, and countries from the West system were not directly involved in the Soviet-Afghan war. Due to the reasons stated above, I assume that the structural change caused by an increasing level of interactions with the outside world. This statement is further elaborated in the following subchapter.

6.4 Concluding remarks on relationships between systems

This subchapter focuses on interactions between the two systems. Through a comparison of economic, political, and military interactions between the two systems, I observed that in the late 1940-1950s the level of interactions was quite low, thereby demonstrated a high level of separation between the two systems. The two superpowers pursued similar policies toward establishing unipolar orders to strengthen their positions in the respective systems.[14] However, the year 1973 displayed growing interconnectedness between the systems: in particular, the Soviet system's asymmetrical economic dependency upon the West system rose considerably. This situation occurred due to economic slowdown of the Soviet Union and greater openness of the USSR's economy and economies of its allies to the developed West in particular. By the end of the 1980s, this asymmetry pushed the Soviet policy-makers to change fundamentally the Soviet foreign policy, which led to the collapse of the Soviet Union.[15]

[13] Visit Chapter 4 for more details on the US-Soviet policies toward the members of their respective systems.
[14] Visit Chapter 3 and Chapter 4 for the analysis of US and Soviet policies toward establishing their unipolar orders.
[15] Brooks and Wohlforth 2000/2001, 50.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

The Soviet system's dependency was quite similar to the ancient Indic system, which was the least stable among the three ancient systems. As discussed in Chapter 2, the ancient Indic system was subject to frequent foreign invasions from a stronger neighboring system located in the Mediterranean region. These foreign invasions occurred due to development of quite close economic and political interactions between the systems, although there was no direct military conflict between the systems in the CW period, dependency on bilateral trade combined with the increase of regular political interactions in general and acceptance of West international rules on human rights in particular pushed the Soviet leaders to 'open' the Soviet system to the West.[16] The higher level of interactions led to the greater openness of the Soviet system and greatly influenced the Gorbachev's policies of détente in the late 1980s.

Furthermore, as military interactions analysis shows, participation of the Soviet Union into rivalry for the control of the developing world further weakened the Soviet Union's economy and, consequently, forced to open the Soviet system to the West. To this regard, the Third World countries require a special attention. Decolonization, although not the by-product of the CW, played an important role in blurring the borderlines between the systems. Many of decolonized countries faced domestic instability and threat of foreign intervention or military conflicts with neighbors and searched for a help from the superpowers. The Soviet Union offered large assistance that drained the Soviet economy.

Many research works analyze the collapse of the Soviet Union, focusing on the USSR as a single unit in the West system. This study, on the contrary, views the USSR's breakup from the structural perspective. In line with Brooks and Wohlforth, I argue that the Soviet Union (and the Soviet system in general) collapsed due to "rising imperial burdens" with respect to its allies.[17] Geographical proximity to the developed West also revealed the technological gap between the two systems and the growing costs of Soviet isolation from the "globalization of production" greatly contributed to the increased level of economic interactions; thereby influencing the Soviet decision-makers.[18] In other words, the increasing level of economic, political, and military interactions between the systems greatly contributed to the Soviet dependency on the West system, which resulted in the Soviet system's breakup and entry of its members into the West system.

[16] Visit Section 3.5.
[17] Brooks and Wohlforth 2000/2001, 22.
[18] Ibid., 40.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

6.5 Implications to the contemporary international system

Recent IR studies mostly focus on empirical aspects of IR, in particular those related to foreign policy, recurring events at state, regional or global levels, as well as those related to policy recommendations to national governments or transnational actors. There is relatively little interest among scholars toward theoretical aspects of IR.[19] However, as the world faces enormous changes, it is critically important to revisit IR theory in order to better explain current developments and improve prediction capabilities of the future of world politics. Therefore, this study combines the theoretical and empirical sides of IR theory by operationalizing the neorealist concepts of international systems theory and testing them through the comparison of coexisting international systems in ancient times and the CW era. By doing so, the research answers why bipolarity as defined by Waltz has lasted only four decades and interprets the Soviet system's collapse through an interaction analysis.

The analysis of the CW period allows looking at contemporary events from a new perspective. There is no doubt that after the Soviet system disappeared, its former members joined the West system: Eastern and Central European countries joined the European Union (EU) and NATO, as well as other international organizations. Other former members, including modern Russia, slowly integrated into the West system. This situation led to conclude that the West system, established after WWII, kept its existence while incorporating new members. However, the structure of the West system did not change: the United States remained the strongest economic power, from 1992 to 2012 (Table 6.1) although China's CINC, due to its large population, became higher than of the United States.[20] Therefore, the US unipolarity existed for more than two decades, contrary to the arguments of many scholars.[21] Conversely, the US unipolarity, as this research shows, has existed since the end of WWII.

[19] John J. Mearsheimer and Stephen M. Walt, "Leaving Theory Behind: Why Simplistic Hypothesis Testing Is Bad for International Relations," *European Journal of International Relations* 19, no. 3 (2013): 428.
[20] "National Material Capabilities (v5.0)" database covers the period of 1816-2012.
[21] Ikenberry, Mastanduno, and Wohlforth 2011, 1.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Table 6.1 Ranking major units' capabilities in the West system

	1992				2012			
Units	CINC	% CINC	GDP[1]	% GDP	CINC	% CINC	GDP[1]	% GDP
United States	0.1483136	15%	9,573	20%	0.1393526	14%	15,863	16%
China	0.1238766	12%	2,163	4%	0.2181166	22%	15,055	15%
Russia	0.0672895	7%	2,484	5%	0.0400789	4%	3,602	4%
India	0.0633383	6%	1,628	3%	0.0808987	8%	6,098	6%
Japan	0.0541936	5%	3,918	8%	0.035588	4%	4,642	5%
Germany	0.0315511	3%	2,662	5%	0.0179105	2%	3,444	4%
United Kingdom	0.0273722	3%	1,525	3%	0.015277	2%	2,350	2%
Brazil	0.0249855	2%	1,561	3%	0.0250626	2%	3,032	3%
Ukraine	0.0227582	2%	449	1%	0.0082312	1%	379	0%
South Korea	0.0219628	2%	584	1%	0.0232122	2%	1,595	2%
Iran	0.0106825	1%	721	1%	0.0157625	2%	1,271	1%

Note: [1] GDP, PPP (constant 2011 international, in billion $). Source: "National Material Capabilities (v5.0)," COW; World Bank.

However, the China's rise in the last decade changed the capabilities' distribution in the West international system (Table 6.1). According to the WB data, China's economy in 2016 surpassed the United States in terms of GDP, PPP.[22] This change can be seen in that China is challenging the US-led order by requesting higher representation in international organizations, like the IMF and the WB, and more importantly by creating its own international institutions such as the Belt Road Initiative (BRI) and the Asian Infrastructure Investment Bank (AIIB), that would satisfy the ambitions of its rising power.[23] Øystein Tunsjø and Judy Dempsey predict that when the China's capabilities become equal to the United States, we may witness the first example of bipolarity in world history.[24] If it occurs, the bipolar system with the United States and China as poles will likely be different from the CW systems because there was no bipolarity during the CW period, rather two coexisting international systems. Since we have no empirical references of bipolarity,[25] we can only speculate about the possible stability or instability of bipolar systems.

Nevertheless, there can be another development, namely, a return to multipolarity. The EU has recently shown disagreements with the United States on many global and

[22] Based on the WB data, the US economy totaled $17.3 trillion USD, while China's GDP, PPP, accounted $19.9 trillion USD. However, in terms of nominal GDP, the US economy in 2017 was still larger than China's ($19.4 trillion USD *vs.* $12.2 trillion USD). However, the IMF provided different data: in terms of GDP, PPP, China's economy in 2014 surpassed the US economy, when the US GDP accounted $17.4 trillion USD, and the China's GDP totaled $18.2 trillion USD. Meanwhile, based on IMF calculations, the US economy in 2017 was still larger than that of China and accounted $19.4 trillion USD, while China's GDP totaled $12.0 trillion USD. Visit the WB and the IMF for more details.

[23] Olga Daksueva and Serafettin Yilmaz, "The AIIB and China-ASEAN Relations: Shaping a New North-South Paradigm," *China Quarterly of International Strategic Studies* 4, no. 1 (2018).

[24] Tunsjø 2018; Dempsey 2012.

[25] Some scholars however argue that the Athens-Sparta rivalry in the fifth century BC and Han-Xiongnu relations in the second century BC are historical examples of bipolarity. Visit, Fliess 1966; Bo 2008; Sun 2007.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

regional issues, such as the Iranian nuclear issue, climate change, and trade.[26] Such an independent stance may position the EU as one of several poles challenging the United States and China.[27] Other possible poles can be India or Russia that do not bandwagon with stronger powers and pursue independent policies,[28] although Russian economic power and material capabilities are relatively low compared with other powers (Table 6.1).

Summarizing the discussed above, this research demonstrated that the CW period was a particular era, in which two coexisting systems were separated. The results obtained in this study allow me to speculate that the US-led international system established after WWII is now challenged by rising powers of the 21st century, such as China, India, and united Europe. The situation will probably lead to a return to multipolarity such as it existed before WWII.

Multipolarity overall seems to be plausible since in world history there were numerous instances of multipolar systems that result in major powers' wars, which lead to a shift toward unipolarity (Table 2.1). As Gilpin states, systemic changes are inevitable although they can be peaceful due to readjustment of the modern international system, and consequently create a new equilibrium.[29] Technological revolution in warfare, high level of economic interdependence among states, and the advent of 'global society' increase the risks of conflict and benefits of cooperation and thus the possibility of peaceful changes, although these factors do not provide guarantee of absence of major powers' war.[30] Nonetheless, the readjustment of capabilities may occur and therefore a structural change of the West international system appears to be inevitable.

[26] Patricia Lewis et al., "The Future of the United States and Europe: An Irreplaceable Partnership," *Chatham House* (2018), https://www.chathamhouse.org/publication/future-united-states-and-europe-irreplaceable-partnership; Andrew Rettman, "EU and US disagree on Iran and Israel," *Euobserver*, December 5, 2017, https://euobserver.com/foreign/140164; "G7 communique unlikely due to lack of consensus: officials," *Reuters*, June 9, 2018, https://www.reuters.com/article/us-g7-summit-communique/g7-communique-unlikely-due-to-lack-of-consensus-officials-idUSKCN1J42L5.

[27] Bernd Von Muenchow-Pohl, "India and Europe in a Multipolar World," *Carnegie Endowment for International Peace*, May 10, 2012, http://carnegieendowment.org/2012/05/10/india-and-europe-in-multipolar-world-pub-48038.

[28] Andrey Makarychev, *Russia and the EU in a Multipolar World: Discourses, Identities, Norms* (Stutgart: ibidem-Verlag, 2014).

[29] Gilpin 1981, 11-15.

[30] Ibid., 213-228.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Bibliography

Books

Asakura, Hironori. *World History of the Customs and Tariffs*. Brussels: World Customs Organization, 2003.

Babbie, Earl R. *The Practice of Social Research*. 12th ed. Belmont, CA: Cengage Learning, 2010.

Banerjee, Gauranga Nath. *India as Known to the Ancient World: Or, India's Intercourse in Ancient Times with Her Neighbours, Egypt, Western Asia, Greece, Rome, Central Asia, China, Further India and Indonesia*. London: Oxford University Press, 1921.

Buzan, Barry, and Richard Little. *International Systems in World History: Remaking the Study of International Relations*. New York: Oxford University Press, 2000.

Carmack, Robert M. *Anthropology and Global History: From Tribes to the Modern World-System*. Plymouth, UK: AltaMira Press, 2013.

Collin, Richard Oliver, and Pamela L. Martin. *An Introduction to World Politics: Conflict and Consensus on a Small Planet.* Lanham, Md.: Rowman & Littlefield Publishers, 2013.

Cumming, Gordon D. *Aid to Africa: French and British Policies from the Cold War to the New Millennium*. London: Taylor & Francis, 2017.

Curtin, Philip D. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.

Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. Cambridge; New York: Cambridge University Press, 1996.

Eckstein, Arthur M. *Mediterranean Anarchy, Interstate War, and the Rise of Rome*. Berkeley; Los Angeles; London: University of California Press, 2009.

Eichler, Jan. *War, Peace and International Security: From Sarajevo to Crimea*. London: Palgrave Macmillan, 2017.

Ermatinger, James William. *The Decline and Fall of the Roman Empire*. Westpowert, CT: Greenwood Publishing Group, 2004.

Fliess, Peter Joachim. *Thucydides and the Politics of Bipolarity*. Baton Rouge, La.: Louisiana State University Press, 1966.

Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin Books, 2005.

———. *The Long Peace: Inquiries into the History of the Cold War*. New York: Oxford University Press, 1987.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Gardner, Lloyd C. *Spheres of Influence: The Great Powers Partition Europe, from Munich to Yalta*. Chicago: Ivan R. Dee, 1993.

Gilpin, Robert G. *War and Change in World Politics*. Cambridge; New York: Cambridge University Press, 1981.

Goncharov, Sergei N., John Wilson Lewis, and Litai Xue. *Uncertain Partners: Stalin, Mao, and the Korean War*. Stanford: Stanford University Press, 1993.

Hansen, Valerie. *The Silk Road: A New History*. Oxford; New York: Oxford University Press, 2012.

Hara, Kimie. *Cold War Frontiers in the Asia-Pacific: Divided Territories in the San Francisco System*. London; New York: Routledge, 2007.

Head, Duncan. *Armies of the Macedonian and Punic Wars: 359 BC to 146 BC*. Wargames Research Group, 2016.

Helleiner, Eric. *States and the Reemergence of Global Finance: From Bretton Woods to the 1990s*. Ithaca; London: Cornell University Press, 1996.

Hirth, Friedrich. *China and the Roman Orient: Researches into Their Ancient and Mediaeval Relations as Represented in Old Chinese Records*. Leipsic, Munich: G. Hirth, 1885.

Hitchcock, William I. *The Bitter Road to Freedom: A New History of the Liberation of Europe*. New York: Free Press, 2008.

Hoffmann, Stanley. *Gulliver's Troubles, or the Setting of American Foreign Policy*. 1st ed. New York: McGraw-Hill, 1968.

Hopf, Ted. *Reconstructing the Cold War: The Early Years, 1945-1958*. New York: Oxford University Press, 2012.

Kaplan, Morton A. *System and Process in International Politics*. New York: Robert E. Krieger Pub. Co., 1975.

Katasonov, Valentin. *Ekonomika Stalina* [Stalin's Economy]. Moscow: Institut Russkoy Civilizacii, 2014.

Kolganov, Andrey, and Alexander Buzgalin. *10 Mifov ob SSSR* [10 Myths about the USSR]. Moscow: Yauza; Eksmo, 2010.

Kostecki, Michel M. *East-West Trade and the GATT System*. London: Macmillan, 1979.

Krasner, Stephen D. *Structural Conflict: The Third World against Global Liberalism*. Berkeley: University of California Press, 1985.

Kulski, Władysław Wszebór. *De Gaulle and the World: The Foreign Policy of the Fifth French Republic*. New York: Syracuse University Press, 1966.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

LaFeber, Walter. *America, Russia and the Cold War, 1945-1980*. 4th ed. New York: Alfred A. Knopf, 1980.

Kaufman, Stuart J., Richard Little, and William C. Wohlforth, eds. *The Balance of Power in World History*. New York: Palgrave Macmillan, 2007.

Lake, David A. *Hierarchy in International Relations*. Ithaca, New York: Cornell University Press, 2009.

Li, Yang, and Xiaojing Zhang. *Imbalance and Rebalance: To Create a New Framework of Global Governance*. Singapore: China Social Science Press, Springer, 2017.

Llobera, Josep R. *An Invitation to Anthropology: The Structure, Evolution and Cultural Identity of Human Societies*. New York: Berghahn Books, 2003.

Major, John S., and Constance A. Cook. *Ancient China: A History*. Abingdon, Oxon: Routledge, 2017.

Makarychev, Andrey. *Russia and the EU in a Multipolar World: Discourses, Identities, Norms*. Stuttgart: ibidem-Verlag, 2014.

Marks, Michael P. *Metaphors in International Relations Theory*. New York: Palgrave Macmillan, 2011.

McCauley, Martin. *Origins of the Cold War, 1941-1949*. 3rd ed. Harlow, England; New York: Pearson Longman, 2008.

McLeod, John. *The History of India*. Westport, CT: Greenwood Publishing Group, 2002.

Morgenthau, Hans J. *Politics among Nations: The Struggle for Power and Peace*. 5th ed. New York: Alfred A. Knopf, 1973.

Oakman, Daniel. *Facing Asia: A History of the Colombo Plan*. Canberra: Pandanus Books, 2010.

Ostrovsky, Max. *Y= Arctg X: The Hyperbola of the World Order*. Lanham: University Press of America, 2007.

Parsons, Talcott. *The Social System*. Abingdon: Routledge, 2013.

Peterson, James W. *American Foreign Policy: Alliance Politics in a Century of War, 1914-2014*. New York; London: Bloomsbury, 2014.

Plokhy, Serhii M. *Yalta: The Price of Peace*. New York: Viking, 2010.

Pollard, Robert A. *Economic Security and the Origins of the Cold War, 1945-1950*. New York: Columbia University Press, 1985.

Powaski, Ronald E. *The Cold War: The United States and the Soviet Union, 1917-1991*. New York: Oxford University Press, 1998.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Radvanyi, Janos. *Hungary and the Superpowers. The 1956 Revolution and Realpolitik*. Stanford: Hoover Institution Press, 1972.

Raychaudhuri, Hemchandra. *Political History of Ancient India: From the Accession of Parikshit to the Extinction of the Gupta Dynasty*. Calcutta: University of Calcutta, 1923.

Roberts, Geoffrey K. *The Soviet Union in World Politics: Coexistence, Revolution, and Cold War, 1945-1991*. London; New York: Routledge, 1999.

Ross, Robert S., ed. *China, the United States, and the Soviet Union: Tripolarity and Policy Making in the Cold War*. Armonk, N.Y.: ME Sharpe, 1993.

Rouvez, Alain, Michael Coco, and Jean-Paul Paddack. *Disconsolate Empires: French, British and Belgian Military Involvement in Post-Colonial Sub-Saharan Africa*. Lanham, Maryland: University Press of America, 1994.

Sakwa, Richard. *The Rise and Fall of the Soviet Union 1917-1991*. 2nd ed. London; New York: Routledge, 2005.

Schmeidel, John C. *Stasi: Shield and Sword of the Party*. London; New York: Routledge, 2008.

Schmidt, Elizabeth. *Foreign Intervention in Africa: From the Cold War to the War on Terror*. Cambridge: Cambridge University Press, 2013.

Schoultz, Lars. *Beneath the United States: A History of US Policy toward Latin America*. Cambridge, Massachusetts; London: Harvard University Press, 2009.

Schwartz, Morton. *Soviet Perceptions of the United States*. Berkeley: University of California Press, 1978.

Sen, Sailendra Nath. *Ancient Indian History and Civilization*. 2nd ed. New Delhi: New Age International, 1999.

Spielvogel, Jackson J. *Western Civilization: Volume I: To 1715*. 7th ed. Boston: Cengage Learning, 2010.

Srinivasan, Krishnan. *The Rise, Decline and Future of the British Commonwealth*. New York: Palgrave Macmillan, 2005.

Stalin, Joseph. *Economic Problems of Socialism in the USSR*. Moscow: FLPH, 1952.

Stueck, William. *The Korean War: An International History*. Princeton: Princeton University Press, 1995.

Thalakada, Nigel. *Unipolarity and the Evolution of America's Cold War Alliances*. Basingstoke; New York: Palgrave Macmillan, 2012.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Tilly, Charles. *Coercion, Capital, and European States, AD 990-1992*. Cambridge: Blackwell, 1992.

Troxell, Hyla A. *The Coinage of the Lycian League*. New York: American Numismatic Society, 1982.

Tunsjø, Øystein. *The Return of Bipolarity in World Politics: China, the United States, and Geostructural Realism.* New York: Columbia University Press, 2018.

Waltz, Kenneth N. *Theory of International Politics*. Reading, Massachusetts: Addison-Wesley Pub. Co., 1979.

Wang, Zhenping. *Ambassadors from the Islands of Immortals: China-Japan Relations in the Han-Tang Period*. Honolulu: University of Hawaii Press, 2005.

Warder, Anthony Kennedy. *Indian Buddhism*. 3rd ed. Delhi: Motilal Banarsidass Publ., 2000.

Young, John, and John Kent. *International Relations since 1945: A Global History*. 2nd ed. Oxford: Oxford University Press, 2013.

Yu, Yingshi. *Trade and Expansion in Han China: A Study in the Structure of Sino-Barbarian Economic Relations* Berkeley: University of California Press, 1967.

Yule, Henry. *Cathay and the Way Thither: Being a Collection of Medieval Notices of China*. London: The Haklyut Society, 1866.

Zakaria, Fareed. *The Post-American World*. New York; London: W. W. Norton & Company, 2008.

Zubok, Vladislav M. *A Failed Empire: The Soviet Union in the Cold War from Stalin to Gorbachev*. Chapel Hill: University of North Carolina Press, 2009.

Zwick, Peter. *Soviet Foreign Relations: Process and Policy*. New Jersey: Prentice Hall, 1990.

Book chapters

Acharya, Amitav. "Theoretical Perspectives on International Relations in Asia." Chap. 3 In *International Relations of Asia*, edited by David Shambaugh and Michael Yahuda, 57-82. Lanham: Rowman and Littlefield Publishers, 2008.

Ammann, Klaus. "Swiss Trade with the East in the Early Cold War." In *East-West Trade and the Cold War*, edited by Jari Eloranta and Jari Ojala, 113-132. Jyväskylä: University of Jyväskylä, 2005.

Ayoob, Mohammed. "State-Making, State-Breaking and State Failure: Explaining the Roots of 'Third World' Insecurity." Chap. 3 In *Between Development and Destruction: An Enquiry into the Causes of Conflict in Post-Colonial States*, edited by Luc van de

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Goor, Kumar Rupesinghe and Paul Sciarone, 67-90. London: Palgrave Macmillan, 1996.

Bang, Peter Fibiger. "Commanding and Consuimg the World: Empire, Tribute, and Trade in Roman and Chinese History." Chap. 5 In *Rome and China: Comparative Perspectives on Ancient World Empires*, edited by Walter Scheidel, 100-120. Oxford; New York: Oxford University Press, 2009.

Brenner, William J. "The Forest and the King of Beasts: Hierarchy and Opposition in Ancient India (C. 600–232 BCE)." Chap. 5 In *The Balance of Power in World History*, edited by Stuart J Kaufman, Richard Little and William C. Wohlforth, 99-121. New York: Palgrave Macmillan, 2007.

Busch, Peter. "The Origins of Konfrontasi: Britain, the Cold War and the Creation of Malaysia, 1960–1963." Chap. 14 In *Cold War Britain, 1945–1964: New Perspectives*, edited by Michael F. Hopkins, Michael D. Kandiah and Gillian Staerck, 180-192. London: Palgrave Macmillan, 2003.

Colvin, Stephen. "Names in Hellenistic and Roman Lycia." Chap. 2 In *The Greco-Roman East: Politics, Culture, Society*, edited by Stephen Colvin, 44-84. New York: Cambridge University Press, 2004.

Demma, Vincent H. "The US Army in Vietnam." Chap. 28 In *American Military History*, 619-693. Washington, DC: Center of Military History, 1989.

Dosch, Jörn. "The United States in the Asia-Pacific." Chap. 2 In *The New Global Politics of the Asia Pacific*, edited by Michael K Connors, Rémy Davison and Jörn Dosch, 12-22. London; New York: Routledge, 2004.

Duman, L. I. "Ancient Chinese Foreign Policy and the Origins of the Tribute System." In *China and Her Neighbours from Ancient Times to the Middle Ages*, edited by S. L. Tikhvinsky and L. S. Perelomov, 17-42. Moscow: Progress Publishers, 1981.

Eloranta, Jari, and Jari Ojala. "Introduction: East-West Trade and the Cold War as a Research Topic." In *East-West Trade and the Cold War*, edited by Jari Eloranta and Jari Ojala, 11-20. Jyväskylä: University of Jyväskylä, 2005.

Gaiduk, Ilya V. "OON v 1950 Godu: Ot Sovetskogo Boykota k Koreyskoy Voyne" [The UN in 1950: from the Soviet boycott to the Korean War]. Chap. 1 In *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], edited by N. I. Egorova, I. V. Gaiduk, G. E. Gigolaev and V. L. Mal′kov, 18-40. Moscow: Universitet Dmitriya Pozharskogo, 2012.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Gilpin, Robert G. "The Richness of the Tradition of Political Realism." Chap. 10 In *Neorealism and Its Critics*, edited by Robert O. Keohane, 301-321. New York: Columbia University Press, 1986.

Grinevskiy, O. A. "Stokgol'mskaya Konferenciya 1984-1986 gg. i Razryadka v Mezhdunarodnykh Otnosheniyah" [The Stockholm Conference of 1984-1986 and Détente in International Relations]. Chap. 11 In *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], edited by N. I. Egorova, I. V. Gaiduk, G. E. Gigolaev and V. L. Mal′kov, 264-292. Moscow: Universitet Dmitriya Pozharskogo, 2012.

Harrison, Mark. "Economic Growth and Slowdown." Chap. 3 In *Brezhnev Reconsidered*, edited by Edwin Bacon and Mark Sandle, 38-67. London: Palgrave Macmillan, 2002.

Holloway, David. "Stalin and the Bomb." Chap. 4 In *Origins of the Cold War: An International History*, edited by David S. Painter and Melvyn P. Leffler, 72-90. New York: Routledge, 2005.

Hui, Victoria Tin-bor. "The Triumph of Domination in the Ancient Chinese System." Chap. 6 In *The Balance of Power in World History*, edited by Stuart J. Kaufman, Richard Little and William C. Wohlforth, 122-147. New York: Palgrave Macmillan, 2007.

Ikenberry, G. John. "Introduction: Power, Order, and Change in World Politics." Chap. 1 In *Power, Order, and Change in World Politics*, edited by G. John Ikenberry, 1-16. Cambridge: Cambridge University Press, 2014.

———. "Liberal Sources of American Unipolarity." Chap. 7 In *International Relations Theory and Consequences of Unipolarity*, edited by G. John Ikenberry, Michael Mastanduno and William C. Wohlforth, 216-251. Cambridge: Cambridge University Press, 2011.

Ikenberry, G. John, Michael Mastanduno, and William C. Wohlforth. "Introduction: Unipolarity, State Behavior, and Systemic Consequences." Chap. 1 In *International Relations Theory and the Consequences of Unipolarity*, edited by G. John Ikenberry, Michael Mastanduno and William C. Wohlforth, 1-32. Cambridge: Cambridge University Press, 2011.

Ivanov, N. S. "Latinskaya Amerika i SSHA: Nezavisimost protiv "Blokovoy" Diplomatii. (Opyt Mnogostoronnih Otnosheniy v 1940-e - 1970-e gg.)" [Latin America and the USA: Independence against the "Bloc" Diplomacy (Experience of Multilateral Relations in the 1940-1970s)]. Chap. 4 In *Mnogostoronnyaya Diplomatiya v*

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy [Multilateral Diplomacy in the Bipolar System of International Relations], edited by N. I. Egorova, I. V. Gaiduk, G. E. Gigolaev and V. L. Mal′kov, 97-126. Moscow: Universitet Dmitriya Pozharskogo, 2012.

Jervis, Robert. "Unipolarity: A Structural Perspective." Chap. 8 In *International Relations Theory and the Consequences of Unipolarity*, edited by G. John Ikenberry, Michael Mastanduno and William C. Wohlforth, 252-281. Cambridge: Cambridge University Press, 2011.

Keohane, Robert O. "Realism, Neorealism and the Study of World Politics." Chap. 1 In *Neorealism and Its Critics*, edited by Robert O. Keohane, 1-26. New York: Columbia University Press, 1986.

———. "Theory of World Politics: Structural Realism and Beyond." Chap. 7 In *Neorealism and Its Critics*, edited by Robert O. Keohane, 158-203. New York: Columbia University Press, 1986.

Knorr, Klaus Eugen. "International Economic Leverage and Its Uses." Chap. 4 In *Economic Issues and National Security*, edited by Klaus Eugen Knorr and Frank N. Trager, 99-126. Lawrence, Kans.: University Press of Kansas, 1977.

Maier, Charles S. "Hegemony and Autonomy within the Western Alliance." Chap. 13 In *Origins of the Cold War: An International History*, edited by Melvyn P. Leffler and David S. Painter, 221-236. New York; London: Routledge, 2005.

Mazov, S. V. "Kongolezskiy Krizis i Poziciya SSSR v OON. 1960 g." [The Congolese Crisis and the USSR's position in the UN. 1960]. Chap. 3 In *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], edited by N. I. Egorova, I. V. Gaiduk, G. E. Gigolaev and V. L. Mal′kov, 56-96. Moscow: Universitet Dmitriya Pozharskogo, 2012.

McGlade, Jacqueline. "COCOM and the Containment of Western Trade and Relations." In *East-West Trade and the Cold War*, edited by Jari Eloranta and Jari Ojala, 47-61. Jyväskylä: University of Jyväskylä, 2005.

Murashko, Galina P., and Albina F. Noskova. "Repressii kak Element Vnutripartiinoi Bor'by za Vlast'" [Repressions as an Element of the Intraparty Struggle for Power]. Chap. 6 In *Moskva i Vostochnaia Evropa. Stanovlenie Politicheskikh Rezhimov Sovetskogo Tipa (1949-1953): Ocherki Istorii* [Moscow and Eastern Europe. Formation of the Soviet-type Political Regimes (1949-1953): Historical Sketches], edited by Tatiana V.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Volokitina, Galina P. Murashko, Albina F. Noshkova and Tatiana A. Pokivailova, 426-494. Moscow: ROSSPEN, 2002.

Painter, David S., and Melvyn P. Leffler. "Introduction: The International System and the Origins of the Cold War." Chap. 1 In *Origins of the Cold War: An International History*, edited by Melvyn P. Leffler and David S. Painter, 1-12. New York: Routledge, 2005.

Panova, V. V. "Deyatel'nost' "Gruppy Semi" v Gody Kholodnoj Vojny" [Activities of the "Group of Seven" in the Years of the Cold War]. Chap. 12 In *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], edited by N. I. Egorova, I. V. Gaiduk, G. E. Gigolaev and V. L. Mal′kov, 293-319. Moscow: Universitet Dmitriya Pozharskogo, 2012.

Perelomov, L. S. "China and Vietnam from the Third Century B.C. To the Third Century A.D.". In *China and Her Neighbours from Ancient Times to the Middle Ages*, edited by S. L. Tikhvinsky and L. S. Perelomov, 59-70. Moscow: Progress Publishers, 1981.

Posen, Barry R. "From Unipolarity to Multipolarity: Transition in Sight?". Chap. 10 In *International Relations Theory and the Consequences of Unipolarity*, edited by G. John Ikenberry, Michael Mastanduno and William C. Wohlforth, 317-341. Cambridge: Cambridge University Press, 2011.

Reynolds, David. "The European Dimension of the Cold War." Chap. 9 In *Origins of the Cold War: An International History*, edited by Melvyn P. Leffler and David S. Painter, 167-177. New York; London: Routledge, 2005.

Roberts, Geoffrey K. "Stalin and Soviet Foreign Policy." Chap. 2 In *Origins of the Cold War: An International History*, edited by David S. Painter and Melvyn P. Leffler, 42-57. New York: Routledge, 2005.

Rohde, Joachim. "The Transfer of American Military Technology to Germany." In *The United States and Germany in the Era of the Cold War, 1945-1990: A Handbook*, edited by Detlef Junker, Philipp Gassert, Wilfried Mausbach and David B. Morris, 163-170. Cambridge: Cambridge University Press, 2004.

Romani, Romano. "Introduction." in *The International Political System: Introduction & Readings*, edited by Romano Romani, 1-39. New York: John Wiley & Sons, 1972.

Stykalin, A. S. "KPSS i Mirovoe Kommunisticheskoe Dvizhenie" [The CPSU and the World Communist Movement]. Chap. 15 In *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

of International Relations], edited by N. I. Egorova, I. V. Gaiduk, G. E. Gigolaev and V. L. Mal′kov, 390-438. Moscow: Universitet Dmitriya Pozharskogo, 2012.

Ulunian, A. A. "Osobennosti Oboronnoy Politiki Balkanskih Chlenov Varshavskogo Pakta (Vtoraya Polovina 50-h gg. XX v.)" [Peculiarities of the Warsaw Pact Balkan Members' Defense Policies (The Second Half of the 50s in the XX century)]. Chap. 7 In *Mnogostoronnyaya Diplomatiya v Bipolyarnoy Sisteme Mezhdunarodnykh Otnosheniy* [Multilateral Diplomacy in the Bipolar System of International Relations], edited by N. I. Egorova, I. V. Gaiduk, G. E. Gigolaev and V. L. Mal′kov, 184-209. Moscow: Universitet Dmitriya Pozharskogo, 2012.

Volokitina, Tatiana V. "Istochniki Formirovaniya Partijno-Gosudarstvennoj Nomenklatury – Novogo Pravyashchego Sloya" [Sources of the Party-State Nomenclature Formation – New Ruling Stratum] Chap. 2 In *Moskva i Vostochnaya Evropa. Stanovlenie Politicheskih Rezhimov Sovetskogo Tipa (1949-1953), Ocherki Istorii* [Moscow and Eastern Europe. Formation of the Soviet-type Political Regimes (1949-1953): Historical Sketches], edited by Tatiana V. Volokitina, Galina P. Murashko, Albina F. Noshkova and Tatiana A. Pokivailova, 100-233. Moscow: ROSSPEN, 2002.

Walt, Stephen M. "Alliances in a Unipolar World." Chap. 4 In *International Relations Theory and the Consequences of Unipolarity*, edited by G. John Ikenberry, Michael Mastanduno and William C. Wohlforth, 99-139. Cambridge: Cambridge University Press, 2011.

Waltz, Kenneth N. "Political Structures." In *The Realism Reader*, edited by Colin Elman and Michael Jensen, 103-112. Milton Park, Abingdon, Oxon; New York: Routledge, 2014.

Journal articles

Acharya, Amitav, and Barry Buzan. "Why Is There No Non-Western International Relations Theory? Ten Years On." *International Relations of the Asia-Pacific* 17,no. 3 (2017): 341-370.

Adams, Gordon. "Cuba and Africa: The International Politics of the Liberation Struggle: A Documentary Essay." *Latin American Perspectives* 8, no. 1 (1981): 108-125.

Allen, Robert Loring. "The Soviet and East European Foreign Credit Program." *American Slavic and East European Review* 16, no. 4 (1957): 433-449.

Ashley, Richard K. "The Poverty of Neorealism." *International Organization* 38, no. 2 (1984): 225-286.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Baldwin, David A. "Security Studies and the End of the Cold War." Review of Rethinking America's Security: Beyond Cold War to New World Order, Graham Allison, Gregory F. Treverton; The United States and the End of the Cold War: Implications, Reconsiderations, Provocations, John Lewis Gaddis; The End of the Cold War: Its Meaning and Implications, Michael J. Hogan; Security Studies for the 1990s, Richard Shultz, Roy Godson, Ted Greenwood. *World Politics* 48, no. 1 (1995): 117-141.

Bertelsen, Rasmus Gjedsse. "The University as a Transnational Actor with Transnational Power: American Missionary Universities in the Middle East and China." *PS: Political Science and Politics* 47, no. 3 (2014): 624-627.

Birken, Lawrence. "What Is Western Civilization?". *The History Teacher* 25, no. 4 (1992): 451-461.

Bo, Hu. "Gudai Dongya Guoji Guanxi Tixi De Zhaoshi" [The Beginning of the System of International Relations in Ancient East Asia]. *Waijiao Pinglun*, no. 1 (2008): 50-59.

Bodenheimer, Susanne. "Dependency and Imperialism: The Roots of Latin American Underdevelopment." *Politics & Society* 1, no. 3 (1971): 327-357.

Brada, Josef C. "Interpreting the Soviet Subsididzation of Eastern Europe." *International Organization* 42, no. 4 (1988): 639-658.

Brooks, Stephen G., and William C. Wohlforth. "Power, Globalization, and the End of the Cold War: Reevaluating a Landmark Case for Ideas." *International Security* 25, no. 3 (Winter 2000/2001): 5-53.

———. "The Rise and Fall of the Great Powers in the Twenty-First Century: China's Rise and the Fate of America's Global Position." *International Security* 40, no. 3 (Winter 2015/16): 7-53.

Bruegel, Bedrich. "Methods of Soviet Domination in Satellite State." *International Affairs* 27, no. 1 (1951): 32-37.

Bunce, Valerie. "The Soviet Union under Gorbachev: Ending Stalinism and Ending the Cold War." *International Journal* 46, no. 2 (1991): 220-241.

Buzan, Barry, and Richard Little. "The Idea of "International System": Theory Meets History." *International Political Science Review* 15, no. 3 (1994): 231-255.

Casson, Lionel. "The Grain Trade of the Hellenistic World." *Transactions and Proceedings of the American Philological Association* 85 (1954): 168-187.

Ceglowski, Janet. "Has Globalization Created a Borderless World." *Business Review*, no. March (March 2000): 17-27.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Cioffi-Revilla, Claudio, and David Lai. "Chinese Warfare and Politics in the Ancient East Asian International System, CA. 2700 B.C. To 722 B.C." *International Interactions* 26, no. 4 (2001): 347-378.

Cox, Michael. "Western Intelligence, the Soviet Threat and NSC-68: A Reply to Beatrice Heuser." *Review of International Studies* 18, no. 1 (1992): 75-83.

Cox, Michael, and Caroline Kennedy-Pipe. "The Tragedy of American Diplomacy? Rethinking the Marshall Plan." *Journal of Cold War Studies* 7, no. 1 (2005): 97-134.

Cox, Ronald W. "US Foreign Policy, Business NGOs and Low-Intensity Democracy." *Class, Race and Corporate Power* 4, no. 2 (2016): 1-21.

Cumming, Gordon D. "French Development Assistance to Africa: Towards a New Agenda?". *African Affairs* 94, no. 376 (1995): 383-398.

Cupitt, Richard T., and Suzette R. Grillot. "COCOM Is Dead, Long Live COCOM: Persistence and Change in Multilateral Security Institutions." *British Journal of Political Science* 27, no. 3 (1997): 361-389.

Daksueva, Olga, and Serafettin Yilmaz. "The AIIB and China-ASEAN Relations: Shaping a New North-South Paradigm." *China Quarterly of International Strategic Studies* 4, no. 1 (2018): 1-27.

David, Steven R. "Explaining Third World Alignment." *World Politics* 43, no. 2 (1991): 233-256.

Demirel-Pegg, Tijen, and James Moskowitz. "US Aid Allocation: The Nexus of Human Rights, Democracy, and Development." *Journal of Peace Research* 46, no. 2 (2009): 181-198.

Deudney, Daniel, and G. John Ikenberry. "Who Won the Cold War?". *Foreign Policy*, no. 87 (1992): 123-138.

Deutsch, Karl W., and J. David Singer. "Multipolar Power Systems and International Stability." *World Politics* 16, no. 3 (April 1964): 390-406.

Dreher, Axel. "Does Globalization Affect Growth? Evidence from a New Index of Globalization." *Applied Economics* 38, no. 10 (2006): 1091-1110.

Edwards, Peter. "The Australian Commitment to the Malayan Emergency, 1948–1950." *Historical Studies* 22, no. 89 (1987): 604-616.

Efrat, Moshe. "The Economics of Soviet Arms Transfers to the Third World. A Case Study: Egypt." *Soviet Studies* 35, no. 4 (1983): 437-456.

Elrod, Richard B. "The Concert of Europe: A Fresh Look at an International System." *World Politics* 28, no. 2 (1976): 159-174.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Evans, Tony, and Peter Wilson. "Regime Theory and the English School of International Relations: A Comparison." *Millennium* 21, no. 3 (1992): 329-351.

Fairbank, J. K., and S. Y. Teng. "On the Ch'ing Tributary System." *Harvard Journal of Asiatic Studies* 6, no. 2 (1941): 135-246.

Fascell, Dante B. "The Helsinki Accord: A Case Study." *The Annals of the American Academy of Political and Social Science* 442 (1979): 69-76.

Fischer, Markus. "Feudal Europe, 800-1300: Communal Discourse and Conflictual Practices." *International Organization* 46, no. 2 (Spring 1992): 427-466.

Forsythe, David P. "Democracy, War, and Covert Action." *Journal of Peace Research* 29, no. 4 (1992): 385-395.

Frank, André Gunder. "Arms Economy and Warfare in the Third World." *Third World Quarterly* 2, no. 2 (1980): 228-250.

Friedberg, Aaron L. "The Future of U.S.-China Relations: Is Conflict Inevitable?". *International Security* 30, no. 2 (Fall 2005): 7-45.

———. "Ripe for Rivalry: Prospects for Peace in a Multipolar Asia." *International Security* 18, no. 3 (Winter 1993-1994): 5-33.

Fukuyama, Francis. "The End of History?". *The National Interest*, no. 16 (1989): 3-18.

Gaddis, John Lewis. "International Relations Theory and the End of the Cold War." *International Security* 17, no. 3 (1992): 5-58.

———. "Was the Truman Doctrine a Real Turning Point?". *Foreign Affairs* 52, no. 2 (1974): 386-402.

Gaddis, John Lewis, and Paul Nitze. "NSC 68 and the Soviet Threat Reconsidered." *International Security* 4, no. 4 (1980): 164-176.

Gaiduk, Ilya V. "Soviet Policy Towards US Participation in the Vietnam War." *History* 81, no. 261 (1996): 40-54

Garten, Jeffrey E. "Business and Foreign Policy." *Foreign Affairs* 76, no. 3 (1997): 67-79.

Gavin, Francis J. "Same as It Ever Was: Nuclear Alarmism, Proliferation, and the Cold War." *International Security* 34, no. 3 (2009): 7-37.

Gilpin, Robert G. "The Theory of Hegemonic War." *The Journal of Interdisciplinary History* 18, no. 4 (1988): 591-613.

Grant, Richard, and Jan Nijman. "Historical Changes in U.S. and Japanese Foreign Aid to the Asia-Pacific Region." *Annals of the Association of American Geographers* 87, no. 1 (1997): 32-51.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Grzybowski, Kazimierz. "International Organizations from the Soviet Point of View." *Law and Contemporary Problems* 29, no. 4 (Autumn 1964): 882-895.

Harbom, Lotta, Erik Melander, and Peter Wallensteen. "Dyadic Dimensions of Armed Conflict, 1946—2007." *Journal of Peace Research* 45, no. 5 (2008): 697-710.

Heuser, Beatrice. "NSC 68 and the Soviet Threat: A New Perspective on Western Threat Perception and Policy Making." *Review of International Studies* 17, no. 1 (1991): 17-40.

Hoffmann, Stanley. "An American Social Science: International Relations." *Daedalus* 106, no. 3 (Summer 1977): 41-60.

Holsti, Kal J. "Scholarship in an Era of Anxiety: The Study of International Politics During the Cold War." *Review of International Studies* 24, no. 5 (1998): 17-46.

Hulsewé, A. F. P. "“New Studies in Roman Commerce with the East.” by Raschkemanfred G.. In Aufstieg Und Niedergang Der Römischen Welt, Geschichte Und Kultur Roms in Der Neueren Forschung, Ii Principat [Rise and Fall of the Roman World: History and Culture of Rome in Recent Research, 2nd Principat], Ed. Temporinihildegard. Vol. 9, Part 2: 604–1361. Berlin: Gruyter, 1978. 758 Pp. Select Addenda, Bibliography, Maps, Finding List, Indexes. Vol. 9, DM 360." *The Journal of Asian Studies* 41, no. 2 (February 1982): 342-343.

Huntington, Samuel P. "The Lonely Superpower." *Foreign Affairs* 78, no. 2 (March/April 1999): 35-49.

Ikenberry, G. John. "Rethinking the Origins of American Hegemony." *Political Science Quarterly* 104, no. 3 (1989): 375-400.

Jackson, John H. "The General Agreement on Tariffs and Trade in United States Domestic Law." *Michigan Law Review* 66, no. 2 (1967): 249-332.

Jacob, Abel. "Israel's Military Aid to Africa, 1960-66." *The Journal of Modern African Studies* 9, no. 2 (1971): 165-187.

Joffe, Josef. "Europe's American Pacifier." *Foreign Policy*, no. 54 (1984): 64-82.

Johnson, Robert H. "Exaggerating America's Stakes in Third World Conflicts." *International Security* 10, no. 3 (1985): 32-68.

Jones, Daniel M., Stuart A. Bremer and J. David Singer. "Militarized Interstate Disputes, 1816-1992: Rationale, Coding Rules, and Empirical Patterns." *Conflict Management and Peace Science* 15, no. 2 (1996): 163-213.

Jorgensen-Dahl, Arnfinn. "The Soviet-Norwegian Maritime Disputes in the Arctic: Law and Politics." *Ocean Development & International Law* 21, no. 4 (1990): 411-429.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Kaplan, Lawrence S. "The Monroe Doctrine and the Truman Doctrine: The Case of Greece." *Journal of the Early Republic* 13, no. 1 (1993): 1-21.

Kaser, Michael. "Soviet Trade Turns to Europe." *Foreign Policy*, no. 19 (1975): 123-135.

Koslowski, Rey, and Friedrich V. Kratochwil. "Understanding Change in International Politics: The Soviet Empire's Demise and the International System." *International Organization* 48, no. 2 (1994): 215-247.

Krauthammer, Charles. "The Unipolar Moment." *Foreign Affairs* 70, no. 1 (1990): 23-33.

Kupchan, Charles A., and Clifford A. Kupchan. "Concerts, Collective Security, and the Future of Europe." *International Security* 16, no. 1 (1991): 114-161.

Lavigne, Marie. "The Soviet Union inside Comecon." *Soviet Studies* 35, no. 2 (1983): 135-153.

Layne, Christopher. "This Time It's Real: The End of Unipolarity and the Pax Americana." *International Studies Quarterly* 56, no. 1 (March 2012): 203–213.

———. "The Unipolar Illusion Revisited: The Coming End of the United States' Unipolar Moment." *International Security* 31, no. 2 (Fall 2006): 7–41.

———. "The Unipolar Illusion: Why New Great Powers Will Rise." *International Security* 17, no. 4 (Spring 1993): 5-51.

Lebow, Richard Ned, and Janice Gross Stein. "Deterrence and the Cold War." *Political Science Quarterly* 110, no. 2 (1995): 157-181.

Little, Douglas. "Mission Impossible: The CIA and the Cult of Covert Action in the Middle East." *Diplomatic History* 28, no. 5 (2004): 663-701.

Long, Andrew G. "Defense Pacts and International Trade." *Journal of Peace Research* 40, no. 5 (2003): 537-552.

Mack, Andrew, and Martin O'Hare. "Moscow-Tokyo and the Northern Territories Dispute." *Asian Survey* 30, no. 4 (1990): 380-394.

Mastanduno, Michael. "System Maker and Privilege Taker: U.S. Power and the International Political Economy." *World Politics* 61, no. 1 (2009): 121-154.

———. "Trade as a Strategic Weapon: American and Alliance Export Control Policy in the Early Postwar Period." *International Organization* 42, no. 1 (1988): 121-150.

Masters, Roger D. "A Multi-Bloc Model of the International System." *The American Political Science Review* 55, no. 4 (1961): 780-798.

McGowan, Patrick J. "Africa and Non-Alignment: A Comparative Study of Foreign Policy." *International Studies Quarterly* 12, no. 3 (1968): 262-295.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Mearsheimer, John J. "Back to the Future: Instability in Europe after the Cold War." *International Security* 15, no. 1 (Summer 1990): 5-56.

———. "The False Promise of International Institutions." *International Security* 19, no. 3 (Winter 1994-1995): 5-49.

Mearsheimer, John J., and Stephen M. Walt. "Leaving Theory Behind: Why Simplistic Hypothesis Testing Is Bad for International Relations." *European Journal of International Relations* 19, no. 3 (2013): 427–457.

Meernik, James, Eric L. Krueger, and Steven C. Poe. "Testing Models of U.S. Foreign Policy: Foreign Aid During and after the Cold War." *The Journal of Politics* 60, no. 1 (1998): 63-85.

Morris, Bernard S. "The Cominform: A Five-Year Perspective." *World Politics* 5, no. 3 (April 1953): 368-376.

Nakajima, Mineo. "The Sino-Soviet Confrontation: Its Roots in the International Background of the Korean War." *The Australian Journal of Chinese Affairs*, no. 1 (1979): 19-47.

Novo, Andrew R. "Where We Get Thucydides Wrong: The Fallacies of History's First "Hegemonic" War." *Diplomacy & Statecraft* 27, no. 1 (2016): 1-21.

Nye, Joseph S. "Multinational Corporations in World Politics." *Foreign Affairs* 53, no. 1 (1974): 153-175.

Pant, Harsh V., and Julie M. Super. "India's 'Non-Alignment'conundrum: A Twentieth-Century Policy in a Changing World." *International Affairs* 91, no. 4 (2015): 747-764.

Pennacchio, Charles F. "The East German Communists and the Origins of the Berlin Blockade Crisis." *East European Quarterly* 29, no. 3 (1995): 293-314.

Pevehouse, Jon C., Timothy Nordstrom, and Kevin Warnke. "The COW-2 International Organizations Dataset Version 2.0." *Conflict Management and Peace Science* 21 (2004): 101-119.

Pitts, Lynn F. "Relations between Rome and the German 'Kings' on the Middle Danube in the First to Fourth Centuries A.D." *The Journal of Roman Studies* 79 (1989): 45-58.

Poe, Steven C., and James Meernik. "US Military Aid in the 1980s: A Global Analysis." *Journal of Peace Research* 32, no. 4 (1995): 399-411.

Posen, Barry R. "Emerging Multipolarity: Why Should We Care?". *Current History* 108, no. 721 (November 2009): 347-352.

Pulleyblank, Edwin G. "The Roman Empire as Known to Han China." *Journal of the American Oriental Society* 119, no. 1 (1999): 71-79.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Rapkin, David P, William R Thompson, and Jon A Christopherson. "Bipolarity and Bipolarization in the Cold War Era: Conceptualization, Measurement, and Validation." *Journal of Conflict Resolution* 23, no. 2 (1979): 261-295.

Regan, Patrick M. "Conditions of Successful Third-Party Intervention in Intrastate Conflicts." *The Journal of Conflict Resolution* 40, no. 2 (1996): 336-359.

Reynolds, David. "A 'Special Relationship'? America, Britain and the International Order since the Second World War." *International Affairs* 62, no. 1 (1985): 1-20.

Rosecrance, Richard N. "Bipolarity, Multipolarity, and the Future." *The Journal of Conflict Resolution* 10, no. 3 (September 1966): 314-327.

Ruggie, John Gerard. "Continuity and Transformation in the World Polity: Toward a Neorealist Synthesis." *World Politics* 35, no. 2 (January 1983): 261-285.

———. "International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order." *International Organization* 36, no. 2 (1982): 379-415.

———. "The United States and the United Nations: Toward a New Realism." *International Organization* 39, no. 2 (1985): 343-356.

Saksena, Km Vimla. "Sino-Soviet Rift." *The Indian Journal of Political Science* 25, no. 2 (1964): 68-76.

Sanjian, Gregory S. "Cold War Imperatives and Quarrelsome Clients: Modeling U.S. and USSR Arms Transfers to India and Pakistan." *The Journal of Conflict Resolution* 42, no. 1 (1998): 97-127.

Schaufelbuehl, Janick Marina, Sandra Bott, Jussi Hanhimäki, and Marco Wyss. "Non-Alignment, the Third Force, or Fence-Sitting: Independent Pathways in the Cold War." *The International History Review* 37, no. 5 (2015): 901-911.

Schweller, Randall L., and Xiaoyu Pu. "After Unipolarity: China's Visions of International Order in an Era of U.S. Decline." *International Security* 36, no. 1 (Summer 2011): 41-72.

Sheng, Michael M. "Mao and China's Relations with the Superpowers in the 1950s: A New Look at the Taiwan Strait Crises and the Sino–Soviet Split." *Modern China* 34, no. 4 (2008): 477-507.

Sherratt, Susan, and Andrew Sherratt. "The Growth of the Mediterranean Economy in the Early First Millennium Bc." *World Archaeology* 24, no. 3 (1993): 361-378.

Singer, J. David. "Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816-1985." *International Interactions* 14 (1987): 115-132.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Singer, J. David, Stuart Bremer, and John Stuckey. “Capability Distribution, Uncertainty, and Major Power War, 1820-1965.” In *Peace, War, and Numbers*, edited by Bruce Russett, 19-48. Beverly Hills: Sage, 1972.

Sislin, John. "Arms as Influence: The Determinants of Successful Influence." *The Journal of Conflict Resolution* 38, no. 4 (1994): 665-689.

Skilling, H Gordon. "National Communism in Eastern Europe since the 22nd Congress." *Canadian Journal of Economics and Political Science* 30, no. 3 (1964): 313-327.

Stueck, William. "The United States, the Soviet Union, and the Division of Korea: A Comparative Approach." *Journal of American-East Asian Relations* 4, no. 1 (1995): 1-27.

Sudo, Sueo. "Japan-ASEAN Relations: New Dimensions in Japanese Foreign Policy." *Asian Survey* 28, no. 5 (1988): 509-525.

Sun, Lizhou. "Xihan Shiqi Dongya Guoji Tixi De Liangji Geju Fenxi" [An Analysis of the Bipolar International System in East Asia during the Western Han Period]. *Shijie Jingji Yu Zhengzhi*, no. 8 (2007): 17-25.

Thorley, J. "The Silk Trade between China and the Roman Empire at Its Height, 'Circa' A. D. 90-130." *Greece & Rome* 18, no. 1 (1971): 71-80.

Thorp, Willard L. "American Policy and the Soviet Economic Offensive." *Foreign Affairs* 35, no. 2 (1957): 271-282.

Tillema, Herbert K. "Foreign Overt Military Intervention in the Nuclear Age." *Journal of Peace Research* 26, no. 2 (1989): 179-196.

Trachtenberg, Marc. "The Marshall Plan as Tragedy." *Journal of Cold War Studies* 7, no. 1 (2005): 135-140.

Vasquez, John A. "Why Do Neighbors Fight? Proximity, Interaction, or Territoriality." *Journal of Peace Research* 32, no. 3 (1995): 277-293.

Wagner, R. Harrison. "Economic Interdependence, Bargaining Power, and Political Influence." *International Organization* 42, no. 3 (1988): 461-483.

———. "What Was Bipolarity?". *International Organization* 47, no. 1 (Winter 1993): 77-106.

Wallace, William, and Christopher Phillips. "Reassessing the Special Relationship." *International Affairs* 85, no. 2 (2009): 263-284.

Walt, Stephen M. "Alliance Formation and the Balance of World Power." *International Security* 9, no. 4 (Spring 1985): 3-43.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Waltz, Kenneth N. "The Emerging Structure of International Politics." *International Security* 18, no. 2 (Autumn 1993): 44-79.

———. "The Stability of a Bipolar World." *Daedalus* 93, no. 3 (Summer 1964): 881-909.

———. "Structural Realism after the Cold War." *International Security* 25, no. 1 (Summer 2000): 5-41.

Wan, Ming. "Japan and the Asian Development Bank." *Pacific Affairs* 68, no. 4 (1995): 509-528.

Wendt, Alexander. "Anarchy Is What States Make of It: The Social Construction of Power Politics." *International Organization* 46, no. 2 (Spring 1992): 391-425.

———. "Why a World State Is Inevitable." *European Journal of International Relations* 9, no. 4 (December 2003): 491-542.

Wilczynski, J. "Strategic Embargo in Perspective." *Soviet Studies* 19, no. 1 (1967): 74-86.

Wilkinson, David. "Central Civilization." *Comparative Civilizations Review* 17, no. 17 (1987): 31-59.

———. "Unipolarity without Hegemony." *International Studies Review* 1, no. 2 (Summer 1999): 141-172.

Williams, Phil. "US-Soviet Relations: Beyond the Cold War?". *International Affairs* 65, no. 2 (1989): 273-288.

Wohlforth, William C. "The Stability of a Unipolar World." *International Security* 24, no. 1 (Summer 1999): 5-41.

Yergin, Daniel. "Politics and Soviet-American Trade: The Three Questions." *Foreign Affairs* 55, no. 3 (1977): 517-538.

Yilmaz, Serafettin. "China, Historical Blocs and International Relations." *Issues & Studies* 50, no. 4 (2014): 191-222.

Yim, Odilia, and Kylee T. Ramdeen. "Hierarchical Cluster Analysis: Comparison of Three Linkage Measures and Application to Psychological Data." *The Quantitative Methods for Psychology* 11, no. 1 (2015): 8-21.

Yu, George T. "China and the Third World." *Asian Survey* 17, no. 11 (1977): 1036-1048.

Zhang, Yongjin. "System, Empire and State in Chinese International Relations." *Review of International Studies* 27, no. 5 (2003): 43-63.

Zyzniewski, Stanley J. "Soviet Foreign Economic Policy." *Political Science Quarterly* 73, no. 2 (1958): 206-233.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Reports

Becker, Abraham S. "US-Soviet Trade in the 1980s." Santa Monica, CA: RAND Corporation, 1987.

"The Changing Role of Soviet-Owned Banks in the West." Virginia: Central Intelligence Agency, 1985. https://www.cia.gov/library/readingroom/docs/CIA-RDP86T00591R000200180002-2.pdf.

Crane, Keith. "The Creditworthiness of Eastern Europe in the 1980s." Santa Monica, CA: RAND Corporation, 1985.

Johnson, A. Ross. "The Warsaw Pact: Soviet Military Policy in Eastern Europe." Santa Monica, CA: Rand Corporation, 1981.

"Soviet and East European-Owned Banks in the West." Virginia: Central Intelligence Agency, 1975. https://www.cia.gov/library/readingroom/docs/DOC_0000233296.pdf.

Statistical data sources

“Formal Alliances (v4.1).” Correlates of War Project, http://www.correlatesofwar.org/data-sets/formal-alliances.

“Intergovernmental Organizations (v2.3).” Correlates of War Project, http://www.correlatesofwar.org/data-sets/IGOs.

International Monetary Fund, http://www.imf.org/external/.

“International Trade (v.4.0).” Correlates of War Project, http://www.correlatesofwar.org/data-sets/bilateral-trade.

“KOF Globalization Index.” KOF Swiss Economic Institute, https://www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html.

Maddison Project, http://www.ggdc.net/maddison/maddison-project/home.htm.

“Militarized Interstate Disputes (v4.2).” Correlates of War Project, http://www.correlatesofwar.org/data-sets/MIDs.

“National Material Capabilities (v5.0).” Correlates of War Project, http://www.correlatesofwar.org/data-sets/national-material-capabilities.

“SIPRI Arms Transfers Database.” Stockholm International Peace Research Institute, https://www.sipri.org/databases/armstransfers.

Statistical Abstract of the United States. US Census Bureau, https://www.census.gov/library/publications/time-series/statistical_abstracts.html.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

"Vneshnyaya torgovlya SSSR" [USSR's Foreign Trade]. *Istoricheskie Materialy* [Historical Materials], http://istmat.info/node/21347.

World Bank, http://www.worldbank.org/.

Dissertations and theses

Cronin, Jason William. "Soft Power and Its Impact on US Influence in Latin America." Master's thesis, Naval Postgraduate School, 2004.

Davies, Sarah Helen. "Rome, International Power Relations, and 146 BCE." Doctoral dissertation, University of Texas at Austin, 2012.

Komarova, Tatiana. "A Study of Interactions among Russia, China, and Taiwan under the Framework of Strategic Triangle Theory, 1992-2012." Doctoral dissertation, Tamkang University, 2015.

Humphreys, Adam R. C. "Kenneth Waltz and the Limits of Explanatory Theory in International Relations." Doctoral dissertation, University of Oxford, 2007.

Mainville, Sebastien. "The International System and Its Environment: Modern Evolutionary, Physiological and Developmental Perspectives on Change in World Politics." Doctoral dissertation, Ohio State University, 2016.

Web-resources

"1941: The Atlantic Charter." United Nations, http://www.un.org/en/sections/history-united-nations-charter/1941-atlantic-charter/index.html.

Bahgat, Gawdat. "Saudi Arabia And The Arab-Israeli Peace Process." *Middle East Policy Council*, no. 14 (Fall 2007), http://www.mepc.org/journal/saudi-arabia-and-arab-israeli-peace-process.

"Charter of the United Nations." United Nations, http://www.un.org/en/sections/un-charter/chapter-i/index.html.

"Chto Takoe "Sovetskiy Chelovek"" [What is the 'Soviet Person']. *Argument* (2016). Published electronically 8 March, http://argumentua.com/stati/chto-takoe-sovetskii-chelovek.

"The Cold War (1945–1989)." *CVCE* (2016). Updated electronically 7 July. http://www.cvce.eu/content/publication/2011/11/21/6dfe06ed-4790-48a4-8968-855e90593185/publishable_en.pdf.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Cristiano64 - Lavoro proprio, self-made (2007). CC BY-SA 3.0, Published electronically 24 July. https://commons.wikimedia.org/w/index.php?curid=2452303.

Dempsey, Judy. "The United States and China: The Return of a Bipolar World." *Carnegie Europe* (2012). Published electronically 12 November. http://carnegieeurope.eu/strategiceurope/?fa=49969.

"G7 communique unlikely due to lack of consensus: officials." *Reuters* (2018). Published electronically 9 June. https://www.reuters.com/article/us-g7-summit-communique/g7-communique-unlikely-due-to-lack-of-consensus-officials-idUSKCN1J42L5.

Gudkov, Lev. "Povest' o Sovetskom Cheloveke" [Story about a Soviet person]. *Vedomosti* (2016). Published electronically 28 December. https://www.vedomosti.ru/opinion/articles/2016/12/28/671519-povest-o-sovetskom.

Interview with Robert McNamara, "Episode 11: Vietnam." *CNN* (2008). Published electronically 14 June. https://web.archive.org/web/20080614065921/http://www.cnn.com/SPECIALS/cold.war/episodes/11/interviews/mcnamara/.

"Is it worth studying International Relations today?" *Global Matters* (2015). Published electronically 27 January. http://www.global-matters.org/2015/01/why-study-international-relations/.

Klitin, Aleksey. "Taivanskie Krizisy 1954-1955 i 1958 godov" [Taiwan Crises of 1954-1955 and 1958]. *Istoriya SSHA: Materialy k Kursu* [US History: Materials for the Course] (2010). Published electronically 2 December. https://ushistory.ru/populjarnaja-literatura/424-tajvanskie-krizisy-1954-1955-godov-i-1958-goda.

"Letter From Chairman Khrushchev to President Kennedy, October 24, 1962," John F. Kennedy Presidential Library and Museum, October 24, 1962, http://microsites.jfklibrary.org/cmc/oct24/doc2.html.

Lewis, Patricia, Jacob Parakilas, Marianne Schneider-Petsinger, Christopher Smart, Jeffrey Rathke, and Donatienne Ruy. "The Future of the United States and Europe: An Irreplaceable Partnership." *Chatham House* (2018). Published electronically 11 April. https://www.chathamhouse.org/publication/future-united-states-and-europe-irreplaceable-partnership.

"Military Technology and the Warsaw Pact," *Global Security*, https://www.globalsecurity.org/military/world/int/warsaw-pact-13.htm.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Mosedschurte. “Cold War World Map. 1953.” 2009, Digital Image. Available from: Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Cold_War_WorldMap_1953.png.

Muenchow-Pohl, Bernd Von. “India and Europe in a Multipolar World.” *Carnegie Endowment for International Peace* (2012). Published electronically 10 May. http://carnegieendowment.org/2012/05/10/india-and-europe-in-multipolar-world-pub-48038.

O’Rourke, Lindsey A. “The U.S. tried to change other countries’ governments 72 times during the Cold War.” *The Washington Post* (2016). Published electronically 23 December. https://www.washingtonpost.com/news/monkey-cage/wp/2016/12/23/the-cia-says-russia-hacked-the-u-s-election-here-are-6-things-to-learn-from-cold-war-attempts-to-change-regimes/?utm_term=.1f32a6e16fe2.

“Outline of Far Eastern and Asian Policy for Review With the President.” Office of the Historian, Bureau of Public Affairs US Department of State, November 14, 1949, https://history.state.gov/historicaldocuments/frus1949v07p2/d386.

“Radio and Television Report to the American People on the Soviet Arms Buildup in Cuba, October 22, 1962.” John F. Kennedy Presidential Library and Museum. October 22, 1962, https://www.jfklibrary.org/Asset-Viewer/sUVmCh-sB0moLfrBcaHaSg.aspx.

Rettman, Andrew. “EU and US disagree on Iran and Israel.” *Euobserver* (2017). Published electronically 5 December. https://euobserver.com/foreign/140164.

Shinn, David. “U.S. Policy towards the Horn of Africa.” *International Policy Digest* (2011). Published electronically 13 October. https://intpolicydigest.org/2011/10/13/u-s-policy-towards-the-horn-of-africa/.

“Understanding Social Interaction,” *Boundless Sociology*, https://courses.lumenlearning.com/boundless-sociology/chapter/understanding-social-interaction/.

Yan, Xuetong. "Why a Bipolar World Is More Likely Than a Unipolar or Multipolar One." *The Huffington Post* (2015). Published electronically 22 April. https://www.huffingtonpost.com/yan-xuetong/bipolar-world-likely_b_7104590.html.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendices

Appendix A List of clusters and included countries according to the analysis of economic interactions

Year	Cluster name	Countries
1948	Rest	Argentina, Australia, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cuba, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Finland, France, Greece, Guatemala, Haiti, Honduras, Iceland, India, Iran, Iraq, Ireland, Israel, Italy, Jordan, Mexico, Netherlands, New Zealand, Nicaragua, Norway, Panama, Paraguay, Peru, Philippines, Portugal, Saudi Arabia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Syria, Thailand, Turkey, Uruguay, Venezuela
	US-UK	United Kingdom, United States
	Soviet	Bulgaria, Czechoslovakia, Hungary, Poland, Romania, Yugoslavia
	Russia	Soviet Union
	PK-MM	Myanmar, Pakistan
	Missing	Afghanistan, Albania, Belgium, East Germany, Indonesia, Lebanon, Liberia, Luxembourg, Mongolia, Nepal, North Korea, South Korea, West Germany, Yemen Arab Republic
1957	Rest	Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Denmark, Dominican Republic, Ecuador, El Salvador, Ethiopia, France, Ghana, Greece, Guatemala, Haiti, Honduras, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Japan, Jordan, Lebanon, Liberia, Libya, Luxembourg, Mexico, Myanmar, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Panama, Paraguay, Peru, Philippines, Portugal, Saudi Arabia, South Africa, South Korea, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syria, Thailand, Turkey, United Kingdom, Uruguay, Venezuela, West Germany, Yemen Arab Republic, Yugoslavia
	US	United States
	Soviet	Afghanistan, Albania, Bulgaria, China, Czechoslovakia, East Germany, Egypt, Finland, Hungary, Iceland, Poland, Romania
	Russia	Soviet Union
	MA-TN-LA-KH	Cambodia, Laos, Morocco, Tunisia
	Missing	Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Cyprus, Democratic Republic of Congo, Gabon, Guinea, Ivory Coast, Kuwait, Madagascar, Malaysia, Mali, Mauritania, Mongolia, Nepal, Niger, Nigeria, North Korea, Oman, Republic of Vietnam, Senegal, Singapore, Somalia, Taiwan, Togo, Vietnam, Zimbabwe

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix A (continued)

Year	Cluster name	Countries
1973	Rest	Algeria, Argentina, Australia, Austria, Bahamas, Bahrain, Bangladesh, Barbados, Belgium, Benin, Bolivia, Brazil, Burundi, Cameroon, Canada, Central African Republic, Chile, China, Colombia, Congo, Costa Rica, Cyprus, Democratic Republic of the Congo, Denmark, Dominican Republic, Ecuador, El Salvador, Ethiopia, Finland, France, Gabon, Gambia, Ghana, Greece, Guatemala, Guyana, Haiti, Honduras, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Ivory Coast, Jamaica, Japan, Jordan, Kenya, Kuwait, Lebanon, Liberia, Libya, Luxembourg, Madagascar, Malawi, Malaysia, Mali, Malta, Mauritania, Mauritius, Mexico, Morocco, Myanmar, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Portugal, Qatar, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, Somalia, South Africa, South Korea, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syria, Taiwan, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela, West Germany, Yemen Arab Republic, Yemen People's Republic, Yugoslavia, Zambia, Zimbabwe
	Soviet	Afghanistan, Bulgaria, Cuba, Czechoslovakia, East Germany, Egypt, Hungary, North Korea, Poland, Romania
	Russia	Soviet Union
	Missing	Albania, Angola, Bhutan, Botswana, Brunei, Burkina Faso, Cambodia, Chad, Equatorial Guinea, Guinea, Guinea-Bissau, Fiji, Laos, Lesotho, Maldives, Mongolia, Nepal, Papua New Guinea, Republic of Vietnam, Swaziland, Vietnam
1989	Eur/Afr	Algeria, Austria, Belgium, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Congo, Cyprus, Democratic Republic of the Congo, Denmark, Djibouti, Egypt, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Iceland, Iran, Ireland, Italy, Ivory Coast, Kenya, Lebanon, Libya, Luxembourg, Madagascar, Malawi, Mali, Malta, Mauritania, Mauritius, Morocco, Netherlands, Niger, Norway, Portugal, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Spain, Sudan, Sweden, Switzerland, Tanzania, Togo, Tunisia, Turkey, Uganda, United Kingdom, West Germany, Yemen Arab Republic, Yugoslavia, Zimbabwe
1989	Am/Afr/As	Angola, Argentina, Australia, Bahamas, Bangladesh, Barbados, Belize, Bolivia, Brazil, Brunei, Canada, Chile, China, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Fiji, Gambia, Grenada, Guatemala, Guyana, Haiti, Honduras, India, Indonesia, Iraq, Israel, Jamaica, Japan, Kuwait, Malaysia, Mexico, New Zealand, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Saudi Arabia, Singapore, South Korea, Sri Lanka, St. Vincent and the Grenadines, Suriname, Taiwan, Thailand, Trinidad and Tobago, United Arab Emirates, Uruguay, Venezuela, Zambia
	US	United States

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

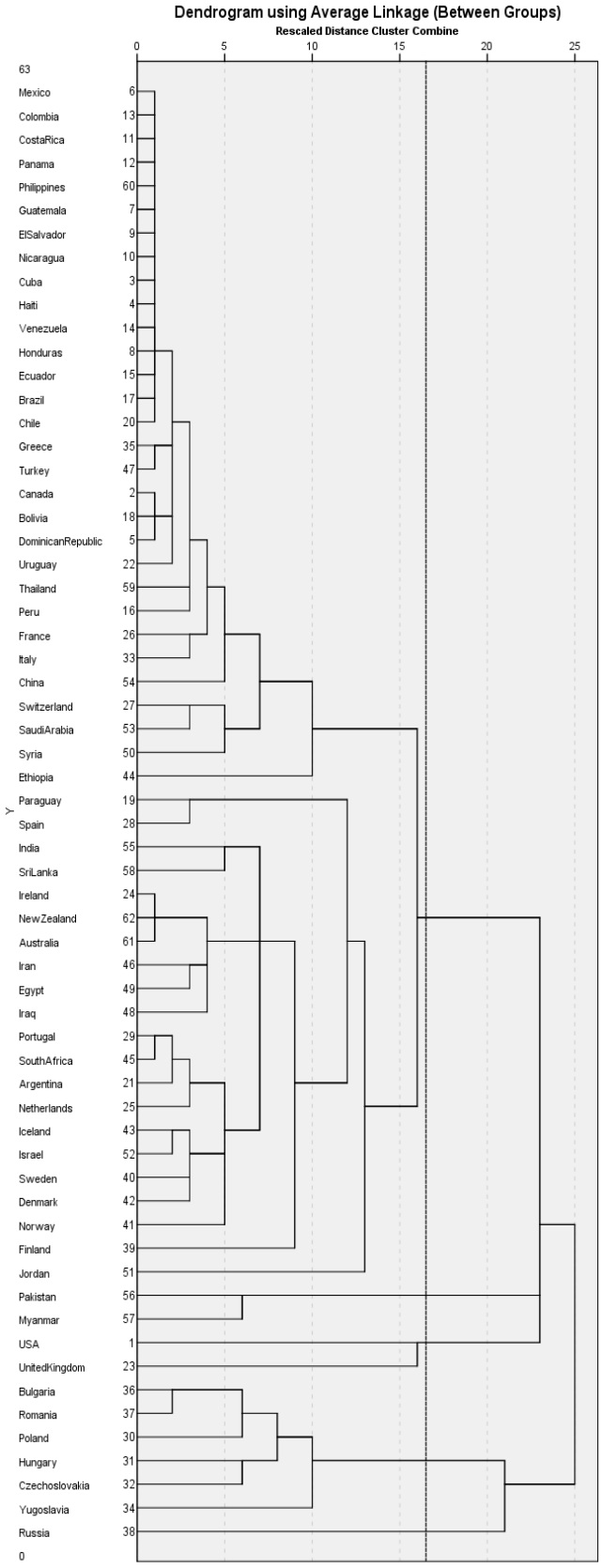
Appendix A (continued)

Year	Cluster name	Countries
1989	Soviet	Afghanistan, Bulgaria, Cambodia, Cuba, Czechoslovakia, East Germany, Hungary, Nicaragua, North Korea, Poland, Romania, Syria, Vietnam, Yemen People's Republic
	AL-RU	Albania, Soviet Union
	Bahrain	Bahrain
	Jordan	Jordan
	Liberia	Liberia
	MZ-SC-LA-MM	Laos, Mozambique, Myanmar, Seychelles
	CapeVerde	Cape Verde
	Missing	Antigua and Barbuda, Bhutan, Botswana, Chad, Comoros, Equatorial Guinea, Guinea-Bissau, Lesotho, Maldives, Marshall Islands, Micronesia, Mongolia, Nepal, Palau, Samoa, Sao Tome and Principe, Solomon Islands, St. Kitts and Nevis, St. Lucia, Swaziland, Tonga, Vanuatu

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix B Dendrograms of economic interactions for each studied year

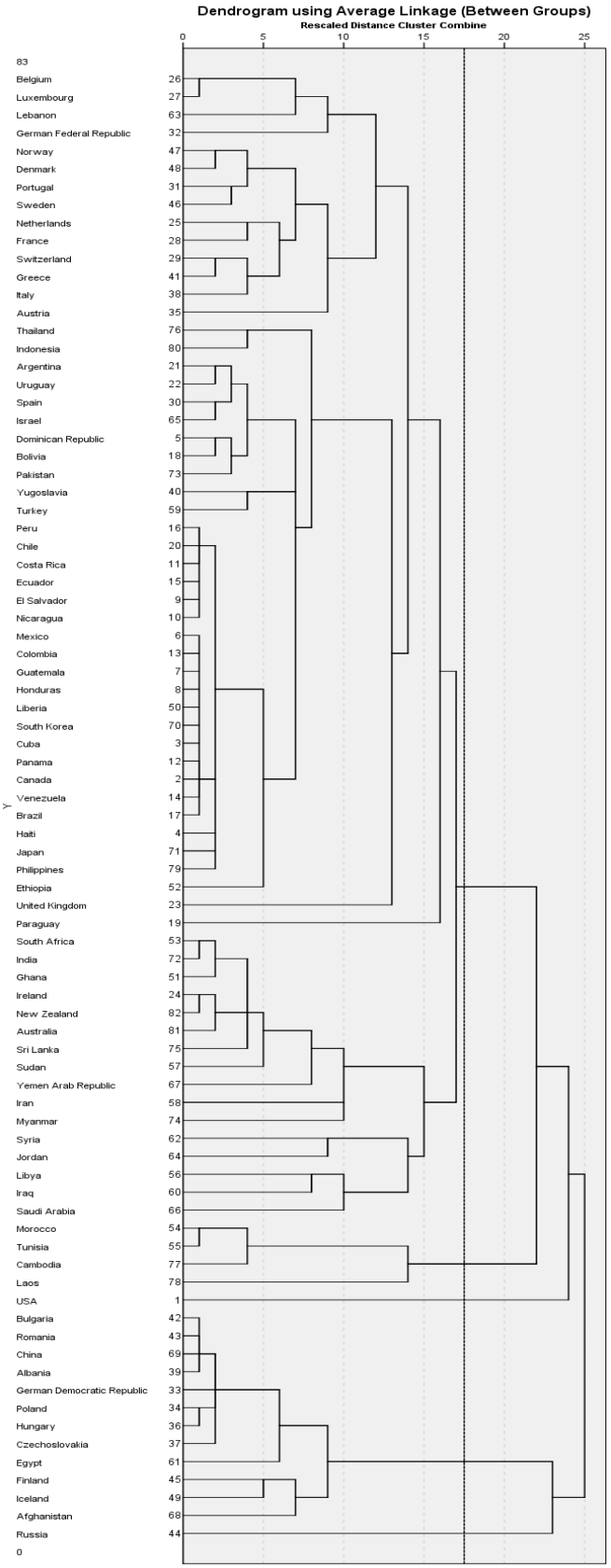
Dendrogram of 1948



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix B (continued)

Dendrogram of 1957



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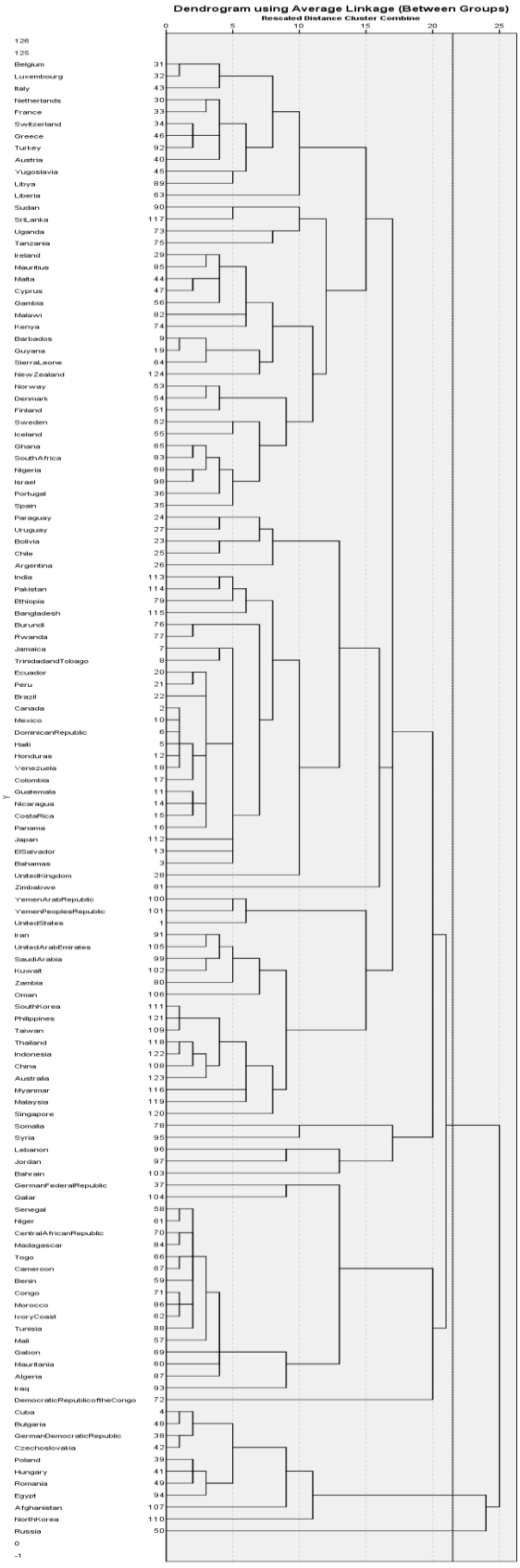
Appendix B (continued)

Dendrogram of 1973


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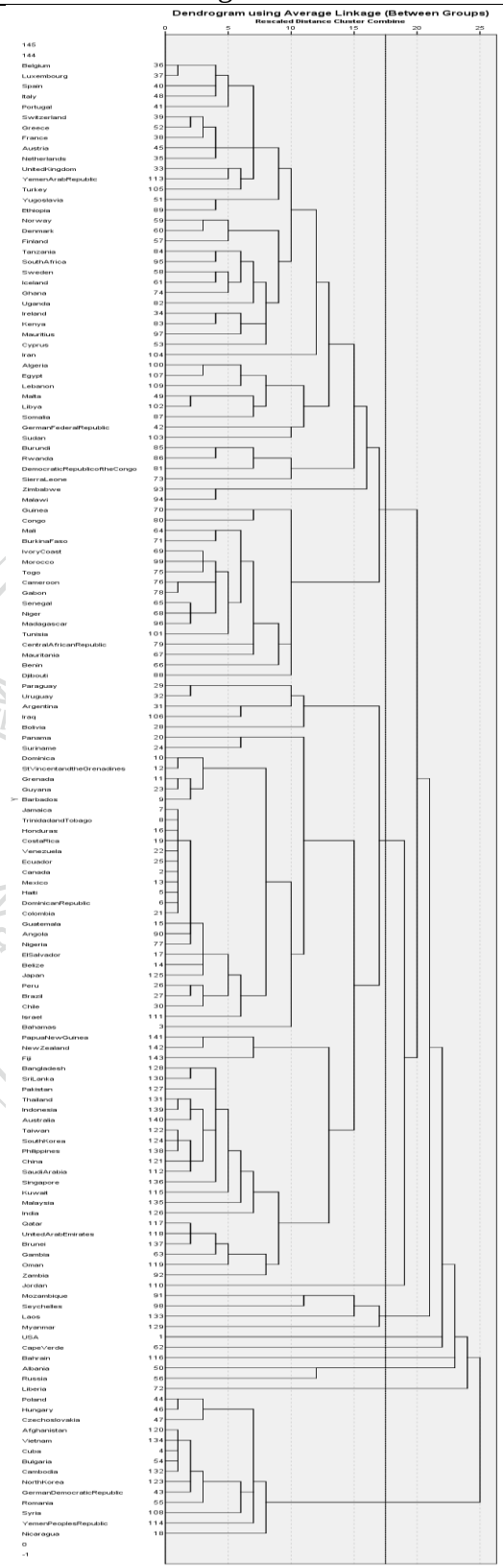
Appendix B (continued)

Dendrogram of 1989



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix C Ranking all units' capabilities in the West system by selected years

1948

Units	GDP	% (GDP)	CINC	% (CINC)	Units	GDP	% (GDP)	CINC	% (CINC)
United States	1,334,331	36%	0.2946597	38%	Cuba	9,706	0%	0.0017359	0%
United Kingdom	337,376	9%	0.075426	10%	Norway	16,466	0%	0.0015807	0%
India	215,927	6%	0.0524505	7%	Israel[1]	3,623	0%	0.0014135	0%
France	180,611	5%	0.0325886	4%	Venezuela	34,427	1%	0.0013442	0%
Italy	142,074	4%	0.0192622	2%	Iraq	7,041	0%	0.001297	0%
Spain	59,970	2%	0.0148603	2%	Saudi Arabia	8,610	0%	0.0011293	0%
Canada	93,121	3%	0.0125928	2%	Nepal[1]	4,462	0%	0.0010616	0%
Brazil	79,157	2%	0.0121925	2%	Ireland	9,643	0%	0.0009568	0%
Pakistan	23,477	1%	0.0118022	2%	Ecuador	5,673	0%	0.0008852	0%
Turkey	33,003	1%	0.0117226	2%	Sri Lanka	8,397	0%	0.0008769	0%
Belgium	42,989	1%	0.0109084	1%	New Zealand	12,701	0%	0.0008759	0%
Australia	53,754	1%	0.0083341	1%	Syria[1]	8,418	0%	0.000855	0%
Netherlands	53,804	1%	0.0083195	1%	Uruguay	9,515	0%	0.000819	0%
Argentina	85,641	2%	0.0082709	1%	Guatemala	5,248	0%	0.0006688	0%
Mexico	58,114	2%	0.0066099	1%	Bolivia	34,820	1%	0.0006092	0%
Sweden	43,316	1%	0.0059829	1%	Yemen Arab Republic[1]	4,353	0%	0.0005736	0%
Egypt[1]	19,288	1%	0.0053934	1%	Dominican Republic[1]	2,416	0%	0.0005684	0%
South Africa[1]	34,465	1%	0.0052241	1%	Paraguay	12,816	0%	0.0004179	0%
Iran[1]	28,128	1%	0.0042677	1%	Haiti	3,168	0%	0.0004093	0%
Greece	13,936	0%	0.0035732	0%	Lebanon[1]	3,313	0%	0.0003211	0%
Thailand[1]	16,375	0%	0.0033879	0%	El Salvador	3,090	0%	0.0002847	0%
Philippines	19,772	1%	0.0033156	0%	Jordan[1]	933	0%	0.000219	0%
Luxembourg	n.a.	n.a.	0.0029497	0%	Honduras	1,797	0%	0.0001638	0%
Colombia	23,235	1%	0.002628	0%	Nicaragua	1,550	0%	0.000143	0%
Portugal	16,894	0%	0.0026259	0%	Liberia	869	0%	0.0001402	0%
Afghanistan[1]	5,255	0%	0.0023342	0%	Costa Rica	1,571	0%	0.000089	0%
Myanmar	n.a	n.a.	0.0022862	0%	Panama	1,664	0%	0.0000781	0%
Ethiopia	8,417	0%	0.0022585	0%	Indonesia[2]	61,872	2%	n.a.	n.a.
Denmark	25,697	1%	0.0020571	0%	South Korea	15,383	0%	n.a.	n.a.
Chile	21,772	1%	0.0020532	0%	'Frontiers'				
Switzerland	41,768	1%	0.0019677	0%	China[1]	244,985	7%	0.1150552	15%
Finland	15,481	0%	0.001916	0%	Iceland	n.a.	n.a.	0.0000126	0%
Peru	15,184	0%	0.0017403	0%	Taiwan	6,238	0%	n.a.	n.a.

1957

United States	1,878,063	33%	0.2550486	38%	Israel	7,761	0%	0.0011808	0%
United Kingdom	412,315	7%	0.0473189	7%	Sri Lanka	11,869	0%	0.0008089	0%
West Germany	461,071	8%	0.0372537	6%	Ecuador	8,751	0%	0.000717	0%
Japan	287,130	5%	0.0328617	5%	Ireland	11,266	0%	0.0006928	0%
France	305,308	5%	0.0327303	5%	Uruguay	12,932	0%	0.0006602	0%
Italy	251,732	4%	0.0181723	3%	New Zealand	20,165	0%	0.0006216	0%
Canada	146,402	3%	0.0132075	2%	Ghana	7,933	0%	0.0006097	0%
Brazil	130,717	2%	0.0125128	2%	Dominican Republic	3,787	0%	0.0005362	0%
Spain	90,901	2%	0.0107244	2%	Bolivia	5,183	0%	0.000527	0%
Pakistan	30,339	1%	0.0099478	1%	Jordan	1,571	0%	0.0005228	0%
South Korea	27,262	0%	0.0090927	1%	Tunisia	4,579	0%	0.0004922	0%
Belgium	58,381	1%	0.0077318	1%	Guatemala	7,992	0%	0.0004494	0%
Turkey	56,321	1%	0.0074336	1%	Lebanon	4,476	0%	0.0004132	0%

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix C (continued)

1957

Units	GDP	% (GDP)	CINC	% (CINC)	Units	GDP	% (GDP)	CINC	% (CINC)
Argentina	107,087	2%	0.0073708	1%	Haiti	3,587	0%	0.0003381	0%
Australia	78,577	1%	0.0070046	1%	El Salvador	4,098	0%	0.0002994	0%
Netherlands	83,950	1%	0.0069896	1%	Paraguay	2,795	0%	0.0002765	0%
Taiwan	n.a.	n.a	0.006829	1%	Libya	1,592	0%	0.0002078	0%
Yugoslavia	35,573	1%	0.0068053	1%	Nicaragua	2,868	0%	0.0001958	0%
Mexico	103,812	2%	0.0065243	1%	Panama	2,414	0%	0.0001897	0%
Venezuela	67,414	1%	0.0060715	1%	Honduras	2,429	0%	0.0001515	0%
Iran	34,939	1%	0.0053636	1%	Costa Rica	2,676	0%	0.0001189	0%
South Africa	47,665	1%	0.0047776	1%	Liberia	1,155	0%	0.0000802	0%
Sweden	59,591	1%	0.0039175	1%	Niger	2,600	0%	n.a.	n.a.
Philippines	37,599	1%	0.0033356	0%	‘Frontiers’				
Thailand	22,792	0%	0.0032868	0%	India	277,924	5%	0.0457935	7%
Colombia	34,766	1%	0.0030797	0%	Indonesia	92,631	2%	0.0127884	2%
Republic of Vietnam	n.a.	n.a.	0.0028541	0%	Austria	39,818	1%	0.0036776	1%
Greece	23,147	0%	0.0024392	0%	Myanmar	n.a.	n.a.	0.0022598	0%
Luxembourg	n.a.	n.a.	0.0021452	0%	Iraq	14,370	0%	0.001691	0%
Chile	30,056	1%	0.0020981	0%	Syria	15,051	0%	0.0012893	0%
Ethiopia	10,167	0%	0.0020597	0%	Norway	23,436	0%	0.0012171	0%
Portugal	23,445	0%	0.0019206	0%	Sudan	9,133	0%	0.0008614	0%
Peru	25,696	0%	0.001707	0%	Cambodia	3,163	0%	0.0007976	0%
Switzerland	60,002	1%	0.0016817	0%	Nepal	5,484	0%	0.0007679	0%
Morocco	16,195	0%	0.0016381	0%	Yemen Arab Republic[3]	5,228	0%	0.0004646	0%
Denmark	35,746	1%	0.0015799	0%	Laos	1,431	0%	0.0003769	0%
Cuba	15,980	0%	0.0014732	0%	Iceland	n.a.	n.a	0.0000128	0%
Malaysia	11,257	0%	0.0014611	0%	Guinea	1,045	0%	n.a.	n.a.
Saudi Arabia	13,785	0%	0.001427	0%					

1973

United States	3,536,622	26%	0.1588194	21%	Bahrain	1,046	0%	0.0003983	0%
Japan	1,242,932	9%	0.0587464	8%	Bahamas	n.a.	n.a.	0.0003565	0%
West Germany	814,786	6%	0.0360924	5%	Honduras	4,866	0%	0.0003382	0%
United Kingdom	675,941	5%	0.0276301	4%	Paraguay	5,487	0%	0.0003289	0%
France	683,965	5%	0.0247987	3%	Burkina Faso	4,045	0%	0.0003243	0%
Italy	582,713	4%	0.0212504	3%	Panama	7,052	0%	0.0003226	0%
Brazil	401,643	3%	0.0203548	3%	Malawi	2,756	0%	0.000308	0%
Indonesia	186,900	1%	0.0119273	2%	Chad	1,726	0%	0.0002874	0%
Canada	312,176	2%	0.0115705	2%	Niger	3,377	0%	0.000253	0%
Spain	266,896	2%	0.0113289	1%	Benin	3,011	0%	0.000236	0%
South Korea	96,231	1%	0.0099513	1%	Rwanda	2,826	0%	0.0002287	0%
Mexico	279,302	2%	0.0098998	1%	Sierra Leone	3,180	0%	0.0002071	0%
Pakistan	67,828	0%	0.0089288	1%	Jamaica	8,411	0%	0.000202	0%
Turkey	133,858	1%	0.0082896	1%	Burundi	1,963	0%	0.0001805	0%
Netherlands	175,791	1%	0.0075289	1%	Costa Rica	8,145	0%	0.0001743	0%
Belgium	118,516	1%	0.0074047	1%	Central African Republic	1,627	0%	0.0001693	0%
South Africa	102,498	1%	0.0060136	1%	Togo	2,245	0%	0.0001629	0%
Argentina	200,720	1%	0.0060082	1%	Liberia	2,212	0%	0.0001606	0%
Taiwan	63,519	0%	0.0060047	1%	United Arab Emirates	9,739	0%	0.0001554	0%
Venezuela	126,364	1%	0.004346	1%	Oman	2,809	0%	0.0001549	0%

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix C (continued)

1973

Units	GDP	% (GDP)	CINC	% (CINC)	Units	GDP	% (GDP)	CINC	% (CINC)
Sweden	109,794	1%	0.0042292	1%	Gabon	4,086	0%	0.0000957	0%
Philippines	82,464	1%	0.0039835	1%	Mauritania	1,309	0%	0.0000842	0%
Colombia	80,728	1%	0.003643	0%	Mauritius	3,169	0%	0.0000818	0%
Myanmar	n.a.	n.a.	0.0033569	0%	Guyana	n.a.	n.a.	0.0000667	0%
Israel	30,839	0%	0.0032919	0%	Equatorial Guinea	289	0%	0.0000497	0%
Portugal	63,397	0%	0.0030673	0%	Botswana	722	0%	0.0000326	0%
Greece	68,355	1%	0.0030066	0%	Malta	n.a.	n.a.	0.0000275	0%
Austria	85,227	1%	0.0028944	0%	Gambia	533	0%	0.0000227	0%
Saudi Arabia	73,601	1%	0.002764	0%	Barbados	n.a.	n.a.	0.0000176	0%
Democratic Republic of the Congo	19,373	0%	0.0026256	0%	Iceland	n.a.	n.a.	0.0000145	0%
Chile	49,816	0%	0.0024745	0%	‘Frontiers’				
Morocco	28,800	0%	0.0022856	0%	China	739,414	5%	0.1134221	15%
Ethiopia	21,286	0%	0.0019183	0%	India	494,832	4%	0.054161	7%
Malaysia	29,982	0%	0.0016202	0%	Republic of Vietnam	n.a.	n.a.	0.009016	1%
Denmark	70,032	1%	0.0015664	0%	Australia	172,314	1%	0.0073532	1%
Norway	44,852	0%	0.0015626	0%	Iran	171,466	1%	0.0069416	1%
Switzerland	117,251	1%	0.0015135	0%	Nigeria	76,585	1%	0.0065656	1%
Singapore	13,108	0%	0.0014916	0%	Vietnam[4]	38,238	0%	0.0056839	1%
Luxembourg	n.a.	n.a.	0.0013248	0%	Yugoslavia	88,813	1%	0.0050485	1%
Kenya	12,107	0%	0.0010018	0%	Bangladesh	35,997	0%	0.0044309	1%
Sri Lanka	19,922	0%	0.0009976	0%	Thailand	75,511	1%	0.004421	1%
Ghana	13,484	0%	0.0009833	0%	Iraq	39,042	0%	0.0027432	0%
Kuwait	23,847	0%	0.0009195	0%	Peru	57,729	0%	0.0026567	0%
Jordan	3,999	0%	0.0008708	0%	Algeria	35,814	0%	0.0020343	0%
Ecuador	21,337	0%	0.0008439	0%	Cambodia	5,858	0%	0.0018587	0%
Nepal	7,894	0%	0.0008337	0%	Syria	27,846	0%	0.0018107	0%
Zimbabwe	8,594	0%	0.0007689	0%	Finland	51,724	0%	0.0016108	0%
Uruguay	14,098	0%	0.000619	0%	Sudan	11,783	0%	0.0013236	0%
Trinidad and Tobago	8,553	0%	0.0006122	0%	Tanzania	9,007	0%	0.0010534	0%
Dominican Republic	9,617	0%	0.0006009	0%	Uganda	8,704	0%	0.0007143	0%
Bolivia	11,030	0%	0.0005811	0%	Zambia	4,930	0%	0.0006947	0%
Tunisia	12,051	0%	0.0005755	0%	Libya	15,410	0%	0.0006938	0%
Guatemala	18,593	0%	0.0005585	0%	Laos	2,331	0%	0.0006795	0%
Ireland	21,103	0%	0.0005351	0%	New Zealand	37,177	0%	0.0006276	0%
Cameroon	7,201	0%	0.0005271	0%	Lebanon	8,915	0%	0.0005245	0%
Qatar	6,228	0%	0.0005074	0%	Somalia	4,625	0%	0.0004739	0%
Madagascar	8,292	0%	0.0004996	0%	Yemen Arab Republic	7,459	0%	0.0004703	0%
Senegal	6,217	0%	0.0004948	0%	Guinea	1,861	0%	0.0004026	0%
Ivory Coast	12,064	0%	0.0004738	0%	Yemen People’s Republic	4,972	0%	0.0003212	0%
El Salvador	9,084	0%	0.0004365	0%	Nicaragua	6,566	0%	0.0002746	0%
Haiti	4,810	0%	0.0004291	0%	Congo	2,727	0%	0.0001569	0%
Mali	3,449	0%	0.000409	0%	Cyprus	n.a.	n.a.	0.0001506	0%

1989

United States	5,703,521	24%	0.148239	19%	Mali	5,995	0%	0.0004288	0%

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix C (continued)

1989

Units	GDP	% (GDP)	CINC	% (CINC)	Units	GDP	% (GDP)	CINC	% (CINC)
Japan	2,208,858	9%	0.0516204	7%	Haiti	6,329	0%	0.000426	0%
West Germany[5]	1,182,261	5%	0.0271015	3%	Malawi	4,923	0%	0.000419	0%
Brazil	776,547	3%	0.0257152	3%	Niger	4,368	0%	0.0003795	0%
United Kingdom	940,908	4%	0.0253604	3%	Lebanon	6,106	0%	0.0003659	0%
France	1,000,286	4%	0.0191178	2%	Paraguay	13,509	0%	0.0003332	0%
Italy	906,053	4%	0.0185772	2%	Benin	5,144	0%	0.0003286	0%
Indonesia	414,090	2%	0.0130354	2%	Rwanda	6,168	0%	0.0003236	0%
Mexico	491,767	2%	0.0122626	2%	Panama	10,215	0%	0.0003116	0%
Turkey	279,614	1%	0.0122344	2%	Burundi	3,747	0%	0.0002935	0%
Canada	523,177	2%	0.01197	2%	Costa Rica	13,867	0%	0.0002523	0%
Spain	454,166	2%	0.0108258	1%	Mauritania	1,852	0%	0.0002422	0%
Egypt	139,663	1%	0.0086225	1%	Sierra Leone	4,164	0%	0.000238	0%
Taiwan	195,311	1%	0.0085746	1%	Trinidad and Tobago	10,937	0%	0.000231	0%
Saudi Arabia	126,701	1%	0.007484	1%	Togo	2,834	0%	0.0002271	0%
Australia	286,820	1%	0.0073055	1%	Central African Republic	1,913	0%	0.0002166	0%
Netherlands	247,906	1%	0.0062806	1%	Liberia	2,216	0%	0.0001993	0%
Nigeria	102,146	0%	0.0060746	1%	Papua New Guinea	n.a.	n.a.	0.000193	0%
Thailand	230,043	1%	0.0056028	1%	Gabon	4,261	0%	0.0001807	0%
Argentina	212,373	1%	0.0055138	1%	Brunei	n.a.	n.a.	0.0001541	0%
Philippines	138,809	1%	0.0052297	1%	Jamaica	8,428	0%	0.0001507	0%
Belgium	166,396	1%	0.0049745	1%	Botswana	3,944	0%	0.0001306	0%
Venezuela	152,577	1%	0.004376	1%	Lesotho	1,947	0%	0.0000952	0%
Colombia	152,686	1%	0.0042672	1%	Djibouti	526	0%	0.0000861	0%
Myanmar	n.a.	n.a.	0.0034984	0%	Fiji	n.a.	n.a.	0.0000798	0%
Morocco	61,748	0%	0.0034746	0%	Suriname	n.a.	n.a.	0.0000772	0%
Greece	101,425	0%	0.003277	0%	Mauritius	7,145	0%	0.0000687	0%
Israel	54,895	0%	0.0030989	0%	Guyana	n.a.	n.a.	0.0000673	0%
Democratic Republic of the Congo	20,417	0%	0.0026134	0%	Bahamas	n.a.	n.a.	0.0000584	0%
Austria	124,791	1%	0.0026086	0%	Gambia	799	0%	0.000042	0%
Chile	81,062	0%	0.00259	0%	Iceland	n.a.	n.a.	0.0000346	0%
Malaysia	81,996	0%	0.0022282	0%	Cape Verde	413	0%	0.0000339	0%
Sudan	21,518	0%	0.0019726	0%	Comoros	290	0%	0.0000267	0%
Singapore	39,857	0%	0.0019086	0%	Barbados	n.a.	n.a.	0.0000173	0%
Norway	76,733	0%	0.0018237	0%	Belize	n.a.	n.a.	0.0000156	0%
Portugal	102,922	0%	0.0017963	0%	Seychelles	343	0%	0.0000109	0%
Tanzania	13,371	0%	0.0015563	0%	Solomon Islands	n.a.	n.a.	0.0000106	0%
Switzerland	141,599	1%	0.0015445	0%	Samoa	n.a.	n.a.	0.0000057	0%
Kenya	25,018	0%	0.0014336	0%	St. Vincent and the Grenadines	n.a.	n.a.	0.0000042	0%
Denmark	93,728	0%	0.0014057	0%	Grenada	n.a.	n.a.	0.0000037	0%
United Arab Emirates	22,766	0%	0.0013154	0%	Dominica	n.a.	n.a.	0.0000024	0%
Ecuador	39,123	0%	0.0013132	0%	‘Frontiers’				
Zimbabwe	13,498	0%	0.0011826	0%	China	2,051,813	9%	0.1144659	15%
Mozambique	13,900	0%	0.001172	0%	India	1,043,912	4%	0.0595363	8%

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix C (continued)

1989

Units	GDP	% (GDP)	CINC	% (CINC)	Units	GDP	% (GDP)	CINC	% (CINC)
Sri Lanka	39,543	0%	0.0010238	0%	South Korea	340,751	1%	0.0178954	2%
Uganda	9,815	0%	0.0009187	0%	Iran	181,227	1%	0.0112109	1%
Ivory Coast	17,542	0%	0.0009037	0%	Iraq	45,160	0%	0.0111034	1%
Ghana	15,843	0%	0.0008911	0%	Pakistan	174,001	1%	0.0104514	1%
Nepal	14,525	0%	0.0008805	0%	South Africa	148,888	1%	0.0082658	1%
Luxembourg	n.a.	n.a.	0.0008461	0%	Bangladesh	65,948	0%	0.0058528	1%
Tunisia	25,384	0%	0.0008385	0%	Yugoslavia	140,179	1%	0.0047691	1%
Cameroon	14,632	0%	0.0008376	0%	Ethiopia[2]	30,064	0%	0.0036767	0%
New Zealand	46,850	0%	0.0008168	0%	Algeria	75,123	0%	0.0036449	0%
Bolivia	13,735	0%	0.0007777	0%	Sweden	149,415	1%	0.0034847	0%
Zambia	5,900	0%	0.0007771	0%	Peru	68,466	0%	0.0031912	0%
Guatemala	28,179	0%	0.0007699	0%	Finland	84,092	0%	0.0018988	0%
Dominican Republic	18,377	0%	0.0007104	0%	Angola	6,959	0%	0.0018198	0%
Somalia	7,349	0%	0.0006873	0%	Libya	13,014	0%	0.0017896	0%
El Salvador	10,491	0%	0.000673	0%	Jordan	12,387	0%	0.001583	0%
Senegal	9,598	0%	0.0006409	0%	Kuwait	16,389	0%	0.001469	0%
Madagascar	8,867	0%	0.0006399	0%	Afghanistan	9,284	0%	0.0012824	0%
Oman	11,481	0%	0.0006184	0%	Yemen Arab Republic	16,341	0%	0.000821	0%
Ireland	38,223	0%	0.0005544	0%	Congo	5,277	0%	0.0005574	0%
Uruguay	19,930	0%	0.0005342	0%	Laos	3,795	0%	0.0005331	0%
Honduras	8,894	0%	0.0004998	0%	Burkina Faso	6,814	0%	0.0004889	0%
Chad	2,698	0%	0.0004831	0%	Guinea	3,168	0%	0.0003902	0%
Qatar	3,275	0%	0.0004637	0%	Cyprus	n.a.	n.a.	0.0001944	0%
Bahrain	2,053	0%	0.0004317	0%	Malta	n.a.	n.a.	0.0000334	0%

[1] 1950 data.
[2] 1950 data: the Ethiopian GDP included Eritrea.
[3] Due to the absence of data on Yemen Arab Republic in 1957, I use the data on Yemen Republic (which should include Yemen People's Republic data).
[4] 1990 data.
Note: The Maddison Project estimated historical GDP in millions of 1990 International Geary-Khamis dollars.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix D Ranking all units' capabilities in the Soviet system by selected years

1948

Units	GDP	% (GDP)	CINC	% (CINC)	Units	GDP	% (GDP)	CINC	% (CINC)
Soviet Union	420,555	50%	0.1639996	47%	North Korea[1]	8,087	1%	0.0036134	1%
Poland[1]	60,742	7%	0.0298539	9%	Bulgaria[1]	11,971	1%	0.0031112	1%
Czechoslovakia	38,108	5%	0.0126014	4%	Albania[1]	1,229	0%	0.0008609	0%
Yugoslavia	24,492	3%	0.0080174	2%	Mongolia[1]	339	0%	0.0003635	0%
Romania	12,975	2%	0.0054891	2%	'Frontiers'				
Hungary	20,148	2%	0.0041569	1%	China[1]	244,985	29%	0.1150552	33%

1957

Soviet Union	724,470	50%	0.1672666	51%	Mongolia	473	0%	0.0004316	0%
China	405,386	28%	0.0995304	30%	'Frontiers'				
Poland	83,641	6%	0.013803	4%	Czechoslo-vakia	57,704	4%	0.0103961	3%
East Germany	n.a.	n.a.	0.0095078	3%	Egypt	23,145	2%	0.0052411	2%
Romania	29,805	2%	0.0062649	2%	North Korea	10,230	1%	0.0048034	1%
Hungary	31,184	2%	0.0031168	1%	North Vietnam[3]	22,486	2%	0.0037391	1%
Bulgaria	17,831	1%	0.0029972	1%	Finland	23,739	2%	0.0012567	0%
Albania	1,874	0%	0.0005115	0%	Afghanistan	6,458	0%	0.001169	0%

1973

Soviet Union	1,513,070	65%	0.1674098	68%	'Frontiers'				
Poland	177,973	8%	0.0144596	6%	Egypt	45,924	2%	0.0086497	4%
Czechoslovakia	102,445	4%	0.0092441	4%	Vietnam	38,238[3]	2%	0.0056839	2%
East Germany	129,969	6%	0.0090189	4%	Cuba	20,209	1%	0.0021846	1%
Romania	72,411	3%	0.0079287	3%	Cambodia	5,858	0%	0.0018587	1%
North Korea	42,819	2%	0.0057453	2%	Finland	51,724	2%	0.0016108	1%
Hungary	58,339	3%	0.0042304	2%	Afghanistan	9,181	0%	0.0014554	1%
Bulgaria	45,557	2%	0.0040426	2%	Albania	5,218	0%	0.0006317	0%
Mongolia	1,170	0%	0.0004429	0%					

1989

Soviet Union	2,037,253	67%	0.1368206	63%	Mongolia	3,031	0%	0.0004432	0%
Poland	215,815	7%	0.0117983	5%	'Frontiers'				
Vietnam	65,615	2%	0.0110879	5%	North Korea	55,934	2%	0.0112662	5%
East Germany[2]	82,177	3%	0.0096714	4%	Syria	65,860	2%	0.0038493	2%
Romania	90,051	3%	0.0081596	4%	Finland	84,092	3%	0.0018988	1%
Czechoslovakia	136,418	4%	0.0077113	4%	Afghanistan	9,284	0%	0.0012824	1%
Bulgaria	55,883	2%	0.003371	2%	Cambodia	8,233	0%	0.0011782	1%
Cuba	31,128	1%	0.0033451	2%	Nicaragua	5,296	0%	0.0007741	0%
Hungary	71,776	2%	0.0030641	1%	Yemen People's Republic	11,862	0%	0.0007542	0%
Albania	7,917	0%	0.0005057	0%	Congo	5,277	0%	0.0005574	0%

[1] 1950 data.
[2] 1990 data.
[3] Due to the absence of data on North Vietnam's GDP in 1957 and 1973, I use the data on Vietnam, which includes South Vietnam's data.
[4] Due to the absence of data on Yemen Arab Republic's GDP in 1957, I use the data on Yemen Republic, which includes Yemen People's Republic data.
Note: The Maddison Project estimated historical GDP in millions of 1990 International Geary-Khamis dollars.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix E US government foreign grants and credit by country, 1946 to 1991

Million USD

Countries	1946-1955	1956-1965	1966-1975	1976-1985	1986-1991
Western Europe	33,067	6,752	1,004	1,626	-6,222
Austria	1,001	193	-19	34	-49
Belgium and Luxembourg	1,570	305	17	-46	-48
Denmark	596	276	64	-58	-13
Finland	86	-26	-19	21	-26
France	8,661	-171	-93	-222	-80
West Germany	3,881	10	-117	-117	-6,459
Iceland	34	33	-8	-12	-8
Ireland	146	-16	-51	7	-21
Italy	3,851	1,435	85	133	-228
Netherlands	1,716	322	116	-180	-2
Norway	697	362	379	-257	-21
Portugal	248	241	34	1,003	423
Spain	258	1,203	607	965	-730
Sweden	107	-20	17	-1	-16
United Kingdom	7,458	105	-546	-964	763
Yugoslavia	1,356	1,151	84	174	-147
Other and unspecified	1,399	1,351	454	1,146	2,227
Eastern Europe	823	501	226	1,029	3,238
Czechoslovakia	136	-	-	-5	32
Poland	350	555	75	1,017	3,408
Romania	-	-	92	55	-24
Soviet Union	292	-59	214	-44	-271
Other and unspecified	45	5	-5	6	89
Near East and South Asia	4,944	16,828	17,195	50,593	2,855
Afghanistan	31	227	185	56	248
Bangladesh	-	-	701	1,670	999
Cyprus	-	19	20	138	105
Egypt	41	1,009	271	13,600	17,402
Greece	2,026	1,281	905	362	1,271
India	370	4,890	3,810	1,021	402
Iran	314	1,061	914	-847	-42
Iraq	13	81	-5	5	358
Israel	390	483	3,760	25,417	13,704
Jordan	26	495	618	1,320	253
Kuwait	-	-	-	-	-16,056
Lebanon	15	78	90	233	-10
Nepal	3	86	105	177	112
Oman	-	-	(Z)	79	3
Pakistan	189	3,092	2,048	1,971	1,453
Saudi Arabia	12	35	23	-20	-15,528
Sri Lanka	(Z)	89	153	512	372
Syria	1	57	15	262	(Z)
Turkey	1,295	3,020	2,703	3,760	1,168
United Arab Emirates	-	-	-	-	-4,070
North Yemen	-	40	24	216	175
UNRWA	-	274	296	596	304
Other and unspecified	98	510	559	263	186
Africa	147	2,272	3,610	11,074	7,974
Algeria	1	135	263	345	-344
Angola	-	-	6	115	21
Benin	-	7	12	44	38
Botswana	-	(Z)	35	169	111
Burkina	-	5	40	287	133

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix E (continued)

Countries	1946-1955	1956-1965	1966-1975	1976-1985	1986-1991
Burundi	-	4	5	62	42
Cameroon	-	16	50	150	165
Cape Verde	-	-	1	68	39
Chad	(Z)	5	20	145	163
Ethiopia	13	200	297	310	386
Ghana	(Z)	64	203	152	132
Guinea	-	58	68	74	101
Ivory Coast	-	14	57	57	114
Kenya	(Z)	34	76	549	384
Lesotho	-	(Z)	27	197	115
Liberia	24	139	86	459	210
Madagascar	(Z)	7	13	86	128
Malawi	-	5	30	56	193
Mali	-	12	58	199	231
Mauritania	-	1	20	161	73
Morocco	7	464	413	948	635
Mozambique	-	-	1	175	376
Niger	-	5	64	223	218
Nigeria	(Z)	87	264	267	407
Rwanda	-	2	13	91	105
Senegal	-	18	48	361	285
Sierra Leone	(Z)	22	36	85	57
Somalia	(Z)	42	47	582	368
Sudan	-	86	52	1,358	751
Swaziland	-	(Z)	8	58	75
Tanzania	2	34	123	259	164
Togo	-	9	18	60	76
Tunisia	2	407	376	563	-76
Uganda	-	12	33	40	144
Zaire	(Z)	258	342	938	718
Zambia	-	1	35	331	265
Zimbabwe	-	(Z)	(Z)	271	111
Other and specified	96	118	350	781	878
Far East and Pacific	9,678	16,199	34,780	9,635	-11,265
Australia	-9	(Z)	276	-12	-252
Burma	25	134	43	31	25
Cambodia	28	327	1,771	-	-
Mainland China	-	-	-	49	210
Taiwan	1,267	2,681	1,523	648	-1,262
Hong Kong	3	35	41	11	-21
Indonesia	246	501	1,390	1,661	103
Japan and Ryukyu Islands	3,267	1,318	-345	-210	-10,424
Laos	37	647	1,868	-	-
Malaysia	1	30	86	39	-75
New Zealand	3	2	95	-68	-26
Pacific Islands, Trust Territory of the[3]	28	89	488	1,260	747
Philippines	1,028	554	729	1,466	2,468
Singapore	-	(Z)	78	110	-176
South Korea	1,420	4,744	5,426	3,518	-2,901
Thailand	192	727	996	733	99
Vietnam	244	3,566	19,721	-	-
Other and unspecified	1,898	844	595	400	244
Western Hemisphere	1,248	5,181	6,816	9,861	10,490
Argentina	86	342	34	21	273
Bolivia	77	288	270	414	761
Brazil	509	1,400	1,518	399	78
Canada	-1	4	272	317	-390

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix E (continued)

Countries	1946-1955	1956-1965	1966-1975	1976-1985	1986-1991
Chile	100	740	724	-565	-25
Colombia	43	446	846	298	88
Costa Rica	15	83	103	687	719
Dominican Republic	2	184	360	550	465
Ecuador	32	131	144	153	277
El Salvador	3	56	93	1,681	2,217
Guatemala	23	146	160	270	711
Guyana	(Z)	7	71	36	76
Haiti	27	75	42	370	420
Honduras	6	53	113	801	1,180
Jamaica	16	3	120	643	665
Mexico	225	178	305	1,162	655
Nicaragua	8	67	150	197	495
Panama	10	103	210	205	309
Paraguay	4	67	86	22	2
Peru	55	304	274	757	501
Trinidad and Tobago	-	35	21	151	-50
Uruguay	8	90	116	-9	2
Venezuela	6	156	115	-35	-150
Central American Bank for Economic Integration	-	6	121	36	-23
Caribbean Development Bank	-	-	8	108	-14
Other and unspecified	-6	218	543	1,193	1,301
Other international organizations and unspecified areas	969	1,335	4,018	9,739	10,054

Note: - Represents zero. (Z) Less than $500,000 USD. Negative figures (-) occur when the total of grant returns, principal repayments, and/or foreign currencies disbursed by the US government exceeds new grants and new credits utilized and/or acquisitions of foreign currencies through new sales of farm products.

Source: *Statistical Abstract of the United States 1992*, US Census Bureau, Table 1326, pp. 791-793; *Statistical Abstract of the United States 1994*, US Census Bureau, Table 1318, pp. 813-815, https://www.census.gov/library/publications/time-series/statistical_abstracts.html.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix F List of clusters and included countries according to the analysis of political interactions

Year	Cluster name	Countries
1950	AF	Afghanistan
	AL	Albania
	America	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, United States, Uruguay, Venezuela
	Asia	Ethiopia, Greece, India, Indonesia, Iran, Ireland, Israel, Liberia, Myanmar, Nepal, Pakistan, Philippines, South Africa, South Korea, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, Turkey, Yugoslavia
	AU	Australia
	CN-FL-MN	China, Finland, Mongolia
	ES	Spain
	Europe	Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, United Kingdom
	MidEast	Egypt, Iraq, Jordan, Lebanon, Saudi Arabia, Syria, Yemen Arab Republic
	NZ	New Zealand
	Soviet	Bulgaria, Czechoslovakia, Hungary, Poland, Romania, Soviet Union
	Missing	East Germany, North Korea, West Germany
1960	America	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, United States, Uruguay, Venezuela
	Rest	Afghanistan, Australia, Austria, Belgium, Benin, Burkina Faso, Cambodia, Cameroon, Canada, Central African Republic, Chad, China, Congo, Cyprus, Democratic Republic of the Congo, Denmark, Egypt, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Ivory Coast, Japan, Jordan, Laos, Lebanon, Liberia, Libya, Luxembourg, Madagascar, Malaysia, Mali, Mauritania, Morocco, Myanmar, Netherlands, Nepal, New Zealand, Niger, Nigeria, Yemen Arab Republic, Norway, Pakistan, Philippines, Portugal, Saudi Arabia, Senegal, Somalia, South Africa, South Korea, Republic of Vietnam, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Taiwan, Thailand, Togo, Tunisia, Turkey, United Kingdom, West Germany, Yugoslavia
	Soviet	Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Mongolia, North Korea, Vietnam, Poland, Romania, Soviet Union
	Missing	Kuwait, Oman, Singapore, Syria, Zimbabwe
1973	America	Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix F (continued)

Year	Cluster name	Countries
1973	DPRK	North Korea
	Europe	Belgium, Canada, Denmark, France, Greece, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Turkey, United Kingdom, United States, West Germany
	MidEast	Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Yemen Arab Republic, Oman, Qatar, Saudi Arabia, Yemen People's Republic, Sudan, Syria, Tunisia, United Arab Emirates
	Rest	Afghanistan, Albania, Australia, Austria, Bahamas, Bangladesh, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, China, Congo, Cuba, Cyprus, Democratic Republic of the Congo, Equatorial Guinea, Ethiopia, Fiji, Finland, Gabon, Gambia, Ghana, Guinea, Guyana, India, Indonesia, Iran, Ireland, Israel, Ivory Coast, Japan, Kenya, Laos, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Mauritius, Mongolia, Myanmar, Nepal, New Zealand, Niger, Nigeria, Pakistan, Philippines, Republic of Vietnam, Rwanda, Senegal, Sierra Leone, Singapore, Somalia, South Africa, South Korea, Sri Lanka, Swaziland, Sweden, Switzerland, Taiwan, Tanzania, Thailand, Togo, Uganda, Vietnam, Yugoslavia, Zambia, Zimbabwe
	Soviet	Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, Soviet Union
	Missing	Angola, Brunei, Guinea-Bissau, Papua New Guinea
1989	Africa	Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mauritania, Niger, Nigeria, Mali, Senegal, Sierra Leone, Togo
	America	Antigua and Barbuda, Argentina, Bahamas, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, Uruguay, Vanuatu, Venezuela
	Europe	Belgium, Canada, Denmark, France, Greece, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Turkey, United Kingdom, United States, West Germany
	MidEast	Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen Arab Republic, Yemen People's Republic

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

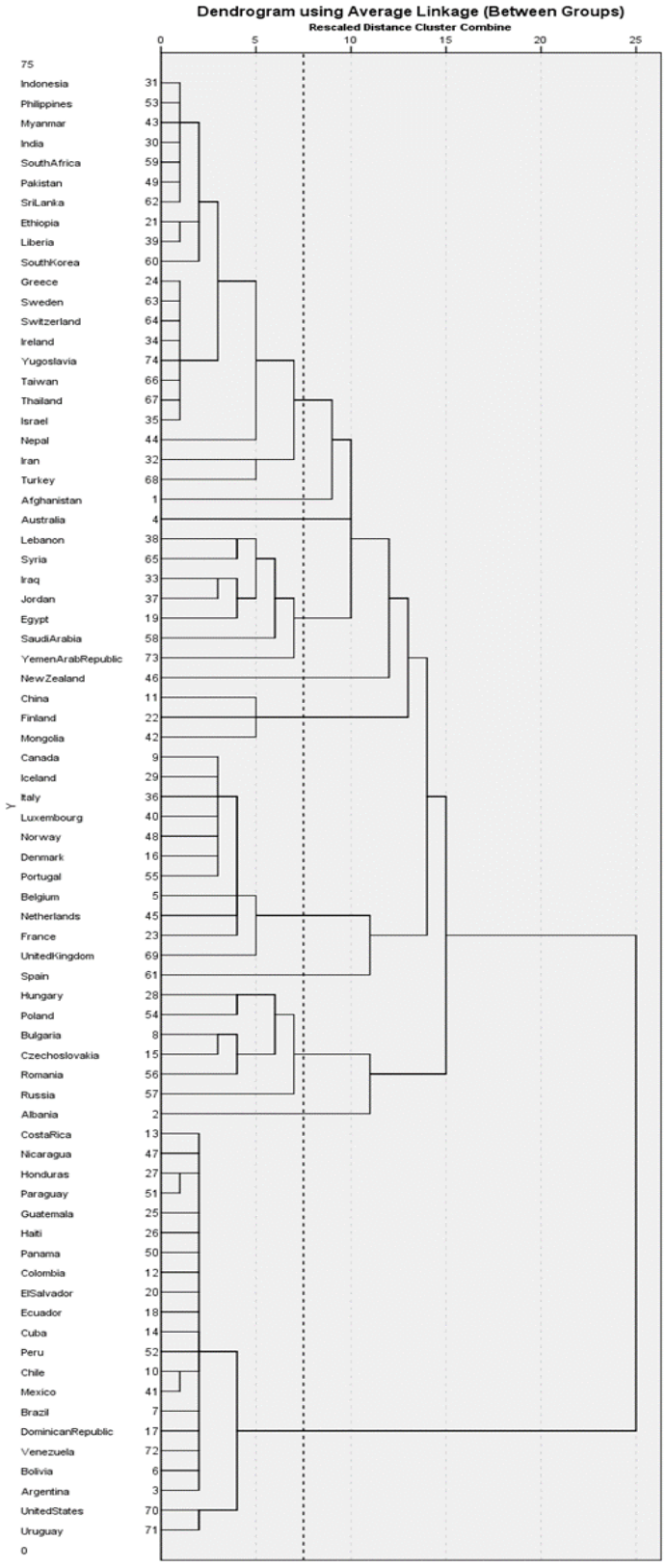
Appendix F (continued)

Year	Cluster name	Countries
1989	Rest	Afghanistan, Albania, Angola, Australia, Austria, Bangladesh, Belize, Bhutan, Botswana, Brunei, Burundi, Cambodia, Cameroon, Central African Republic, Chad, China, Comoros, Congo, Cuba, Cyprus, Democratic Republic of the Congo, Equatorial Guinea, Ethiopia, Fiji, Finland, Gabon, Guyana, India, Indonesia, Iran, Ireland, Israel, Japan, Kenya, Laos, Lesotho, Madagascar, Malawi, Malaysia, Maldives, Malta, Mauritius, Mongolia, Mozambique, Myanmar, Nepal, New Zealand, North Korea, Pakistan, Papua New Guinea, Philippines, Rwanda, Samoa, Sao Tome and Principe, Seychelles, Singapore, Solomon Islands, South Africa, South Korea, Sri Lanka, Suriname, Swaziland, Sweden, Switzerland, Taiwan, Tanzania, Thailand, Uganda, Vietnam, Yugoslavia, Zambia, Zimbabwe
	Soviet	Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, Soviet Union
	Missing	Marshall Islands, Micronesia, Palau, Tonga

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix G Dendrograms of political interactions for each studied year

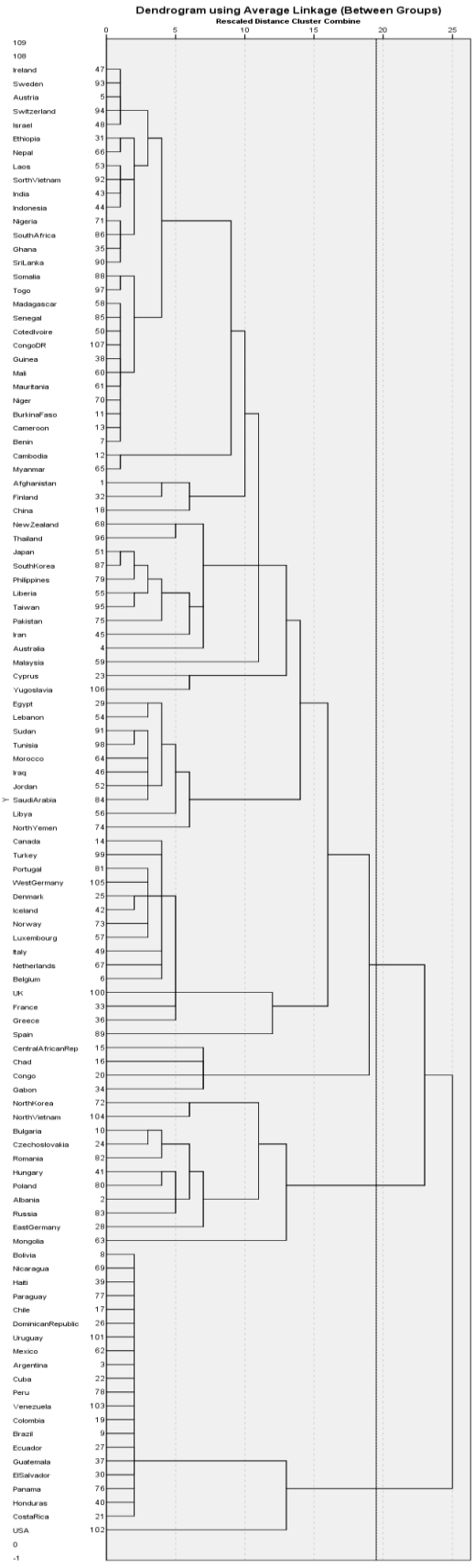
Dendrogram of 1950



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

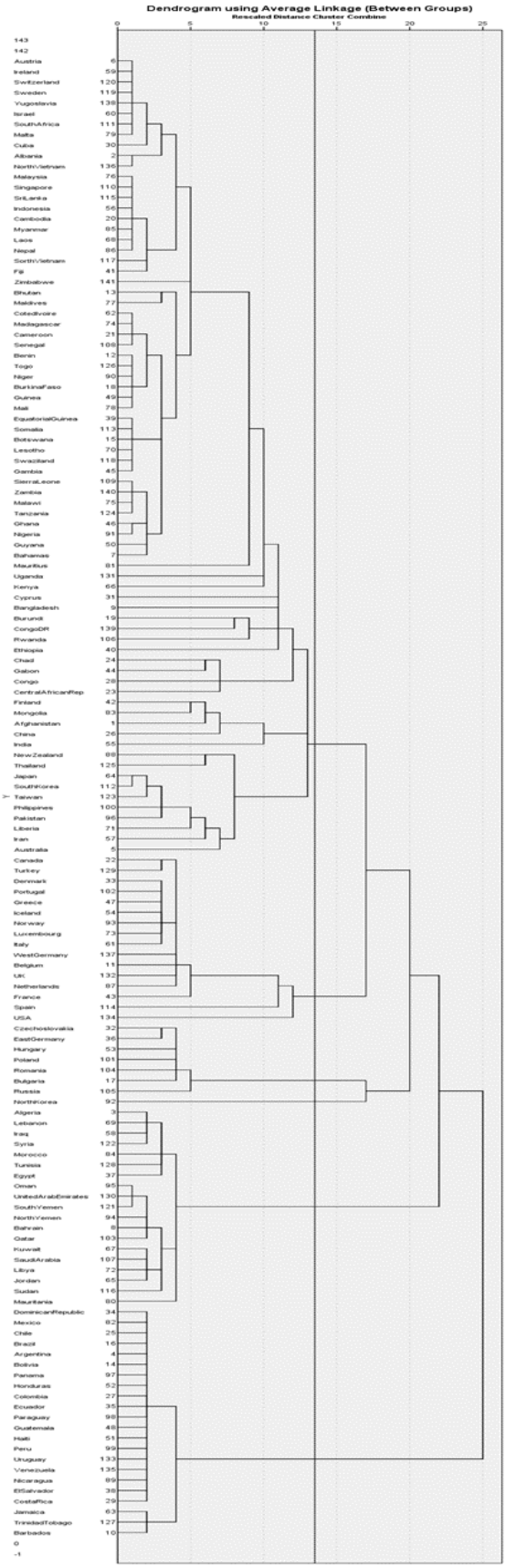
Appendix G (continued)

Dendrogram of 1960



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

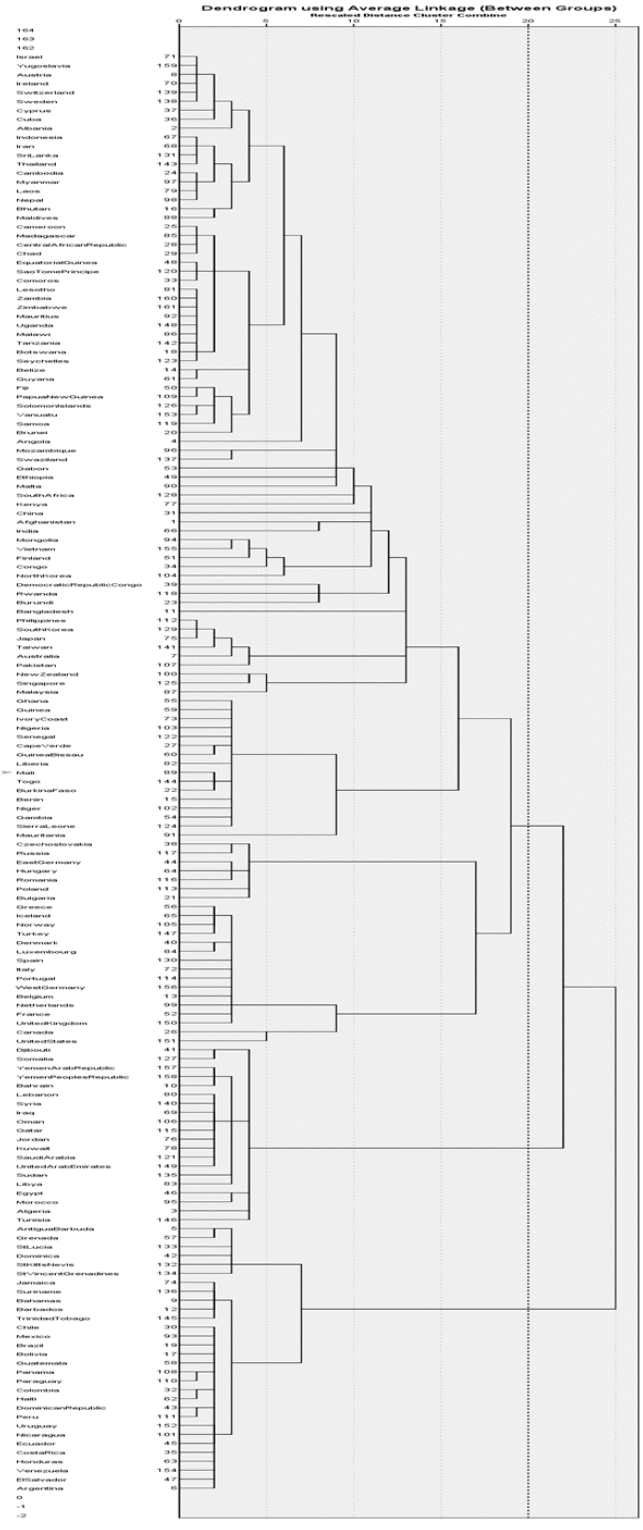
Appendix G (continued)

Dendrogram of 1973


DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix G (continued)

Dendrogram of 1989



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H List of clusters and included countries according to the analysis of military interactions

Year	Cluster name		Countries
1948	Soviet		Albania, Bulgaria, China, Czechoslovakia, Hungary, Iceland, Mongolia, North Korea, Poland, Taiwan, Yugoslavia
	Rest		Afghanistan, Argentina, Australia, Belgium, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Denmark, Dominican Republic, East Germany, Egypt, Ethiopia, France, Greece, Haiti, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jordan, Lebanon, Myanmar, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Paraguay, Peru, Portugal, Saudi Arabia, South Korea, Spain, Sweden, Switzerland, Syria, Thailand, Turkey, United States, Uruguay, Yemen Arab Republic
	UK		United Kingdom
	Russia		Soviet Union
	Missing		Cuba, Ecuador, El Salvador, Finland, Guatemala, Honduras, Liberia, Luxembourg, Mexico, Nepal, Panama, Philippines, Romania, South Africa, Sri Lanka, Venezuela, West Germany
Year	Cluster name	Short name	Countries
1957	UK zone		Ireland, Kuwait, Malaysia, New Zealand, Oman, Singapore, Zimbabwe
	IR-LY-UY		Iran, Libya, Uruguay
	America		Bolivia, Ecuador, El Salvador, Haiti, Liberia
	BG-MN		Bulgaria, Mongolia
	RO-GN		Guinea, Romania
	USA	US	United States
	Canada	CA	Canada
	Cuba	CU	Cuba
	Dominican Republic	DO	Dominican Republic
	Mexico	MX	Mexico
	Guatemala	GT	Guatemala
	Honduras	HN	Honduras
	Nicaragua	NI	Nicaragua
	Costa Rica	CR	Costa Rica
	Colombia	CO	Colombia
	Venezuela	VE	Venezuela
	Peru	PE	Peru
	Brazil	BR	Brazil
	Chile	CL	Chile

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1957	Argentina	AR	Argentina
	United Kingdom	GB	United Kingdom
	Netherlands	NL	Netherlands
	Belgium	BE	Belgium
	France	FR	France
	Switzerland	CH	Switzerland
	Spain	ES	Spain
	Portugal	PT	Portugal
	GFR	DE	West Germany
	GDR	DD	East Germany
	Poland	PL	Poland
	Austria	AT	Austria
	Hungary	HU	Hungary
	Czechoslovakia	CS	Czechoslovakia
	Italy	IT	Italy
	Albania	AL	Albania
	Yugoslavia	YU	Yugoslavia
	Greece	GR	Greece
	Russia	SU	Soviet Union
	Finland	FI	Finland
	Sweden	SE	Sweden
	Norway	NO	Norway
	Denmark	DK	Denmark
	Iceland	IS	Iceland
	Ghana	GH	Ghana
	Ethiopia	ET	Ethiopia
	South Africa	ZA	South Africa
	Morocco	MA	Morocco
	Tunisia	TN	Tunisia
	Sudan	SD	Sudan
	Turkey	TR	Turkey
	Iraq	IQ	Iraq
	Egypt	EG	Egypt
	Syria	SY	Syria
	Lebanon	LB	Lebanon
	Jordan	JO	Jordan
	Israel	IL	Israel

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1957	Saudi Arabia	SA	Saudi Arabia
	YAR	YAR	Yemen Arab Republic
	Afghanistan	AF	Afghanistan
	China	CN	China
	Taiwan	TW	Taiwan
	North Korea	KP	North Korea
	South Korea	KR	South Korea
	Japan	JP	Japan
	India	IN	India
	Pakistan	PK	Pakistan
	Myanmar	MM	Myanmar
	Sri Lanka	LK	Sri Lanka
	Thailand	TH	Thailand
	Cambodia	KH	Cambodia
	Laos	LA	Laos
	Vietnam	VN	Vietnam
	ROV	RVN	Republic of Vietnam
	Philippines	PH	Philippines
	Indonesia	ID	Indonesia
	Australia	AU	Australia
	Niger	NE	Niger
	Nepal	NP	Nepal
	Missing		Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Cyprus, Democratic Republic of the Congo, Gabon, Ivory Coast, Luxembourg, Madagascar, Mali, Mauritania, Nigeria, Panama, Paraguay, Senegal, Somalia, Togo
1973	Outliers		Costa Rica, Dominican Republic, Haiti, Honduras, Liberia, Luxembourg, Myanmar
	BN-GY-MG		Brunei, Guyana, Madagascar
	CF-QA		Central African Republic, Qatar
	BH-JM		Bahrain, Jamaica
	CM-TD-CI		Cameroon, Chad, Ivory Coast
	GQ-BJ		Equatorial Guinea, Benin
	USA	US	United States
	Canada	CA	Canada
	Cuba	CU	Cuba
	Trinidad and Tobago	TT	Trinidad and Tobago

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1973	Mexico	MX	Mexico
	Guatemala	GT	Guatemala
	El Salvador	SV	El Salvador
	Nicaragua	NI	Nicaragua
	Panama	PA	Panama
	Colombia	CO	Colombia
	Venezuela	VE	Venezuela
	Ecuador	EC	Ecuador
	Peru	PE	Peru
	Brazil	BR	Brazil
	Bolivia	BO	Bolivia
	Paraguay	PY	Paraguay
	Chile	CL	Chile
	Argentina	AR	Argentina
	Uruguay	UY	Uruguay
	UK	GB	United Kingdom
	Ireland	IE	Ireland
	Netherlands	NL	Netherlands
	Belgium	BE	Belgium
	France	FR	France
	Switzerland	CH	Switzerland
	Spain	ES	Spain
	Spain	PT	Portugal
	GFR	DE	West Germany
	GDR	DD	East Germany
	Poland	PL	Poland
	Austria	AT	Austria
	Hungary	HU	Hungary
	Czechoslovakia	CS	Czechoslovakia
	Italy	IT	Italy
	Malta	MT	Malta
	Albania	AL	Albania
	Yugoslavia	UY	Yugoslavia
	Greece	GR	Greece
	Cyprus	CY	Cyprus
	Bulgaria	BG	Bulgaria
	Romania	RO	Romania

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1973	Russia	SU	Soviet Union
	Finland	FI	Finland
	Sweden	SE	Sweden
	Norway	NO	Norway
	Denmark	DK	Denmark
	Iceland	IS	Iceland
	Gambia	GM	Gambia
	Mali	ML	Mali
	Senegal	SN	Senegal
	Mauritania	MR	Mauritania
	Niger	NE	Niger
	Guinea	GN	Guinea
	Burkina Faso	BF	Burkina Faso
	Sierra Leone	SL	Sierra Leone
	Ghana	GH	Ghana
	Togo	TG	Togo
	Nigeria	NG	Nigeria
	Gabon	GA	Gabon
	Congo	CG	Congo
	DROC	CD	Democratic Republic of the Congo
	Uganda	UG	Uganda
	Kenya	KE	Kenya
	Tanzania	TZ	Tanzania
	Burundi	BI	Burundi
	Rwanda	RW	Rwanda
	Somalia	SO	Somalia
	Ethiopia	ET	Ethiopia
	Zambia	ZM	Zambia
	Zimbabwe	ZW	Zimbabwe
	Malawi	MW	Malawi
	South Africa	ZA	South Africa
	Botswana	BW	Botswana
	Mauritius	MU	Mauritius
	Morocco	MA	Morocco
	Algeria	DZ	Algeria
	Tunisia	TN	Tunisia
	Libya	LY	Libya

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1973	Sudan	SD	Sudan
	Iran	IR	Iran
	Turkey	TR	Turkey
	Iraq	IQ	Iraq
	Egypt	EG	Egypt
	Syria	SY	Syria
	Lebanon	LB	Lebanon
	Jordan	JO	Jordan
	Israel	IL	Israel
	Saudi Arabia	SA	Saudi Arabia
	YAR	YAR	Yemen Arab Republic
	YPR	YPR	Yemen People's Republic
	Kuwait	KW	Kuwait
	UAE	AE	United Arab Emirates
	Oman	OM	Oman
	Afghanistan	AF	Afghanistan
	China	CN	China
	Mongolia	MN	Mongolia
	Taiwan	TW	Taiwan
	North Korea	KP	North Korea
	South Korea	KR	South Korea
	Japan	JP	Japan
	India	IN	India
	Pakistan	PK	Pakistan
	Bangladesh	BD	Bangladesh
	Sri Lanka	LK	Sri Lanka
	Nepal	NP	Nepal
	Thailand	TH	Thailand
	Cambodia	KH	Cambodia
	Laos	LA	Laos
	Vietnam	VN	Vietnam
	ROV	RVN	Republic of Vietnam
	Malaysia	MY	Malaysia
	Singapore	SG	Singapore
	Philippines	PH	Philippines
	Indonesia	ID	Indonesia
	Australia	AU	Australia

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1973	New Zealand	NZ	New Zealand
	Angola	AO	Angola
	Guinea-Bissau	GW	Guinea-Bissau
	PNG	PG	Papua New Guinea
	Missing		Bahamas, Barbados, Bhutan, Fiji, Lesotho, Maldives, Swaziland
1989	Outlier islands		Bahamas, Chad, Jamaica, Marshall Islands, Nepal, Palau
	CG-GN		Congo, Guinea
	Africa		Benin, Brunei, Central African Republic, Comoros, Fiji, Qatar, Rwanda, Togo
	CM-DO-TN-UY		Cameroon, Dominican Republic, Tunisia, Uruguay
	LA-VN		Laos, Vietnam
	Outliers		Burkina Faso, Hungary, Mongolia, Yemen Arab Republic, Yemen People's Republic
	WS-SB-TO		Samoa, Solomon Islands, Tonga
	NE-SL		Niger, Sierra Leone
	Afghanistan	AF	Afghanistan
	Algeria	DZ	Algeria
	Angola	AO	Angola
	Argentina	AR	Argentina
	Australia	AU	Australia
	Austria	AT	Austria
	Bahrain	BH	Bahrain
	Bangladesh	BD	Bangladesh
	Belgium	BE	Belgium
	Bolivia	BO	Bolivia
	Botswana	BW	Botswana
	Brazil	BR	Brazil
	Bulgaria	BG	Bulgaria
	Cambodia	KH	Cambodia
	Canada	CA	Canada
	Chile	CL	Chile
	China	CN	China
	Colombia	CO	Colombia
	Costa Rica	CR	Costa Rica
	Cuba	CU	Cuba
	Cyprus	CY	Cyprus
	Czechoslovakia	CS	Czechoslovakia

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1989	DROC	CD	Democratic Republic of the Congo
	Denmark	DK	Denmark
	GDR	DD	East Germany
	Ecuador	EC	Ecuador
	Egypt	EG	Egypt
	El Salvador	SV	El Salvador
	Ethiopia	ET	Ethiopia
	Finland	FI	Finland
	France	FR	France
	Gabon	GA	Gabon
	Gambia	GM	Gambia
	Ghana	GH	Ghana
	Greece	GR	Greece
	Guatemala	GT	Guatemala
	Guinea-Bissau	GW	Guinea-Bissau
	Honduras	HN	Honduras
	India	IN	India
	Indonesia	ID	Indonesia
	Iran	IR	Iran
	Iraq	IQ	Iraq
	Ireland	IE	Ireland
	Israel	IL	Israel
	Italy	IT	Italy
	Ivory Coast	CI	Ivory Coast
	Japan	JP	Japan
	Jordan	JO	Jordan
	Kenya	KE	Kenya
	Kuwait	KW	Kuwait
	Lebanon	LB	Lebanon
	Lesotho	LS	Lesotho
	Liberia	LR	Liberia
	Libya	LY	Libya
	Malawi	MW	Malawi
	Malaysia	MY	Malaysia
	Mali	ML	Mali
	Malta	MT	Malta
	Mauritania	MR	Mauritania

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

Year	Cluster name	Short name	Countries
1989	Mauritius	MU	Mauritius
	Mexico	MX	Mexico
	Morocco	MA	Morocco
	Myanmar	MM	Myanmar
	Netherlands	NL	Netherlands
	New Zealand	NZ	New Zealand
	Nicaragua	NI	Nicaragua
	Nigeria	NG	Nigeria
	North Korea	KP	North Korea
	Norway	NO	Norway
	Oman	OM	Oman
	Pakistan	PK	Pakistan
	Panama	PA	Panama
	PNG	PG	Papua New Guinea
	Paraguay	PY	Paraguay
	Peru	PE	Peru
	Philippines	PH	Philippines
	Poland	PL	Poland
	Portugal	PT	Portugal
	Romania	RO	Romania
	Russia	SU	Soviet Union
	Saudi Arabia	SA	Saudi Arabia
	Senegal	SN	Senegal
	Seychelles	SC	Seychelles
	Singapore	SG	Singapore
	Somalia	SO	Somalia
	South Africa	ZA	South Africa
	South Korea	KR	South Korea
	Spain	ES	Spain
	Sri Lanka	LK	Sri Lanka
	Sudan	SD	Sudan
	Swaziland	SZ	Swaziland
	Sweden	SE	Sweden
	Switzerland	CH	Switzerland
	Syria	SY	Syria
	Taiwan	TW	Taiwan
	Tanzania	TZ	Tanzania

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix H (continued)

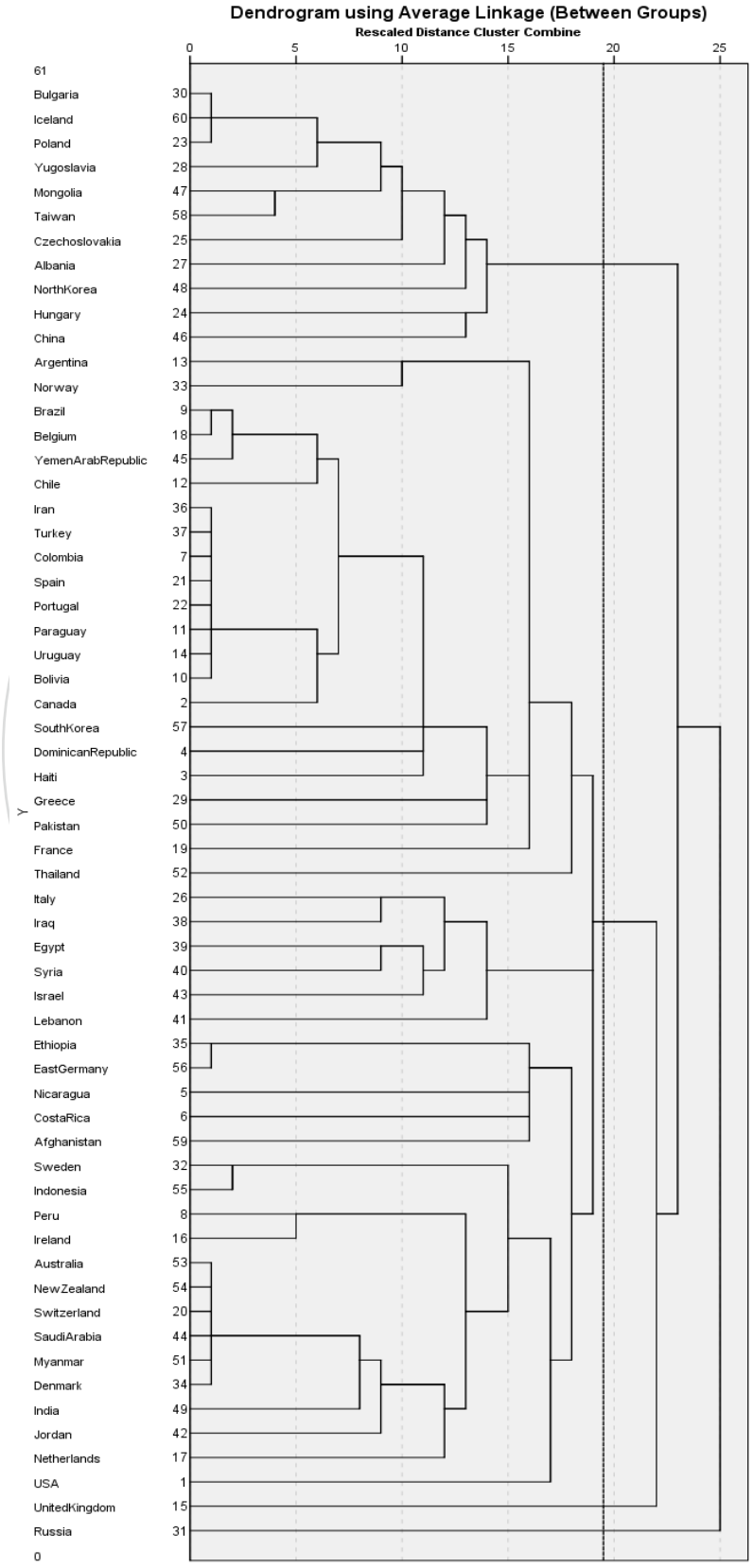
Year	Cluster name	Short name	Countries
	Thailand	TH	Thailand
	Turkey	TR	Turkey
	Uganda	UG	Uganda
	UAE	AE	United Arab Emirates
	UK	GB	United Kingdom
	USA	US	United States
	Venezuela	VE	Venezuela
	GFR	DE	West Germany
	Yugoslavia	YU	Yugoslavia
	Zambia	ZM	Zambia
	Zimbabwe	ZW	Zimbabwe
	Micronesia	FM	Micronesia
	Missing		Albania, Antigua and Barbuda, Barbados, Belize, Bhutan, Burundi, Cape Verde, Djibouti, Dominica, Equatorial Guinea, Grenada, Guyana, Haiti, Iceland, Luxembourg, Madagascar, Maldives, Mozambique, Sao Tome and Principe, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Vanuatu

Note: The short names of countries, specified by the standard ISO 3166, are used in the heatmaps in Appendices J, K, and L.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix I Dendrograms of military interactions for each studied year

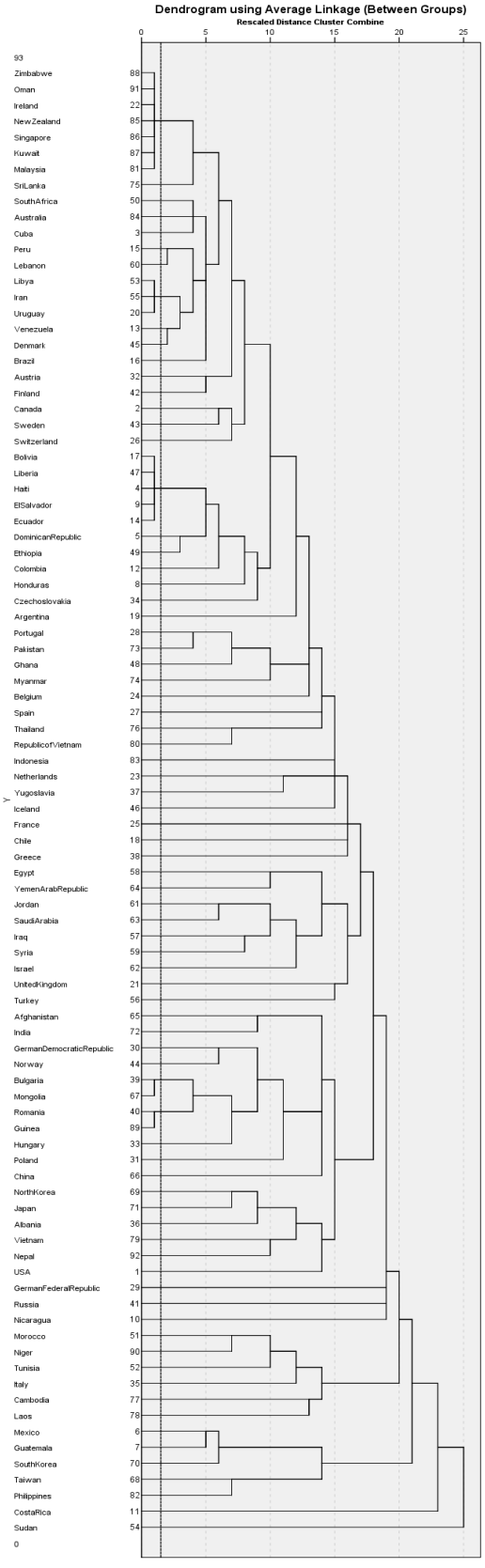
Dendrogram of 1948



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix I (continued)

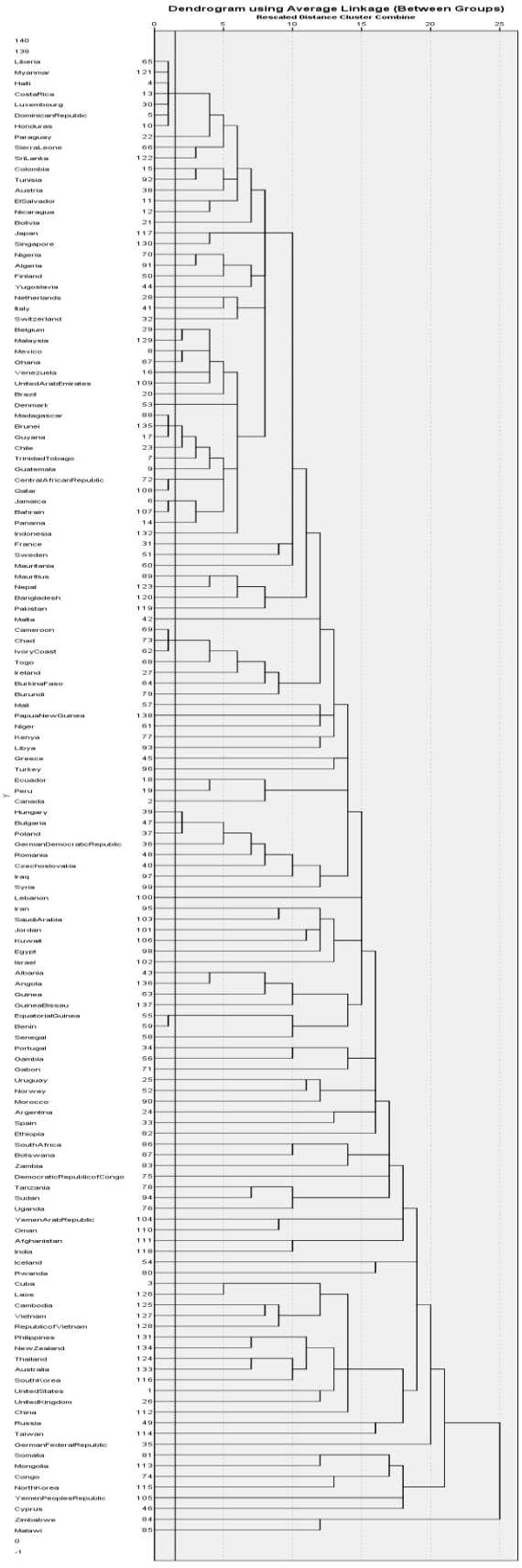
Dendrogram of 1957



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix I (continued)

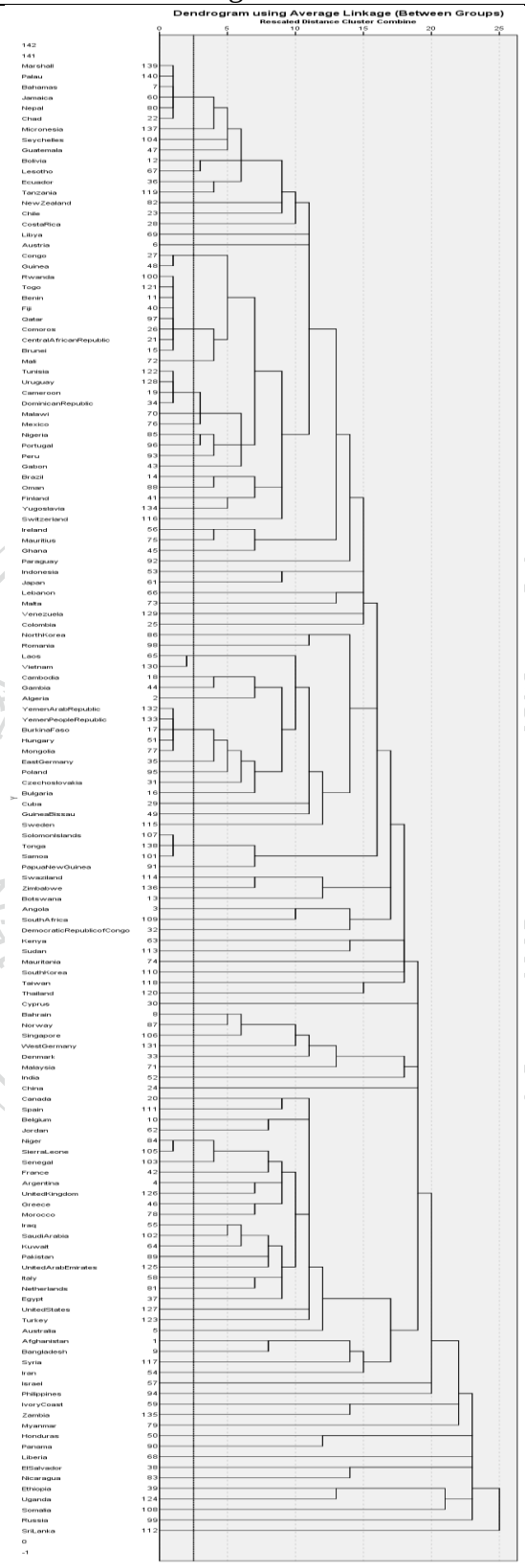
Dendrogram of 1973



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix I (continued)

Dendrogram of 1989



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix J Heatmap of military interactions between clusters in 1957. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line)

	UK zone	IR-LY-UY	Ameri ca	BG-MN	RO-GN	US	CA	CU	DO	MX	GT	HN	NI	CR	CO	VE	PE	BR	CL	AR	GB	NL	BE	FR	CH	ES	PT	DE	DD	PL	AT	HU	CS	IT	AL	YU	GR	SU
UK zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IR-LY-UY	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
America	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BG-MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
RO-GN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
US	0	0.5	0.5	0	0	0	1	0.5	0.5	0.61	0.55	0.5	0.5	0	0.5	0.5	0.5	0.5	0.55	0.5	1.16	0.5	0.5	1.11	0.5	0.5	0.5	0.5	0.05	0	0.5	0	0.05	0.5	0.05	0.5	0.5	0.42
CA	0	0	0	0	0	1	0	0.5	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0.5	0.5	0.5	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0.5	0
CU	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DO	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MX	0	0	0	0	0	2	0	0	0	0	0.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GT	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HN	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NI	0	0	0	0	0	1	0	1	0	0	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CR	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
CO	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
PE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BR	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CL	0	0	0	0	0	1.33	1	0	0	0	0	0	0	0	0	0	0	0	0	0.67	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GB	0.5	0.5	0	0	0	1.27	0.5	0.5	0	0	0	0	0	0	0.5	0.5	0.5	0	0.5	0.5	0	0.5	0.5	1.09	0.5	0.5	0.5	0.5	0	0	0.5	0	0	0.5	0.09	0.5	0	0.27
NL	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0.5	0	0	0.5	0.5	0	0	0.5	0	0	0.5	0	0	0	0.5	0	0	0	0	0	1	0	0	0	0
BE	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
FR	0	0	0	0	0	1.4	0.5	0	0.5	0	0	0	0	0	0	0	0.5	0	0.5	0.5	1.4	0.5	0.5	0	0.5	0.5	0.5	0.5	0	0	0.5	0	0	1.2	0	0.5	0	0.4
CH	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ES	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0
PT	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
DE	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5	0	0.5	1	0.5	0	0	0	0	0	0	0	1	0	0	0.5	0
DD	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	1
PL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
AT	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	1
HU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
CS	0	0	0	0	0.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0.5	0.5	0	0	0	0	0	1
IT	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0.5	1	0	1.33	0	0.5	0.5	1	0	0	0.5	0	0	0	0.33	0.33	0	0
AL	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	1
YU	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
GR	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0.5	0.5	0.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14	0	0	0.10	0	0	0	0	1	0.55	0.5	0.83	1	0	0.5	0	0	0
FI	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SE	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0.5	1	0	1	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0
NO	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
DK	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
IS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ET	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZA	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
MA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
TN	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TR	0	0	0	0	0	1.38	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.13	0.38
IQ	0	0	0	0	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5
EG	0	0	0	0	0	0.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.35	0	0	0.27	0	0	0	0	0	0	0	0	1	0	0	1	0	1.35
SY	0	0	0	0	0	0.18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.06	0	0	0	0	0	0	0	0	0	0.06	0	0	0	1.18
LB	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JO	0	0	0	0	0	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
IL	0	0	0	0	0	1.3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1.4	0	0	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3
SA	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CN	0	0	0	0	0	0.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1.3
TW	0	0	0	0	0	1.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0	0	0	0	0	0	0	0	0	0.44
KP	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
KR	0	0	0	0	0	1.83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.17
JP	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5
IN	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0.07	0	0	0	0	0	0	0	0	0	0	1
PK	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
LK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TH	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KH	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LA	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
RVN	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PH	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ID	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	1
AU	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix J (continued)

	FI	SE	NO	DK	IS	GH	ET	ZA	MA	TN	SD	TR	IQ	EG	SY	LB	JO	IL	SA	YAR	AF	CN	TW	KP	KR	JP	IN	PK	MM	LK	TH	KH	LA	VN	RVN	PH	ID	AU	NE	NP
UK zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IR-LY-UY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
America	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BG-MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RO-GN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
US	0.5	0.5	0.5	0.5	0	0	0.5	0.5	0	0.5	0	0.55	0.61	0.21	0.05	0.5	0.55	0.55	0.5	0	0	0.21	0.71	0.11	0.66	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0	0
CA	0.5	0	0.5	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0	0	0.5	0.5	0	0
CU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DO	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GB	0.5	0.5	0	0.5	0.09	0	0	0.5	0	0	0.5	0.5	0.68	0.77	0.5	0.5	0.59	0.68	0.59	0.09	0	0.09	0	0	0	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0	0.5	0.5	0	0
NL	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0	0
BE	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FR	0.5	1	0.5	0	0	0	0	0	0.5	1.1	0	0	0	0.2	0.2	0.5	0	0.7	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0.5	0.5	0	0.5	0	0	0	0.5	0
CH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ES	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
DE	0	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0
DD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
AT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IT	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0
AL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YU	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
GR	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0.5	0	0.14	0	0	0	0	0	0	0	0.5	0.05	0.60	0.64	0.55	0	0.05	0.05	0	0.5	0.5	0.60	0.10	0.5	0.05	0.10	0.5	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0
FI	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0.5	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DK	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IS	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ET	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TR	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.38	0.8	0	1.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IQ	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0.8	0.3	1	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EG	0	0	0	0	0	0	0	0	0	0	1.04	0.04	0.12	0	0.27	0	1.04	0.81	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SY	0	0	0	0	0	0	0	0	0	0	0	0.35	0.18	0.53	0	0	0.24	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LB	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JO	0	0	0	0	0	0	0	0	0	0	0	1.1	0.1	1.1	0.2	0	0	0.7	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IL	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.3	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
SA	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.33	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
CN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.44	1	0.19	0.06	0.3	0.06	0	0	0	0	0	1	0.06	0.06	0	0	0	0	0.06
TW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.78	0	0.11	0.44	1	0	0	0	0	0	0	0	0	0.11	0.11	0	0	0	0	0
KP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.17	0.5	0.67	0	0.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1	0	0.3	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0
IN	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0	0	0	0	0	0.57	0.07	0	0	0	0	0	0	0	0	0	0	0	0
PK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.18	0	0	0	0	0	0.82	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
KH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0.67	0	0	0	0	0	0
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
VN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
RVN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0.33	0	0	0	0	0	0	0	0	0.67	0	0	0	0.33	0	0	0	0	0
PH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix K Heatmap of political interactions between clusters in 1973. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line)

	Outliers	BN-GY-MG	CF-QA	BH-JM	CM-TD-CI	GQ-BJ	US	CA	CU	TT	MX	GT	SV	NI	PA	CO	VE	EC	PE	BR	BO	PY	CL	AR	UY	GB	IE	NL	BE	FR	CH	ES	PT	DE	DD	PL	AT	HU	CS	IT	MT	AL	UY	GR	CY	BG	RO	SU	FI	SE	NO	DK	IS	GM	ML	SN	MR	NE	GN	BF
Outliers	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BN-GY-M	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CF-QA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BH-JM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CM-TD-C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GQ-BJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
US	0.5	0.5	0	0.5	0	0	0	1.06	0.06	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.56	0.56	0.5	0.5	0.5	0.5	0.5	0.5	1.06	0	1	0.5	1	1	0.5	0.5	0.5	0	0	0.5	0	0	1	0	0	0.5	0.5	0	0	0	0.63	0.5	0.5	0.5	0.5	0	0	0	0	0	0	0
CA	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0.5	0	0.5	0.5	0.5	0	0.5	0	0	0	0	1	0	1	0.5	0.5	0	0.5	0	0.5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0
CU	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
TT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MX	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GT	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NI	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PA	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VE	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EC	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PE	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
BR	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BO	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PY	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CL	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
UY	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
GB	0	0.5	0.5	0.5	0	0	1.3	1	0	0.5	0.5	0.3	0	0	0.5	0	0.5	0.5	0.5	0.5	0	0	0.5	0	0	0	0	1	0.5	1	0.5	0.5	0.5	0.5	0	0	0	0	0	1	0	0	0.5	0.5	0	0	0	0.3	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0
IE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
NL	0	0	0	0	0	0	1	1	0	0	0.5	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0.5	0	1	0.5	0	0.5	0.5	0	0.5	0	1	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0
BE	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FR	0	0.5	0	0	0.5	0	1	0.5	0	0.5	0.5	0.5	0.5	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0	1	0.5	0.5	0.5	0	0.5	0.5	0.5	1	0	0	0.5	0	0	0.5	0	0	0.5	0.5	0	0	0.5	0	0	0.5	0.5	0	0	0	0	0	0.5
CH	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0	0	0	0.5	0	0.5	0	0	0	0.5	0	0.5	0	0.5	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0
ES	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
PT	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0.17	0
DE	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0.5	0	0	0	0.5	0.5	0.5	0.5	0	0	0	0.5	0	0.5	0.5	1	0.5	1	0.5	0.5	0	0	0	0	0	0	0	1	0.5	0	0	0	0.5	0	0.5	2	0	0	0	0	0	0	0	0	0	0
DD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
PL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
AT	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
HU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0
CS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	0	1	0	0	0	0	0	0.5	0	0	0.5	0.5	1	0	0	0	0	0	0	0	0	0
IT	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0.5	0	1	0	0.5	0	0.5	0	0.5	0	1	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0.5	0	0	0	0	0.5	0	0
MT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UY	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GR	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
BG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
RO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
SU	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.13	0	0	0	0	0	0	0	0	0.5	0.5	1	0	0.5	1	0	0	0	0.5	0	0.5	0.5	0.5	0	1	0	0	0	0	0	0	0	0.5	0
FI	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.5	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.5	0.5	0.5	0	0	0.5	0.5	0	0.5	0	0	0.5	0	0	0.5	0	0	0	0.5	0	0.5	0.5	0	0	0	0	0.5	0	0.5	0.5	0	0	0	0
NO	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
DK	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
IS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.33	0	0	0	0	0	0	1	0	0	0	0	0
GM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
ML	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
SN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0	0
MR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
GN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
BF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SL	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
GH	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix K (continued)

	Outliers	BN-GY-MG	CF-QA	BH-JM	CM-TD-CI	GQ-BJ	US	CA	CU	TT	MX	GT	SV	NI	PA	CO	VE	EC	PE	BR	BO	PY	CL	AR	UY	GB	IE	NL	BE	FR	CH	ES	PT	DE	DD	PL	AT	HU	CS	IT	MT	AL	UY	GR	CY	BG	RO	SU	FI	SE	NO	DK	IS	GM	ML	SN	MR	NE	GN	BF
TZ	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.14	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
BI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
ET	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.13	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ZW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZA	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MA	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
TN	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LY	0	0	0	0	0	0	1.3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
IR	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
TR	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0	0	1	0	0	0	1	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
EG	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	0	0	0	0	0	0	0	0	0	0	0	0
SY	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1.1	0	0	0	0	0	0	0	0	0	0	0	0
LB	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JO	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IL	0	0	0	0	0	0	1.06	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.12	0	0	0	0	0	0	0	0	0	0	0	0
SA	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
YPR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
KW	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AE	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
CN	0	0	0	0	0	0	0.44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.56	0	0	0	0	0	0	0	0	0	1	0
MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
TW	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
KR	0	0	0	0	0	0	1.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.78	0	0	0	0	0	0	0	0	0	0	0	0
JP	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
IN	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
PK	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
BD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
LK	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TH	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.13	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
KH	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
LA	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
VN	0	0	0	0	0	0	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
RVN	0	0	0	0	0	0	1.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	0	0	0	0	0	0	0	0	0	0	0	0
MY	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SG	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
PH	0	0	0	0	0	0	1.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.88	0	0	0	0	0	0	0	0	0	0	0	0
ID	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AU	0	0	0	0	0	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	1.17	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
NZ	0	0	0	0	0	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
AO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix K (continued)

	SL	GH	TG	NG	GA	CG	CD	UG	KE	TZ	BI	RW	SO	ET	ZM	ZW	MW	ZA	BW	MU	MA	DZ	TN	LY	SD	IR	TR	IQ	EG	SY	LB	JO	IL	SA	YAR	YPR	KW	AE	OM	AF	CN	MN	TW	KP	KR	JP	IN	PK	BD	LK	NP	TH	KH	LA	VN	RVN	MY	SG	PH	ID	AU	NZ	AO	GW	PG
Outliers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BN-GY-MG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CF-QA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BH-JM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CM-TD-CI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GQ-BJ	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
US	0.5	0.5	0	0.5	0.5	0	0.5	0.5	0.5	0.5	0	0	0	0.5	0	0	0	0.5	0	0	0.5	0	0.5	0.56	0	0.5	0.5	0	0.06	0.06	0.5	0.5	0.56	0.5	0	0	0.5	0.5	0.5	0	0.56	0	0.5	0	0.94	0.5	0.5	0.5	0	0.5	0	1	0.94	0.56	0.5	0.94	0.5	0.5	0.94	0.5	1	1	0	0	0
CA	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0.5	0.5	0	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0
CU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
BO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GB	0	0.5	0	0.5	0	0	0	0.3	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0.5	0	0	0.5	0.5	0	0.5	0	0	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5	0	0.3	0	0	0	0	0.5	0.5	0.5	0.5	0	0.5	0.8	0	0.3	0.3	0	0.5	0.5	0.5	0.5	1.3	1.3	0	0	0
IE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NL	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.5	0.5	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0.5	0	0	0	0.5	0.5	0	0	0.5	0	0	0	0
BE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FR	0	0.5	0.5	0	0.5	0.5	0.5	0	0.5	0	0.5	0.5	0	0.5	0	0	0	0.5	0	0	0.5	0	0.5	0.5	0	0.5	0.5	0.5	0.5	0	0.5	0	0.5	0.5	0	0	0.5	0.5	0	0	0.5	0	0	0	0.5	0	0.5	0.5	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0
CH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0.5	0.5	0.5	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0
ES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PT	0	0	0	0	0	0	0	0	0	0.17	0	0	0	0	0.17	0	0.17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
DE	0	0.5	0.5	0.5	0	0	0	0	0	0	0	0.5	0	0.5	0.5	0	0	0.5	0	0	0	0	0	0.5	0	0.5	0.5	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0.5	0	0	0	0	0
DD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
PL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IT	0	0.5	0	0	0	0	0	0.5	0.5	0.5	0	0.5	0	0	0.5	0	0	0.5	0	0	0.5	0	0.5	0.5	0	0.5	0.5	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0.5	0	0.5	0	0	0
MT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0.5	0	0.5	0	0.5	0	0.5	0	0	0.5	0	0.5	0	0	0	0	0	0	0.5	0	0.5	0.5	0.5	0	0.5	0.63	0.63	0.5	0	0.3	0	0.5	0.5	0	0	0	0.5	0.63	0.63	0	0.5	0.13	0	0.5	0	0.5	0	0	0.3	0.13	0.63	0.8	0.63	0	0	0.13	0	0.3	0.3	0	0	0
FI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.5	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0
NO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ML	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SN	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix K (continued)

	SL	GH	TG	NG	GA	CG	CD	UG	KE	TZ	BI	RW	SO	ET	ZM	ZW	MW	ZA	BW	MU	MA	DZ	TN	LY	SD	IR	TR	IQ	EG	SY	LB	JO	IL	SA	YAR	YPR	KW	AE	OM	AF	CN	MN	TW	KP	KR	JP	IN	PK	BD	LK	NP	TH	KH	LA	VN	RVN	MY	SG	PH	ID	AU	NZ	AO	GW	PG
TZ	0	0	0	0	0	0	0	0.57	0	0	0.29	0.14	0	0	0.14	0	0	0	0	0	0	0	0	0.43	0.14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BI	0	0	0	0	0	0	0	0	0	0.67	0	0.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RW	0	0	0	0	0	0	0	0	0	0.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ET	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZM	0	0	0	0	0	0	0	0.3	0	0.13	0	0	0	0	0	0.38	0	0.63	0	0	0	0	0	0	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0	1.8	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LY	0	0	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SD	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IR	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
TR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.59	0	0	0.29	0.29	0	0.29	0.29	0.29	0.35	0	0	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0.8	0.1	0.7	1	0.7	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SY	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0.8	0	0	0.7	1	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IL	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.06	0	0	0	0	0.41	0.65	0.71	0.06	0.41	0	0.41	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
SA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.8	0.8	0	0.8	0.8	0	0	0	0.3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YPR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0.67	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
KW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CN	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0.11	1	0.11	0	0.11	1	1	1	0	0.22	1.11	0.11	1.22	0.33	0	0	0.22	0	0.22	0.22	1	0	0
MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0
KP	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.78	0	0	0.22	0	0	0	0	0	0	0.78	0.78	0	0.78	1.78	0	0	0.78	0	0.78	0.78	0	0	0
JP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0
IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0	0.8	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
PK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	1	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0.88	0	0	0	0	0	0	0	0.88	0.13	1	0.88	0	0	0.88	0	1	2	0	0	0
KH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	1	0	2	1	0	0	0
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0
VN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0.88	0	0	0	0	0	0	1	0.88	0.13	0	0.88	0	0	0.88	0	1	1	0	0	0
RVN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1.1	0	1.7	0	0	0	0	0	0	0.7	0.7	0	0.7	0	0	0	0.8	0	0.7	0.7	0	0	0
MY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
PH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.13	0	0.88	1	0	0	0	0	0	0.88	0.88	0	0.88	1	0	1	0	0	1.88	0.88	0	0	0
ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
AU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.83	0	0	0	0	0	0	1	1.33	0.17	1	0.83	0	0	1.33	0.5	0	1.5	0	0	0.5
NZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.8	0	0	0	0	0	0	1.5	0.8	0.3	1	0.8	0	0.5	0.8	0.5	1.5	0	0	0	0
AO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix L Heatmap of military interactions between clusters in 1989. Each line displays the level of interactions between the chosen cluster (left column) and other clusters (top line)

	Outliers	CG-GN	Africa	CM-DO-TN-UY	LA-VN	Soviet	WS-SB-TO	NE-SL	AF	DZ	AO	AR	AU	AT	BH	BD	BE	BO	BW	BR	BG	KH	CA	CL	CN	CO	CR	CU	CY	CS	CD	DK	DD	EC	EG	SV	ET	FI	FR	GA	GM	GH	GR	GT	GW	HN	IN	ID	IR	IQ	IE	IL	IT	CI	JP	JO	KE
Outliers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CG-GN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CM-DO-TN-UY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LA-VN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soviet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WS-SB-TO	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE-SL	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0
AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	0	0	1	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	1	0	0	2	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	2	0	0	1	0	0	1	0
AU	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	2	0	0	1	0	0	1	0
AT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
BD	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0
BE	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	1	0	0	1	0	1	1	0	0	1	0
BO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BW	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BR	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0.5	0
BG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	0	0	0	0	0	0	0	0.33	0	0	0.5	0.83	0.83	0	0	0.33	0.33	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0.83	0	0	1.17	0.5	0	0	0.33	0	0	0	0.5	0	0.5	0.83	0	0	0.33	0	0	0.33	0.5
CL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0
CN	0	0	0	0	0.75	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
CR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CU	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	0	0	0	0
CS	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CD	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DK	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
DD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0
EC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EG	0	0	0	0	0	0	0	0.67	0	0	0	0.67	0.67	0	0	0.67	0.67	0	0	1	0	0	1.67	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1.67	0	0	0	0.67	0	0	0	0	0	0	1.67	0	0.33	0.67	0	0	0.67	0
SV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
FI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FR	0	0.5	0.46	0.5	0	0	0	0.29	0	0	0.5	0.29	0.29	0	0.5	0.29	0.79	0	0	0.5	0	0	0.93	0.5	0.5	0.5	0	0	0.5	0	0.5	0.5	0	0	0.79	0	0	0.5	0	0.5	0	0.79	0	0	0	0.5	0.5	0.14	0.79	0	0	0.79	0.5	0.5	0.79	0.5
GA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
GM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
GR	0	0	0	0	0	0	0	0.33	0	0	0	0.33	0.33	1	0	0.33	0.33	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	1	0	0	0.33	0	0	0	0	0	0	0	0	0.33	0.33	0	0	1.33	0	0	1.33	0
GT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
GW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.33	0	0	0	1	0	0	0	0	0	0
ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0.03	1	0	0	0	0	0.03	0	0	0	0.03	0	0	0.03	0	0	0.33	0	0	0	0	0.03	0	0
IQ	0	0	0	0	0	0	0	0.30	0	0	0	0.30	0.30	0	0	0.30	0.30	0	0	1	0	0	1.30	0	1	0	0	0	0.04	0	0	0	0	0	1.30	0	0	1.30	0	0	0	0.30	0	0	0	0	0.39	0	0	0.04	0.30	0	0	1.30	0
IE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5	0.5	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0.33	0	0	0	0	0.33	0
IT	0	0	0	0	0	0	0	1	0	0	0	1.5	1.5	0	0	1	1	0	0	0.5	0	0	1	0	0.5	0	0	0	0	0	0	0	0	0	0	1	0	0.5	0	1.5	0.5	0	0.5	1.5	0	0	0	0.5	0	0	1	0	0	0	0	1	0
CI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0
JO	0	0	0	0	0	0	0	0.33	0	0	0	0.33	0.33	0	0	0.33	0.33	0	0	1	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	1.33	0	0	0	1.33	1	0	0	0	0	0	1.33	0	0.67	0.33	0	0	0	0
KE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix L (continued)

	Outliers	CG-GN	Africa	CM-DO-TN-UY	LA-VN	Soviet	WS-SB-TO	NE-SL	AF	DZ	AO	AR	AU	AT	BH	BD	BE	BO	BW	BR	BG	KH	CA	CL	CN	CO	CR	CU	CY	CS	CD	DK	DD	EC	EG	SV	ET	FI	FR	GA	GM	GH	GR	GT	GW	HN	IN	ID	IR	IQ	IE	IL	IT	CI	JP	JO	KE
KW	0	0	0	0	0	0	0	0.86	0	0	0	0.86	0.86	0	0	0.86	0.86	0	0	0	0	0	0.86	0	0	0	0	0	0	0	0	0	0	1.86	0	0	0	1.86	0	0	0	0.86	0	0	0	0	0	0.14	0.86	0	0	1.86	0	0	0.86	0	0
LB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0
LS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0	0
LY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0
ML	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
MX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MA	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0
MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NL	0	0	0	0	0	0	0	1	0	0	0	1.5	1	0	0	1	1	0	0	0	0	0	1.5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1.5	0	0	0	1	0	0	0	0.5	0.5	0.5	1	0	0	1	0	0	1	0
NZ	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
NG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
KP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
NO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
OM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
PK	0	0	0	0	0	0	0	0.25	0.25	0	0	0.25	1.25	0	0	1.25	0.25	0	0	0	0	0	1.25	0	1	0	0	0	0	0	0	0	0	0	0.25	0	0	1.25	0	0	0	0.25	0	0	0	0.5	0	1	0.25	0	0	1.25	0	0	0.25	0
PA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.67	0	0	0	0	0	0.33	0
PY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
PH	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
PL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
RO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SU	0	0.5	0	0	0.5	0.5	0	0	0.5	0.5	0.5	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0	0	0.5	0	0	0.5	0	1	0	0	1	0	0	0	0.5	0.5	0	0	0	0	0	0	0.5	0	0.5	0	0.5	0.5	0	0	0	0	0.5	0
SA	0	0	0	0	0	0	0	0.75	0	0	0	0.75	0.75	1	0	0.75	0.75	0	0	1	0	0	1.75	0	1	0	0	0	0	0	0	0	0	0	0.75	0	0	0	1.75	0	0	0	0.75	0	0	0	0	0.25	0.75	0	0	0.75	0	0	0.75	0
SN	0	0	0	0	0	0	0	0.17	0	0	0	0.17	0.17	0	0	0.17	0.17	0	0	0	0	0	0.17	0	0	0	0	0	0	0	0	0	0	0	0.17	0	0	0	0.17	0	0	0	0.17	0	0.33	0	0	0	0.17	0	0	0.17	0	0	0.17	0
SC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0.5	0	1	0	0	0.5	0.5	0	0	0	0
SO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
ZA	0	0	0	0	0	0	0	0	0	0	0.25	0	1	0	0	0	0	0	0.25	0	0	0	1	0	0	0	0	0.25	0	0	0.25	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
KR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
ES	0	0	0	0	0	0	0	0.33	0	0	0.5	0.83	0.33	0	0	0.33	0.33	0.5	0.5	0	0	0	0.83	1	0	0	0	0	0	0	0	0	0	0.5	0.33	0	0	0	1.33	0.5	0	0	0.33	0	0	0	0	0.5	0.33	1.17	0	0	0.83	0	0	0.83	0
LK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
SZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	1	0.5	0.5	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0
CH	0	0	0	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0.5	0.5	0	0	0.5	0.5	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0
SY	0	0	0	0	0	0	0	0.33	0	0	0	0.33	0.33	0	0	0.33	0.33	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0.33	0	0	0	0.33	0	0	0	0	0	0.33	0	0	0.33	0	0	0.33	0
TW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
TZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TH	0	0	0	0	0.25	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
TR	0	0	0	0	0	0	0	0.125	0	0	0	0.13	0.13	0	0	0.13	0.13	0	0	0	0	0	0.13	0	0	0	0	0	0.5	0	0	0	0	0	0.13	0	0	0	1.13	0	0	0	0.25	0	0	0	0	0.13	0.13	0	0	1.13	0	0	0.13	0
UG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.6
AE	0	0	0	0	0	0	0	0.67	0	0	0	0.67	0.67	0	0	0.67	0.67	0	0	0	0	0	0.67	0	0	0	0	0	0	0	0	0	0	0	0.67	0	0	0	1.67	0	0	0	0.67	0	0	0	0	0.33	0.67	0	0	1.67	0	0	0.67	0
GB	0	0	0	0	0	0	0	0.67	0	0	0	0.67	1.17	0	0.5	0.67	0.67	0	0.5	1	0	0	1.17	0.5	0	0.5	0	0	0	0	0	0.5	0	0.5	1.17	0	0	0.5	1.67	0	0	0.5	0.67	0	0	0	0.5	0.5	0	1.5	0.5	0	1.17	0	0.5	1.17	0.5
US	0.5	0	0	0.5	0	0	0	0.25	0.5	0.5	0.5	0.75	0.75	0.5	0.5	0.75	0.75	0.5	0.5	0.5	0	0	1.31	0.5	0.5	0.5	0.5	0.06	0.5	0	0	0.56	0	0.5	0.75	0	0	0.5	1.25	0.5	0	0	0.75	0.5	0	0.56	0.5	0.5	0.25	0.81	0	1	1.25	0	0.5	0.75	0.5
VE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
DE	0	0	0	0.13	0	0	0	0	0	0.5	0	0.5	0	0	0	0.5	0	0	0	0	0.5	0	1	0.5	0.5	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0.5	0	0	0	0	0.5	0	0	0	0.5	0.5	1	0.5	0	0	1	0	0.5	0	0.5
YU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ZM	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix L (continued)

	KW	LB	LS	LR	LY	MW	MY	ML	MT	MR	MU	MX	MA	MM	NL	NZ	NI	NG	KP	NO	OM	PK	PA	PG	PY	PE	PH	PL	PT	RO	SU	SA	SN	SC	SG	SO	ZA	KR	ES	LK	SD	SZ	SE	CH	SY	TW	TZ	TH	TR	UG	AE	GB	US	VE	DE	YU	ZM	ZW	FM
Outliers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
CG-GN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CM-DO-TN-UY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
LA-VN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	0	0	0	0	0	0	0	0	0	0
Soviet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WS-SB-TO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE-SL	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	1	1	1	0	0	0	0	0
AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
DZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
AO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.5	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0.5	0	0
AR	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	1	0	1	0	0	0	1	0	1	1	2	0	1	0	0	0
AU	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	2	0	1	0	0	1	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	1	0	1	2	2	0	0	0	0	1
AT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0
BH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1	0	0	0
BD	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	1	1	2	0	0	0	0	0
BE	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	1	1	2	0	0	0	0	0
BO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
BW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0
BR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	1	0.5	0	0.5	0	0	0	0
BG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	0.33	0	0	0	0	0	0	0	0	0	0	0.5	0.33	0.5	0.83	0	0	0	0	0.5	0	0.83	0	0	0.5	0	0.5	0	0	0	0	0.83	0.33	0	0	0	0.5	0	0.83	0	0	0	0	0.5	0.33	0	0	0	0.33	0	0.33	0.83	1.67	0	1	0	0	0	0
CL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5	0	0.5	0	0	0	0
CN	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0.5	0	1	0	0	0	0	1	0	1	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
CR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
CU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0
CY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.75	0	0	0	1	0	0	1	0	0	0
CS	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
DK	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	1	0	0	0
DD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0
EG	1.67	0	0	0	1	0	0	1	0	0	0	0	0.67	0	0.67	0	0	0	0	0	1	0.67	0	0	0	0	0	0	0	0	0	0.67	0.67	0	0	0	0	0	0.67	0	1	0	0	0	0.67	0	0	0	0.67	0	0.67	1.67	1.67	0	1	0	0	0	0
SV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.5	0.5	0	0.5	0	0	0
FR	0.79	0.14	0	0	0	0.5	0	0.5	0	0.5	0	0.5	0.79	0	0.79	0	0	0.5	0.14	0.5	0.5	0.79	0	0	0	0.5	0	0	0.5	0.5	0	0.79	0.29	0	0.5	0	0.5	0.5	1.29	0	0	0	0.5	0.5	0.29	0	0	0.5	0.79	0	0.79	1.29	1.29	0.5	0	0.5	0	0.5	0
GA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
GM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GR	0.33	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0.33	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0.33	0.33	0	0	0	0	0.33	0	0	0	0	0	0.33	0	0	0	0.67	0	0.33	0.33	1.33	0	1	0	0	0	0
GT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
GW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.33	0	0	0	0	0
IN	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0	1.33	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
IR	0.03	1	0	0	0	0.03	0	0	0	0	0	0	0	0	1	0	0	0	1	0.03	0	1	0.03	0	0	0	0	0	0.03	1	0.03	0	0	0.03	0	0	0	0.03	0	0	0	0	0	0	0.07	0	0.03	0	0.1	0	0.03	0	0	0	0	0
IQ	0.30	1	0	0.04	0	0	0	0	0	0	0	0	0.30	0	0.30	0	0	0	0	0	0	0.30	0.04	0	0	0	0	0	0	1	0.30	0.30	0	0	0	1	0	1.35	0	0	0	0	1	0.30	0	0	0	0.30	0	0.30	1.35	1.35	0	1	1	0	0	0
IE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
IL	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0	0.5	0	0	0	1	0.5	0	0	0
IT	1.5	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0.5	0	0	0.5	1.5	0	0	0	0.5	0.5	0	0.5	0	0	1	1	0	0.5	0	0	0.5	1.5	0.5	0.5	0	0.5	0	1	0.5	0	0.5	1.5	0.5	1.5	1.5	2	0.5	1	0	0	0	0
CI	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
JO	0.33	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0.33	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	1	0.33	0.33	0	0	0	0	0	1.33	0	0	0	0	0	0.33	0	0	0	0.33	0	0.33	1.33	1.33	0	0	0	0	0	0
KE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0.67	0	1	1	0	1	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix L (continued)

	KW	LB	LS	LR	LY	MW	MY	ML	MT	MR	MU	MX	MA	MM	NL	NZ	NI	NG	KP	NO	OM	PK	PA	PG	PY	PE	PH	PL	PT	RO	SU	SA	SN	SC	SG	SO	ZA	KR	ES	LK	SD	SZ	SE	CH	SY	TW	TZ	TH	TR	UG	AE	GB	US	VE	DE	YU	ZM	ZW	FM
KW	0	0	0	0	0	0	0	0	0	0	0	0	0.86	0	0.86	0	0	0	0	0	0	0.86	0	0	0	0	0	0	0	0	1	0.86	0.86	0	0	0	0	0	0.86	0	0	0	0	1	0.86	0	0	0	0.86	0	0.86	1.86	1.86	0	1	1	0	0	0
LB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
LS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
LR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
LY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
MY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ML	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
MR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
MX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
MA	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	1	0	1	1	2	0	0	0	0	0
MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0
NL	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.5	0	0	0	0	0	1	0	0	0	0.5	0	0	0	0	0	1	1	0	0	0	0	0.5	1	0	0	0	0	0.5	1	0.5	0	0	1.5	0	1.5	2	2	0	1	0	0	0
NZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
NI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	0	0	0	0	0
NG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
KP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
NO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	1	0.5	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0
OM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0
PK	0.25	0	0	0	0	0	0	0	0	0	0	0	0.25	0	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.25	0.25	0	0	0	0	0.25	0	0	0	0	1	1	0.25	0	0	0	0.25	0	0.25	1.25	1.25	0	1	0	0	0	0
PA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
PE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
PH	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
PL	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0
PT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0
RO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0
SU	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0	0.5	0	1	0	1	0	0	0	0	0	0	0	0.5	0	0	0	0	0	1	0	0.5	0	0	0	0	0	0	0	0	0.5	0	0	0
SA	0.75	0	0	0	0	0	0	0	0	0	0	0	0.75	0	0.75	0	0	0	0	0	0	0.75	0	0	0	0	0	0	0	0	0	0	0	0.75	0	0	0	0	0.75	0	0	0	0	0	1	0.75	0	0	0	0.75	0	0.75	1.75	1.75	0	1	0	0	0	0
SN	0.17	0	0	0	0	0	0	0	0	0.5	0	0	0.17	0	0.17	0	0	0	0	0	0	0.17	0	0	0	0	0	0	0	0	0	0	0.17	0	0	0	0	0	0.17	0	0	0	0	0	0.17	0	0	0	0.17	0	0.17	0.17	0.17	0	0	0	0	0	0
SC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.5	0	0	0	0	0.5	0	0.5	0	0.5	0	0	0
SO	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.25	0	1	0	0	0	0	0	0	0	0	0	1	0	0.25	0.25	0
KR	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0
ES	0.33	0	0.5	0	0	0	0	0	0	0	0	0	0.83	0	0.33	0	0	0	0	0.5	0	0.33	0.5	0	0	0	0	0	0	0	0	0	0.33	0.33	0	0	0	0	0	0	0	0	0.5	0	0.33	0	0	0.33	0	0	0.33	0	0.33	0.83	1.33	0	0	0	0.5	0
LK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
SD	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	1	0	1	0	0	0
SZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.5	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0
CH	0.5	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0.5	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0.5	0.5	1	0	1	0	0	0	0
SY	0.33	1	0	0	0	0	0	0	0.33	0	0	0	0.33	0	0.33	0	0	0	0	0	0	0	0.33	0	0	0	0	0	0	0	0	1	0.33	0.33	0	0	0	0	0.33	0	0	0	0	0	0	0	0	0	0	0.67	0	0.33	0.33	0.33	0	0	0	0	0	0
TW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0
TZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
TH	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1	0	0	0
TR	0.13	0	0	0	0	0	0	0	0	0	0	0	0.13	0	1.13	0	0	0	0	0	0	0.13	0	0	0	0	0	0	0	0	0	0	0.13	0.13	0	0	0	0	0.13	0	0	0	0	0	0.25	1	0	0	0	0.13	1.13	1.13	0	1	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AE	0.67	0	0	1	0	0	0	0	0	0	0	0	0.67	0	1.67	0	0	0	0	1	0	0	0.67	0	0	0	0	0	0	0	0	0	0.67	0.67	0	1	0	0	0.67	0	0	0	0	1	1	0.67	0	0	0	0.67	0	1.67	1.67	0	1	0	0	0	0
GB	1.17	0	0	0	0	0	0.5	0	0	0.5	0.5	0	0.67	0	1.67	0.5	0	0	0	0	0.5	1.17	0	0	0	0	0	0	0.5	0.5	0	0	1.17	0.67	0	0	0	0.5	1.17	0.5	0	0	0.5	0.5	0.67	0.5	0.5	0.5	1.17	0	1.17	0	1.67	0.5	1	0.5	0	0	0
US	0.75	0	0.5	0	0.06	0.5	0	0	0	0	0	0.5	0.75	0	1.25	0.5	0.06	0.5	0	0.5	0.5	0.75	0.69	0	0	0.5	0.5	0	0.5	0	0	0.75	0.25	0.5	0.5	0	0	0.5	1.25	0.5	0.5	0	0.5	1	0.25	0.5	0.5	0.5	0.75	0	0.75	1.25	0	0.5	1	0	0	0	0.5
VE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0
DE	0.5	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	1	0	0	0.5	0	0.5	0.5	0.5	0	0	0	0.5	0.5	0.5	0.5	0	0	0.5	0	0	0.5	0	0.5	0.5	0	0	0.5	0	0.5	1	0	0.5	0	0.5	0.5	0	0.5	1	1	0	0	0.5	0	0	0
YU	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0
ZM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix M List of member countries of the West system

1948 (1950)	
'Core'	Argentina, Australia, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Denmark, Dominican Republic, France, Haiti, India, Iran, Iraq, Ireland, Israel, Italy, Jordan, Myanmar, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Paraguay, Peru, Portugal, Saudi Arabia, Spain, Sweden, Switzerland, Syria, Thailand, Turkey, United Kingdom, United States, Uruguay
'Periphery'	Afghanistan[1], Belgium[1], Cuba[2], Ecuador[2], El Salvador[2], Finland[3], Guatemala[2], Honduras[2], Indonesia[1], Lebanon[1], Liberia[4], Luxembourg[4], Mexico[2], Nepal[4], Panama[2], Philippines[2], South Africa[2], South Korea[1], Sri Lanka[2], Venezuela[2], Yemen Arab Republic[1]
'Frontiers'	China[9,10], Egypt[10], Ethiopia[10], Greece[10], Iceland[10], Taiwan[10]
Unclear	East Germany[5]
1957 (1960)	
'Core'	Argentina, Australia, Belgium, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Denmark, Dominican Republic, Ecuador, El Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iran, Italy, Japan, Jordan, Laos, Lebanon, Liberia, Libya, Mexico, Morocco, Netherlands, New Zealand, Nicaragua, Pakistan, Peru, Philippines, Portugal, Saudi Arabia, South Korea, Spain, Sweden, Thailand, Tunisia, Turkey, United Kingdom, United States, Uruguay, Venezuela, West Germany, Yugoslavia
'Periphery'	Ghana[3], Ireland[7], Israel[7], Luxembourg[2], Malaysia[1], Niger[5], Panama[2], Paraguay[2], Republic of Vietnam[1], South Africa[7], Sri Lanka[7], Switzerland[7], Taiwan[1]
'Frontiers'	Austria[10], Cambodia[9], Guinea[10], Iceland[8], India[10], Indonesia[10], Iraq[10], Myanmar[9], Nepal[10], Norway[10], Sudan[10], Syria[10], Yemen Arab Republic[10]
Unclear	Benin[4], Burkina Faso[4], Cameroon[4], Central African Republic[4], Chad[4], Congo[4], Cyprus[4], Democratic Republic of the Congo[4], Gabon[4], Ivory Coast[4], Kuwait[5], Madagascar[4], Mali[4], Mauritania[4], Nigeria[4], Oman[5], Senegal[4], Singapore[5], Somalia[4], Togo[4], Zimbabwe[5]
1973	
'Core'	Argentina, Bahrain, Belgium, Bolivia, Brazil, Burundi, Canada, Central African Republic, Chile, Colombia, Costa Rica, Democratic Republic of the Congo, Denmark, Dominican Republic, Ecuador, El Salvador, Ethiopia, France, Gabon, Greece, Guatemala, Haiti, Honduras, Iceland, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Kuwait, Liberia, Luxembourg, Mauritania, Mexico, Morocco, Netherlands, Nicaragua, Norway, Oman, Pakistan, Panama, Paraguay, Philippines, Portugal, Qatar, Rwanda, Saudi Arabia, Spain, Taiwan, Togo, Trinidad and Tobago, Tunisia, Turkey, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela, West Germany

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix M (continued)

1973	
'Periphery'	Austria[7], Bahamas[2], Barbados[2], Benin[7], Botswana[5], Burkina Faso[5], Cameroon[7], Chad[1], Equatorial Guinea[1], Gambia[7], Ghana[7], Guyana[7], Indonesia[7], Ivory Coast[7], Madagascar[7], Malawi[7], Malaysia[7], Mali[7], Malta[7], Mauritius[6], Myanmar[7], Nepal[1], Niger[7], Senegal[7], Sierra Leone[7], Singapore[7], South Africa[7], South Korea[7], Sri Lanka[7], Sweden[7], Switzerland[7], Zimbabwe[7]
'Frontiers'	Algeria[10], Australia[10], Bangladesh[10], Cambodia[10], China[9,10], Congo[10], Cyprus[10], Finland[9,10], Guinea[10], India[10], Iran[10], Iraq[10], Laos[10], Lebanon[10], Libya[10], New Zealand[10], Nigeria[10], Peru[10], Republic of Vietnam[10], Somalia[10], Sudan[10], Syria[8,10], Tanzania[10], Thailand[10], Uganda[10], Vietnam[10], Yemen Arab Republic[10], Yemen People's Republic[8,10], Yugoslavia[10], Zambia[10]
Unclear	Angola[5], Bhutan[4], Brunei[5], Fiji[4], Guinea-Bissau[10], Lesotho[4], Maldives[4], Papua New Guinea[5], Swaziland[4]
1989	
'Core'	Argentina, Australia, Bahamas, Bahrain, Belgium, Benin, Bolivia, Brazil, Brunei, Canada, Chile, Colombia, Costa Rica, Democratic Republic of the Congo, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, France, Gabon, Gambia, Ghana, Greece, Guatemala, Honduras, Ireland, Israel, Italy, Ivory Coast, Jamaica, Japan, Kenya, Lebanon, Liberia, Malaysia, Mali, Mauritania, Mexico, Morocco, Myanmar, Netherlands, New Zealand, Niger, Nigeria, Oman, Panama, Papua New Guinea, Paraguay, Philippines, Portugal, Qatar, Rwanda, Saudi Arabia, Seychelles, Sierra Leone, Somalia, South Korea, Spain, Sri Lanka, Sudan, Switzerland, Taiwan, Tanzania, Thailand, Togo, Tunisia, Turkey, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela, West Germany
'Periphery'	Austria[7], Barbados[2], Belize[3], Botswana[5], Burundi[2], Cameroon[7], Cape Verde[2], Central African Republic[7], Chad[5], Comoros[5], Djibouti[2], Dominica[2], Fiji[7], Grenada[2], Guyana[3], Haiti[2], Iceland[2], Indonesia[7], Lesotho[5], Luxembourg[2], Madagascar[3], Malawi[7], Mauritius[7], Mozambique[2], Nepal[1], Norway[6], Samoa[5], Senegal[6], Singapore[6], Solomon Islands[5], St. Vincent and the Grenadines[2], Suriname[2], Swaziland[1], Trinidad and Tobago[2], Uganda[7], Zambia[7], Zimbabwe[7]
'Frontiers'	Afghanistan[8,10], Algeria[10], Angola[10], Bangladesh[10], Burkina Faso[10], China[9,10], Congo[9,10], Cyprus[10], Ethiopia[10], Finland[9], Guinea[10], India[10], Iran[10], Iraq[10], Jordan[10], Kuwait[10], Laos[10], Libya[10], Malta[10], Pakistan[10], Peru[10], South Africa[10], Sweden[10], Yemen Arab Republic[10], Yugoslavia[10]
Unclear	Antigua and Barbuda[5], Bhutan[4], Equatorial Guinea[4], Guinea-Bissau[5], Maldives[4], Marshall Islands[5], Micronesia[5], Palau[5], Sao Tome and Principe[4], St. Kitts and Nevis[4], St. Lucia[4], Tonga[5], Vanuatu[4]

Note: [1] economic data missing; [2] military data missing; [3] only economic interactions; [4] only political interactions; [5] only military interactions; [6] economic and political interactions; [7] economic and military interactions; [8] economic interactions with the Soviet system; [9] political interactions with the Soviet system; [10] military interactions with the Soviet system.

In the group of 'unclear,' there are the countries with the data only on one type of interactions available.

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

Appendix N List of member countries of the Soviet system

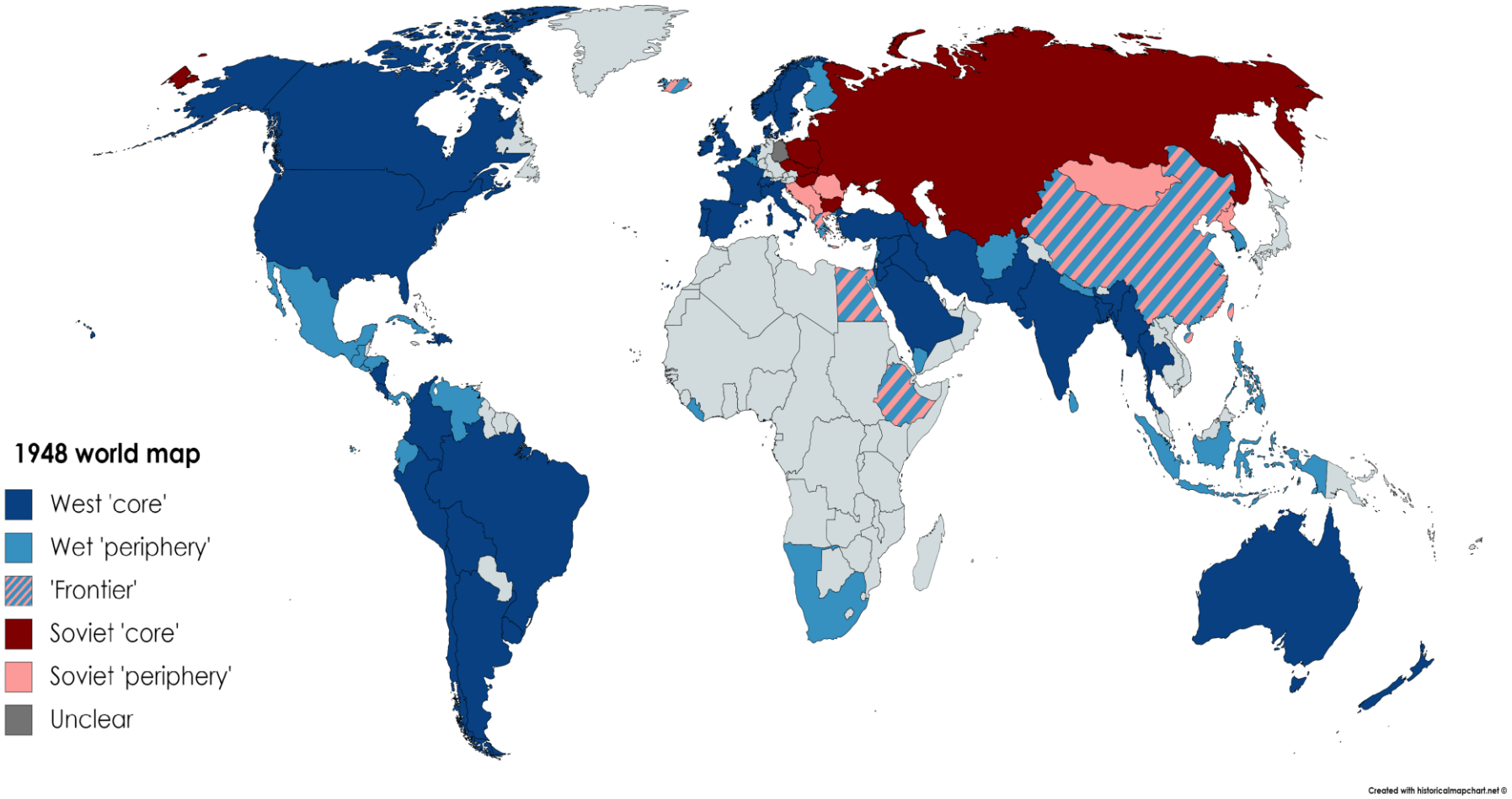
1948 (1950)	
'Core'	Bulgaria, Czechoslovakia, Hungary, Poland, Soviet Union
'Periphery'	Albania[1], Mongolia[1], North Korea[7], Romania[2], Yugoslavia[3]
'Frontiers'	China[4,5]
1957 (1960)	
'Core'	Albania, Bulgaria, China, East Germany, Hungary, Poland, Romania, Soviet Union
'Periphery'	Mongolia[1]
'Frontiers'	Afghanistan[5,6], Czechoslovakia[6], Egypt[5,6], Finland[6], North Korea[6], Vietnam[6]
1973	
'Core'	Bulgaria, Czechoslovakia, East Germany, Hungary, North Korea, Poland, Romania, Soviet Union
'Periphery'	Mongolia[1]
'Frontiers'	Albania[6], Afghanistan[6], Cambodia[5,6], Cuba[6], Egypt[5,6], Finland[4], Vietnam[6]
1989	
'Core'	Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, Soviet Union, Vietnam
'Periphery'	Albania[2], Cuba[3], Mongolia[1]
'Frontiers'	Afghanistan[5,6], Cambodia[5], Congo[4,6], Finland[4,6], Nicaragua[5,6], North Korea[4,6], Syria[5,6], Yemen People's Republic[5]

Note: [1] economic data missing; [2] military data missing; [3] economic and military interactions; [4] economic interactions with the West system; [5] political interactions with the West system; [6] military interactions with the West system; [7] political data missing

DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

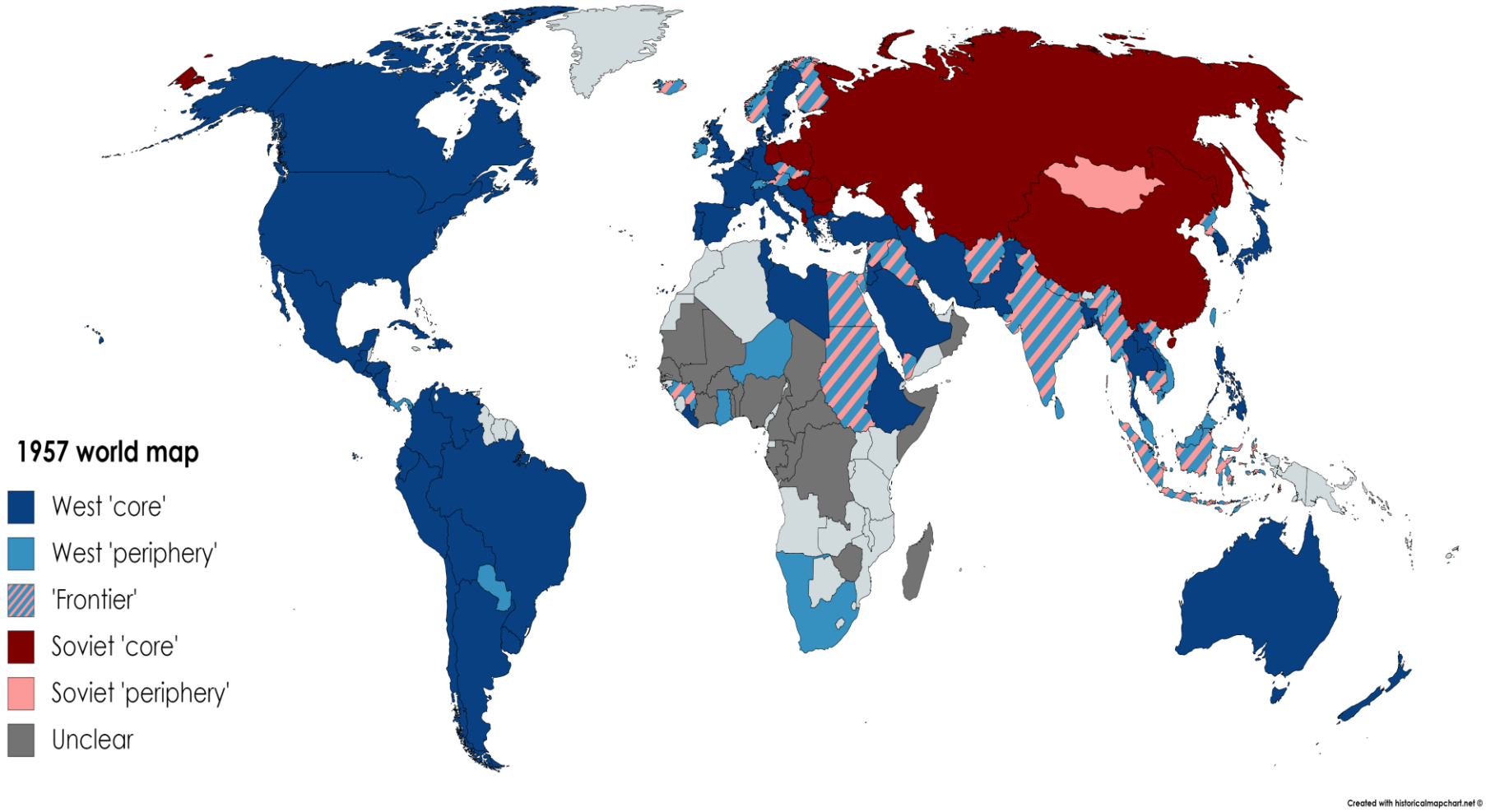
Appendix O Geographical representation of the CW international systems

1948 (1950)



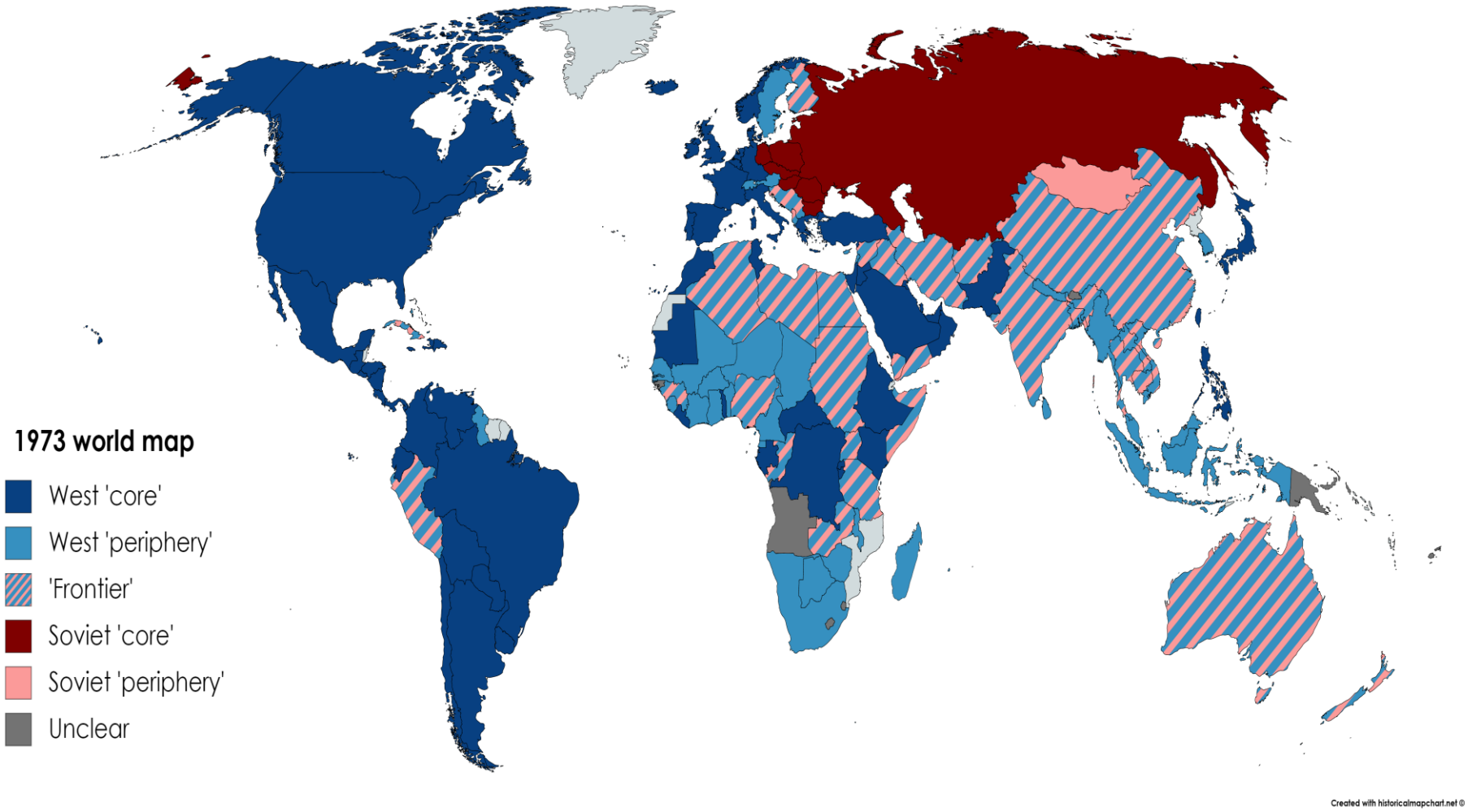
DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

1957 (1960)



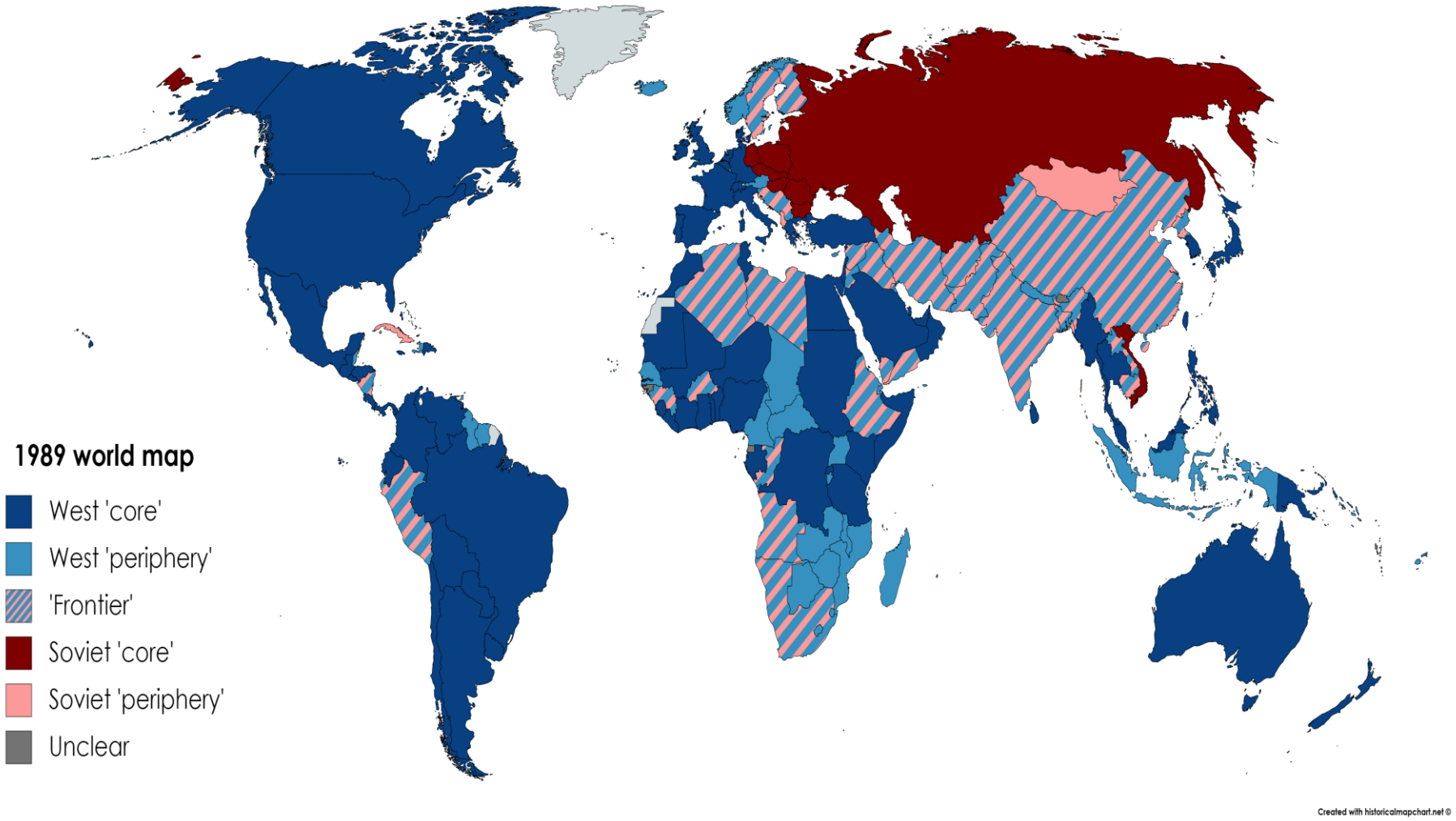
DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

1973



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07

1989



DOI:10.6814/DIS.NCCU.IDAS.001.2018.A07