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National sovereignty and the control of transnational resources: Issues of political power, national security and economic competition

Shambaugh, George Elmer, IV, Ph.D.

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National Sovereignty and the Control of Transnational Resources:

Issues of Political Power, National Security and Economic Competition

George E. Shambaugh, IV

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ABSTRACT

National Sovereignty and the Control of Transnational Resources: Issues of Political Power, National Security and Economic Competition

George E. Shambaugh, IV

Analysis of allied corporate and national reactions to United States' export control policy are analyzed to determine those conditions under which the United States can exercise control over actors and resources within another state's territory. This dissertation argues that dependence among states and firms is a potent and often overlooked source of political power, and that foreign dependence on American suppliers and access to American consumer markets in several industries has enabled the United States to enforce its export control policy abroad. Further, it demonstrates that dependence can be used by all states as a source of political influence.

This project investigates attempts by the United States to restrict the movement of strategic goods and technology around the globe since 1949. To succeed, this type of policy requires compliance by all states and firms which possess or can produce the goods in question. Neither traditional legal arguments of national jurisdiction nor Realist theories of political power and alliance dynamics explains the successes and failures of American efforts to implement its export control policy abroad against the interests of its allies. This thesis argues that the United States' influence attempts are most likely to succeed if actors in the

industrial sectors affected by the policy are dependent on American suppliers or access to American markets, regardless of U.S. hegemony or the distribution of global resources.

Proposed and competing hypotheses are tested in two ways. First, statistical analyses of 47 attempts by the United States to implement its export control policy abroad since 1949 are performed; second, two in-depth comparative case studies are analyzed. These cases include failed U.S. efforts to block construction of the trans-Siberian Pipeline from 1982 through 1984, and largely successful U.S. efforts to control movement of computer and high-technology resources through Operation Exodus between 1982 and 1987.

This project demonstrates the utility of combining insights from international law, economics, and political science to address common, underlying issues such as the nature of sovereignty and political power. Most importantly, it demonstrates that all states can use foreign dependence on their markets and suppliers as a source of political power.

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Dedication

To my mother, whose life and memory continue to inspire me.

Acknowledgements

I am indebted to many colleagues, friends and family members. My colleagues and friends at Columbia University deserve credit for both their comments, and their willingness to repeatedly discuss and read portions of this project. Professors David Baldwin, Helen Milner, and David Spiro from Columbia University, Eve Sandberg from Oberlin College, and Margee Ensign from American University all saw promise in my initial attempts to formulate a dissertation topic and all provided guidance throughout the dissertation writing process. Patricia Weitsman provided significant insights, criticisms and support without which this project would have been far more daunting. My father, brothers and sister were constant sources of motivation to pursue and complete this project. And, most importantly, my wife Jacqui's tireless support and tolerance for endless proof reading, short weekends, and my general preoccupation throughout this process, deserves special recognition. I alone, however, accept full responsibility for any errors of commission or omission. Finally, this project could not have been completed without financial support from the Eisenhower Foundation, the MacArthur Foundation, and the Oberlin College Alumni Foundation.

Chapter 1

Introduction and Project Summary:

Vying for Control over Actors and Resources Across International Boundaries

I. Vying for Control Across International Boundaries

When a conflict of interest arises from states' competing efforts to exert control over actors and resources across international boundaries, which state's interests will prevail? As a result of the dramatic expansion in the numbers and sizes of multinational corporations since World War II, states increasingly seek to assert authority beyond their borders. They seek this authority for taxation purposes, to enforce national anti-trust policies and to restrict the export of "strategic" technology. Attempts to apply export control policies abroad have provoked international disputes with both the longest historical record and the most serious ramifications for a state's economic and military security.

This project analyzes allied reactions to United States' export control policy in order to determine those conditions under which one state can exercise control over actors and resources within another state's territory. It will investigate attempts by United States government to restrict the movement of strategic goods and technology around the globe since 1949. The success of this type of policy is dependent upon the compliance of all firms that possess or can produce the goods in question and the cooperation of the governments of those countries in which the firms operate. Extraterritorial control over another state's actors and resources against its interest violates the state's sovereignty by undermining both its legal and physical authority over domestic resources. Such actions challenge some of the

most basic assumptions underlying international relations theory, including the nature of sovereignty and political power. Neither traditional legal arguments of national jurisdiction nor Realist hypotheses of political power and alliance dynamics can predict or explain those conditions under which this type of action will be successful. The dissertation develops an alternate argument that employs the relationship between dependence and political power to predict the likelihood of a successful influence attempt.

The analyses that follow support the proposed hypothesis that United States' attempts to assert its export control policy abroad are most likely to succeed if actors in the industrial sectors affected are dependent on American suppliers or access to American markets, regardless of U.S. hegemony or presence of an external threat to the alliance. This argument is developed and evaluated in the context of existing and competing explanations of alliance dynamics and political power. The theories are tested in subsequent chapters through analyses of European corporate and state responses to the application of U.S. export control policy abroad since 1949.

II. Dissertation Outline

A. Dependence and Political Influence

Following this introductory chapter, Chapter 2 analyzes the centrality of sovereignty in international politics and the inability of territorial conceptions of the nation-state to account for competition among states over the control of

transnational actors and resources.

Cases chosen for analysis involve attempts by the American government to enforce its export control policy against the interests of both firms operating abroad and the governments of the countries where these firms operate. Enforcement of United States' export control regulations abroad violates the sovereignty of the states in question by undermining both the legal and physical control over resources within their borders. Because "successful" U.S. influence attempts require other states to relinquish their sovereign control over their actors and resources, states are expected to challenge U.S. efforts to the greatest extent of their abilities. Therefore, those instances when the United States is able to implement and enforce its regulations successfully represent crucial cases for the study of political power and alliance dynamics in international politics.

Realist-based hypotheses of political influence that link the distribution of capabilities among states to political power are proposed as explanations for successful and failed American attempts to enforce its policies across international borders. These hypotheses, however, fail to provide sufficient explanations and predictions of those conditions under which the United States can implement its export control policy successfully. This study argues that hypotheses that emphasize the effect of dependence on political power offer a fruitful means to explain and interpret the success of U.S. policy.

For example, in June of 1982, the Western allies openly challenged the application of the United States' export control policy abroad. This policy

restricted the sale of oil and gas equipment and related technology to the Soviet Union by corporations within and outside of U.S. territory. In what became the "most violent dispute over extraterritoriality in the history of American trade controls,"[1] Britain, France and Canada instituted national legislation that forbad any firms located within their borders from abiding by United States' law. Although the trans-Siberian pipeline embargo affected only a small number of firms and a relatively narrow set of economic and security concerns, the allies were willing to challenge the United States in order to preserve their sovereign integrity. In contrast, the allies have not challenged continued extraterritorial application of United States' export controls in the more technologically sophisticated computer and electronic industries through Operation Exodus since 1982, even though these policies directly affect a wide range of important economic and political concerns.

The allies acquiesced to the extension of United States' regulations abroad through Operation Exodus during the 1980's despite declining U.S. hegemony within the Western alliance,[2] decreasing threat of Soviet aggression[3] and continuing movement in the international system toward multi-polarity.[4] Given these developments, prominent Realist theorists of international relations would predict that the allies should have become more, rather than less willing to challenge U.S. initiatives than in the earlier trans-Siberian pipeline case. These theories are over-predictive because they treat dependence and interdependence as byproducts of state interaction and underestimate the effect of dependence on political power.[5]

I argue in this dissertation that United States' attempts to implement its export control policy abroad are more likely to succeed if the industrial sectors affected by the policy are dependent on American suppliers or access to the American consumer market. In the examples cited above, European reactions were strongest in 1982, when the sectors affected involved oil production and transport -- industries that can operate with complete independence from U.S. markets or the technology of U.S. firms. In contrast, European protests were virtually nonexistent throughout Operation Exodus in the 1980's. Operation Exodus targeted high-technology electronics, computer and telecommunications industries that are still dependent on U.S. markets and on the technology possessed by its firms. Emphasizing dependent relationships among actors and the context in which state and firm interactions take place, highlights sources of power and cooperation neglected in traditional Realist analyses.

Chapter 2 argues that firm and state dependence on access to American suppliers and the American consumer market has enabled the United States to implement its export control policy abroad since 1949. Further, it argues that foreign dependence on access to domestic suppliers and markets can be used by all states as a source of political influence.

B. Methodology

Chapter 3 defines and operationalizes the variables used in throughout this study. The effects of firm and state dependence, U.S. hegemony and host

government intervention on the success of U.S.'s attempts to influence the activities of actors operating abroad are then tested in two ways. First, 47 U.S. influence attempts between 1949 and 1987 are analyzed in Chapter 3 using statistical techniques. The statistical overview of these influence attempts serves as a preliminary test of the hypotheses. Firm and state dependence on the United States is first interpreted from in-depth analyses of individual case histories and interviews with the participants. To correct for any variation due to subjective biases of the actors or researcher, dependence is coded a second time using objective indicators calculated using aggregated trade data for each industrial sector affected by U.S. actions. This project argues that the allies will not challenge U.S. export control policy in cases where the level of dependence is high, regardless of changes in economic or military hegemony.

Second, the statistical analyses are supplemented by a set of in-depth comparative case studies that involve firms from both independent and dependent industrial sectors. Comparative analysis of these cases in Chapters 4 and 5, identifies the causal links between firm and state dependence and U.S. influence. The statistical overview verifies that the cases chosen for more detailed analysis are representative of other cases. It also provides both verification of, and validity for, case specific data gained for comparative analysis. The comparative analysis, in turn, explains the failed U.S. attempts to stop European construction of a trans-Siberian pipeline from 1980 to 1984, and the success of American efforts to control the movements of computer and other high-technology goods through Operation

Exodus from 1981 through 1987.

Chapter 6 outlines conclusions of the analyses with a summary of findings and suggestions for future research. The analyses support the primary hypotheses that firm and state dependence has enabled the United States to implement its export control policy abroad and can be used by all members of the alliance as a source of political influence.

III. Extension of U.S. Export Controls Abroad, 1949-1987

A. Goals and Targets of U.S. Policy

The United States regulates the activities of firms within its borders to maintain national security, to support its foreign policy, and to prevent the export of resources in short supply. Since 1949, the United States has asserted authority over the activities of foreign subsidiaries of American corporations, thereby controlling economic and security resources physically outside of its territory. The success of this practice requires both the cooperation of both multinational firms, including their foreign subsidiaries, and the acquiescence of the host countries in which these firms operate.

The instrumental and symbolic value of the export controls rested on the ability of the United States to secure the participation of allied governments and firms in the embargo. If the Soviet Union acquired restricted goods or technology, then the American trade restrictions would have very little instrument effect. Equally important, the provision of restricted goods and technology by an American

ally would indicate the lack of a unified allied interpretation to the Soviet threat. Lack of a unified response by the alliance would diminish the symbolic value of the sanctions by questioning the American interpretation of Soviet actions and by challenging the legitimacy of the sanctions as an appropriate response to the Soviet threat. For its policy to be effective, the United States had to secure the participation of both its allies and firms which produced the embargoed goods and technology.

B. Sources of U.S. Influence

The United States had three primary means of securing the participation of allied governments and firms in its export control policy. First, it can attempt to persuade the others that the policy was an appropriate and necessary response to the Soviet threat. Using bilateral and multilateral fora, the American government has tried continuously to obtain voluntarily compliance and support from its allies and the international business community. It has sought to increase the monitoring and enforcement practices of the Coordinating Committee on East-West Trade (CoCom), and the number of items restricted by CoCom regulations.[6] Second, the United States seeks to prevent violations by both the CoCom controls and its own export control laws through early detection and by closely reviewing license applications.[7]

Third, the United States government can use positive and negative sanctions to induce or coerce participation in its control policy. When diplomatic persuasion

and early detection efforts fail to secure participation in its export control policies, the United States government can use positive and negative sanctions to secure compliance. Promises of a government contract or access to sophisticated technology, such as S.D.I., can be effective positive incentives for participation in American policy initiatives. Alternatively, threats may be used to enforce compliance. The United States has two primary means of inflicting negative sanctions on uncooperative actors operating abroad. First, the United States has sought to deter violators by demonstrating its willingness to aggressively use criminal and Administrative sanctions available under the Trading with the Enemy Act of 1917 and the Export Control Act of 1949, and subsequent revisions.[8] Second, the United States can threaten to terminate all foreign access to its country, its resources, its people and their consumer market.

The Extension of Domestic Regulations Abroad

The United States has several means of applying its domestic regulations to foreign firms through the Trading with the Enemy Act and the Export Control (and Administration) Acts. The Trading with the Enemy Act enables the President to investigate, regulate, or prohibit all commercial and financial transactions with foreign countries and their nationals during time of war or national emergency. This policy has been implemented through the Foreign Assets Control Regulations (FACRs) to embargo trade with the People's Republic of China, North Korea, North Vietnam and Cambodia in 1950, and through the Cuban Assets Control

Regulations (CACRs) which have embargoed all trade with Cuba since 1963.

The Export Control Act (later the Export Administration Acts) authorizes the President to curtail or prohibit the export of technical data as well as goods in order to "further the foreign policy of the United States and to aid in fulfilling its international responsibilities." It also allows the President "to exercise the necessary vigilance over exports from the standpoint of their significance to national security of the United States."[9] The regulation applies to all exports from the United States except those shipped to Canada for Canadian consumption.

The United States has justified the extraterritorial extension of its regulations on two grounds, both of which rely on the nationality principle of international law. First, the United States applies its controls to the re-export of certain goods and technologies. "Re-export" refers to the export of a particular item from the firm or country that originally purchased the item to another buyer. Under the authority of the Export Control Act, these regulations are justified by the legal argument that goods and technology that originated in the United States continue to be subject to American jurisdiction, regardless of how many times the actual goods have been traded. Second, the United States applies its laws directly to businesses in other countries associated with American individuals or corporations. Under the Trading with the Enemy Act, this policy is justified on the grounds that a foreign incorporated subsidiary assumes the nationality of its United States parent.[10] As such, they are "United States persons," subject to the jurisdiction of the United States. While most countries control the export of arms and certain "strategic"

technologies, and many require "end-use" or "end-user" certificates which attempt to limit the re-export of these goods to restricted destinations, United States controls are exceptional both in the frequency of their use during peacetime and the application of the reexport controls to products regardless of how many times the product has been traded.

In addition to conflicts resulting from United States' use of the nationality principle to justify the extraterritorial application of its regulations, there have been extensive disagreements within the Western alliance over how the "nationality" of the subsidiary should be determined. The United States' position has been that when there is a direct conflict between the claim by one state to extraterritorial jurisdiction over its nationals in another state and the law in the second state, the law in the second state must prevail. But, in the case of a conflict between the policy of the foreign state and the American law, the nationality principle provides sufficient grounds for extension of the American law abroad. More recently, the United States has accepted that primary jurisdiction rests with the state where a corporation is doing business, with the caveat that if a conflict of jurisdiction arises, the conflict must be resolved by exercising reasonableness and comity, balancing the respective interests of the states involved.[11]

These questions have been debated at length in numerous law review articles, legal briefs and judicial opinions.[12] Most of this legal literature addresses the issue of extraterritoriality by testing the "validity" of American export control policy against accepted rules of international law. In particular, the debates have

emphasized "reasonableness" in interpreting competing bases of jurisdiction based on the territorial and nationality principles in international law. These debates help to clarify some of the issues as well as the legal positions of the states involved. Legal analyses of sovereignty and extraterritoriality, however, do not reveal the sources of international disputes over extraterritoriality, nor do they explain the varying reactions of states in these disputes.

In international politics, there is no guarantee of an impartial, authoritative interpretation of international law to resolve disputes when they arise. More importantly, while international law may serve as a guide and justification for state action, it is not a cause of, nor can it govern, state actions in international relations. The extent to which states accept the justifications offered by others is as much a function of international politics as it is of international law. Therefore, to address these issues, it is essential to analyze the actions taken by sovereign states under conditions of interdependence as well as by the laws they use to justify their behavior. As Hans Morgenthau argued in *Politics Among Nations*, the concept of sovereignty in legal theory cannot be divorced from "the political reality to which the concept is supposed to give legal expression."[13] The nationality of a subsidiary and the jurisdiction to which it is subject is determined, in large part by international politics rather than international law.[14]

Contracts with American firms are required to contain "consent orders," which obligate signatories of the contracts to abide by U.S. export control regulations. Violating American embargo policy carries penalties of indictment

under U.S. law, including imprisonment for executives and fines of up to $100,000 per offense. These penalties threaten companies operating within American territory more than those operating aborad. Without the cooperation of local governments, domestic law of one state generally carries no legal force in another state's territory. Aside from the questions of sovereignty and precedence of domestic over foreign law, a foreign country has no legitimate means to enforce its policies within the territory of another. Lack of a viable means of enforcement across international boundaries is the primary source of weakness behind international law, even when the legitimacy of that law has been accepted by the international community. The United States has successfully fined several individuals and firms that have violated its export control policy aborad, but this success is contingent on extradition agreements which can be politically sensitive, costly and time consuming. The United States government has at its disposal, however, a far more enforceable and fearsome penalty for non compliance. The backbone of American threats against firms operating abroad involves the possibility of placing these non-cooperative firms on the Economic Defense list and "Atlas."

The Gray and Black Lists

The primary means of inflicting costs on non-cooperative international actors is through the use of denial lists that restrict foreign access to American firms and individuals. Within the United States, several lists are maintained of firms to

whom exports should be scrutinized. These include the Economic Defense list (also known as the Gray list) and "Atlas" (also known as the Black list).[15] The lists effectively terminate access to American suppliers and the American market. These lists provide a means of influencing firms at home and abroad without formally extending United States' regulations beyond its borders. The denial lists are maintained by the Department of Commerce and apply only to the export of goods from the United States, and, therefore, despite their extraterritorial affect, they do not "legally" extend abroad. It is illegal for an American company or individual to conduct business with any firm that appears on these lists. As a result, the threat of placing firms on the Gray or Black lists provides the American government with a very potent means of exploiting foreign dependence on American suppliers and access to American markets.

Multinational firms generally try to avoid conflict with their home or host government by not applying for licenses they think will be denied or that could lead to tensions. By avoiding prohibited business and advising their affiliates to do the same, they inadvertently fulfill the goals of U.S. policy. In essence, by anticipating the reactions of the United States, the firm has enabled it to successfully implement its policies without ever overtly applying or enforcing them.

C. Firm and Host Country Options

Firms are often caught between governments that do not agree on the role of the enterprise or on East-West trade policy. Their primary interest is in the

maintenance of stable business, market and supply relationship. If, by virtue of the export controls, it does not integrate itself into the economy of the host country, or if it cannot maintain a reliable supply of products to its customers, a firm may lose business. Not to comply, however, risks possible indictment in the United States.

U.S. affiliates are significantly subservient to U.S. laws and regulations, however, this subservience is not absolute. At times, the U.S. government has had to accede to transactions by U.S. affiliates that it would have liked to deny. At other times, to achieve control and to pacify the host government, it has had to spend diplomatic capital. In other cases, it has been unable to gain its objectives.

Even if an export license for an affiliate is denied by the U.S. government, a conflict does not necessarily arise. The host government may not have been informed of the application or denials, or, if it does know it may not be greatly disturbed by the denial. If the host country contains domestically owned companies in the industry, and they can readily fill the order, no foreign trade is lost to the host country. The U.S. affiliate may feel injured, but without recourse to its host government, it usually accepts the decision without complaint.[16] Thus, the United States government must influence both the multinational firm and its host government.

The host country government may adopt several policy positions with respect to the application of United States export control policy within its territory. First, it may accept both the political objective and appropriateness of the controls, as the allies did before 1953 in embargoing trade with the Soviet Union and again

in 1979 in the case of American hostages in Iran. Second, it may sympathize with the policy objectives, but differ over the appropriate means to achieve the policy goals. Examples of this include European positions taken after 1953 concerning trade with the Soviet Union or British policy against the Arab boycott in the 1970's. In the former case, the allies disputed the appropriateness of the embargo for restraining Soviet military development, in the latter, while Britain supported the anti-boycott measures, it felt that British companies should be free to make their own commercial judgements on how to react to it. Third, there may be disagreement with both the policy goals and the means to achieve them. For example, the Europeans do not restrict exports to Cuba, and Britain and Canada have very minimal restrictions on trade with the Peoples' Republic of China.

Domestic legislation and bilateral agreements limiting the scope of United States' jurisdiction serve as indicators of foreign interpretations of the legitimacy and appropriateness of United States' claims. Numerous bilateral agreements have been signed between the United States and its Canadian and European allies which seek to define the bounds of United States' authority. Furthermore, in order to preserve their sovereign autonomy, the allies have enacted domestic legislation to prohibit firms within their borders from abiding by United States' law. For example, in 1982, the British government activated blocking legislation ordering companies not to comply with United States' regulation. The French government, citing 1938 and 1959 laws designed for use during times of crises in war or a threat to vital needs of the nation, ordered French subsidiaries of American companies to

fulfill their contracts despite the imposition of U.S. sanctions in 1982. Western Germany and Italy followed suit and, in addition to other legislation, the Canadian government has enacted the Foreign Extraterritorial Measures Act that empowers it to intervene when the United States seeks to extend its jurisdiction abroad.[17] Yet, despite the presence of conflicts of interest and the success of these policies in 1982, the allies did not challenge similar U.S. actions in the computer industry in 1984 and have not consistently challenged American infringement on their sovereign autonomy.

Successful implementation of United States export control policy requires both the compliance of all firms that possess or can produce the goods in question and the cooperation of the governments of those countries in which the firms operate. In all the cases analyzed below, neither the states nor firms involved are willing participants in U.S. export control policy. In each case, the United States government is attempting to get firms and countries to do something they would not otherwise have done. Its ability to do so is a function of political power. The primary argument developed in this thesis is that firm and state dependence on American suppliers and the American consumer market provided the United States government with a source of power over resources and activities taking place beyond its borders.

IV. Conclusion

Analysis of allied corporate and national reactions to United States' export control policy are analyzed to determine those conditions under which the United States can exercise control over actors and resources within another state's territory. This dissertation argues that dependence among states and firms is a potent source of political power, and that foreign dependence on American suppliers and access to American consumer markets in several industries has enabled the United States to enforce its export control policy abroad. Further, it demonstrates that dependence can be used by all states as a source of political influence.

This project has both theoretical and political importance. It demonstrates the utility of combining insights from international law, economics and political science to address common, underlying issues such as the nature of sovereignty and political power. Most importantly, by emphasizing interdependence and the context of state interaction, sources of international power and cooperation neglected by several prominent Realist theories are highlighted. Further, this project identifies untapped political resources resulting from interdependence among states and firms that may be used for or against each member of the alliance. The ability to use these resources has a direct and increasingly significant impact on national economic and military security, technology transfer, industrial innovation, and economic competition at home and abroad.

Citations

1. Kenneth Abbott, "Collective Goods, Mobile Resources, and Extraterritorial Trade Controls," *Law and Contemporary Problems* 50, (Summer 1987), pp. 118-119. For a discussion of the policy implications of U.S. export-import policy and its application abroad, see: U.S. Congress, Panel on the Impact of National Security Controls on International Technology Transfer, Committee on Science, Engineering, and Public Policy, National Academy of Sciences, *Balancing the National Interest: U.S. National Security Export Controls and Global Competition* (Washington, D.C. National Academy Press, 1987); Kevin Cahill, *Trade Wars* (London: W.H. Allen, 1986), and J.G. Castel, *Extraterritoriality in International Trade* (Toronto: Butterworths, 1988).

2. The definition and operationalization of hegemony is discussed in detail in Chapter 2 and 3, above. The specific point at which American economic and/or military hegemony began to decline, or whether or not it has declined relative to other nations, is a matter of dispute. Several prominent proponents of theories of hegemonic stability argue that U.S. hegemony declined in the late 1970's and 1980's relative to both Europe and Japan. For example, see: Robert Gilpin, *The Political Economy of International Relations* (Princeton: Princeton University Press, 1987), and Stephen Krasner, "State Power and the Structure of the International Trading System." *World Politics* 28 (1976).

3. The effect of an external threat on political power and alliance dynamics is discussed in detail in Chapter 2. For a discussion of threat perception, see: Stephen Walt, *Origin of Alliances* (Ithaca: Cornell University Press, 1987).

4. A definition of systemic polarity and the effects of polarity on alliance dynamics and political power are discussed in detail in Chapter 2. For a general discussion of the concept, see: Kenneth Waltz, *Theory of International Politics* (Reading: Addison-Wesley, 1979).

5. Dependence is interpreted in terms of the costs of foregoing a particular relationship. The more costly it is for an actor to forego a particular relationship, the more dependent the actor is on the maintenance of that relationship. Treating dependence in terms of the costs of foregoing a relationship highlights the links between dependence and political power. As will be discussed in detail in Chapter 3, the costs associated with terminating a trading relationship with the United States

are a function of two factors: the relative proportion of trade an actor conducts with the United States, and the availability of alternate trading partners. "Interdependence" refers to a relationship of mutual, though not necessarily reciprocal dependence.

6. For a discussion of the Coordinating Committee on East-West Trade, see: Gunnar Adler-Karlsson, *Western Economic Warfare, 1947-1967* (Stockholm: Almquist and Wiksell, 1968); Gary Bertsch, *East-West Strategic Trade, CoCom and the Atlantic Alliance* (Paris: Atlantic Institute, 1983); Michael Mastanduno, "Strategies of Economic Containment: United States Trade Relations with the Soviet Union," *World Politics* 37 (July 1985); and National Academy of Sciences, Panel on the Future Design and Implementation of U.S. National Security Export Controls, Committee on Science, Engineering and Public Policy, *Finding Common Ground: U.S. Export Controls in a Changed Global Environment* (Washington, D.C.: National Academy Press, 1991).

7. See: Douglas Rosenthal, William Knighton, *Chatham House Papers #17: National Laws and International Commerce: The Problem of Extraterritoriality* (London: Routledge & Kegan Paul, 1982); Kenneth, Abbott, "Collective Goods, Mobile Resources, and Extraterritorial Trade Controls," *Law and Contemporary Problems* 50 (Summer 1987); A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, 2nd ed. (New York: Matthew Bender, 1983); and Lowe, "Public International Law and the Conflict of Laws," *International and Comparative Law Quarterly* 33, 515 (1984).

8. The United States government invoked both the of these arguments to prohibit trade with North Korea, Vietnam and Cambodia, Cuba, and the Soviet Union following its crackdown in Poland. In response to the Arab boycott of Israel and the seizure of hostages in Iran, the United States justified the extraterritorial extension of its regulations on the basis of firm association with American individuals or American corporations; while its actions against Libya were applied against all firms trading in United States origin goods and technology regardless of their affiliation with American firms. See: Douglas Rosenthal, William Knighton, *Chatham House Papers #17: National Laws and International Commerce: The Problem of Extraterritoriality*, pp 58-59.

For a discussion of the legal and political debate surrounding these regulations, see: Kenneth, Abbott, "Collective Goods, Mobile Resources, and Extraterritorial Trade Controls;" A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*; and Lowe, "Public International Law and the Conflict of Laws."

9. The purpose of the act is to secure the supply of resources at home and abroad that could affect the welfare and foreign policy of the United States. See: J. N. Behrman, *National Interests and Multinational Enterprises* (Englewood Cliffs: Prentice Hall, Inc., 1970), p. 103.

10. The United States government invoked both the of these arguments to prohibit trade with North Korea, Vietnam and Cambodia, Cuba, and the Soviet Union following its crackdown in Poland. In response to the Arab boycott of Israel and the seizure of hostages in Iran, the United States justified the extraterritorial extension of its regulations on the basis of firm association with American individuals or American corporations; while its actions against Libya were applied against all firms trading in United States origin goods and technology regardless of their affiliation with American firms. See: Douglas Rosenthal and William Knighton, *Chatham House Papers #17: National Laws and International Commerce: The Problem of Extraterritoriality* (London: Routledge & Kegan Paul, 1982), pp 58-59.

11. See: *Restatement of the Law (Revised) 1980 to Present*, Draft No. 2, § 403.

12. See for example: Kenneth, Abbott, "Collective Goods, Mobile Resources, and Extraterritorial Trade Controls," *Law and Contemporary Problems* 50 (Summer 1987); A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, 2nd ed. (New York: Matthew Bender, 1983); and Lowe, "Public International Law and the Conflict of Laws," *International and Comparative Law Quarterly* 33, 515 (1984).

13. Hans Morgenthau, *Politics Among Nations*, pp. 305-306.

14. Stephen Kobrin, "Enforcing Export Embargoes Through Multinational Corporations: Why Doesn't It Work Anymore?" *Business in the Contemporary World* (Winter 1989).

15. A.L.C. de Mestral, and T. Gruchalla-Wesierski, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.* (London: Martinus Nijhoff Publishers, 1990) p. 78; A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, p. 22.

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Chapter 2

Dependence and Political Power:

The Argument and Theoretical Issues

I. Introduction: The Problem and Puzzle of Extraterritoriality

The United States' government has attempted to restrict the movement of strategic goods and technology around the globe since 1949. The success of this type of policy requires compliance by all firms which possess or can produce the goods in question and cooperation from the host governments in those countries where the firms operate. In most cases, states will challenge any infringement upon their sovereignty; however, this is not always the case.[1] When a conflict of interest arises as a result of competing efforts by states to exert control over actors and resources across international boundaries, which state's interest will prevail? Answers to this question raise issues of political power, alliance dynamics and sovereign autonomy in international politics.

In June of 1982, the Western allies openly challenged the application of the United States' export control policy abroad. This policy restricted the sale of oil and gas equipment and related technology to the Soviet Union by corporations within and outside of U.S. territory. In what became the "most violent dispute over extraterritoriality in the history of American trade controls,"[2] Britain, France and Canada instituted national legislation forbidding any firms located within their borders from abiding by United States' law. Although the export embargo affected only a small number of firms and a relatively narrow set of economic and security concerns, the allies were willing to challenge the United States in order to preserve

their sovereign integrity. In contrast, they have not challenged the continued extraterritorial application of United States' export controls in the more technologically sophisticated computer and electronic industries through Operation Exodus, even though these policies directly affect a wide range of important economic and political concerns.[3] Allied confrontation, as in the first case, is common and readily explained; allied acquiescence to external control, however, presents both an empirical and theoretical puzzle.

The allies acquiesced to the extension of United States' regulations abroad throughout Operation Exodus despite declining U.S. hegemony within the Western alliance,[4] decreasing threat of Soviet aggression[5] and continuing movement in the international system toward multi-polarity.[6] Given these developments, several prominent Realist theorists of international relations would predict that the allies should have become more, rather than less, willing to challenge U.S. initiatives than in the earlier trans-Siberian pipeline case. This dissertation offers an alternate set of hypotheses to explain American influence within the Western alliance. It asserts that interdependence among firms and among states is a critical and often overlooked source of political power.

The argument developed in this project predicts that the United States' attempts to implement its export control policy abroad are more likely to succeed if actors in the industrial sectors affected by the policy are dependent on American suppliers or access to the American consumer market. In the examples cited above, European reactions were strongest in 1982 when the sectors affected involved oil

production and transport, industries that can operate with complete independence from U.S. markets or the technology of U.S. firms. In contrast, European protests were virtually nonexistent throughout Operation Exodus in the mid-1980's. Operation Exodus affected high-technology electronics, computer and telecommunications industries that are still dependent on U.S. markets and on the technology possessed by its firms. This argument is developed below in the context of existing and competing explanations of alliance dynamics and political power. These theories are tested and evaluated in subsequent chapters through analyses of European corporate and national responses to the application of U.S. export control policy abroad since 1949.

Chapter Outline

Extraterritorial application of authority over actors and resources against the interests of other states challenges some of the most basic assumptions underlying international relations theory, including the nature of sovereignty and political power. The second section of this chapter discusses the centrality of sovereignty in the theory and practice of international politics. It outlines the puzzle arising from competition among states over the control of transnational actors and resources for traditional, territorial analyses of the nation-state.

The third section presents a theoretical argument linking dependence and political power that serves as the foundation for this project. In section four, several prominent theories of alliance dynamics and political power that offer

alternate explanations for political influence in international politics are presented and critiqued. The dissertation argues that hypotheses emphasizing the effect of dependence on political power offer a fruitful alternative to traditional theories of political power and alliance dynamics based on the distribution of resources in international politics. Conceptualizing the relationships among actors in terms of interdependent relationships both clarifies the propositions of these traditional theories and explains variations they cannot account for.

II. National Sovereignty, Dependence and Interdependence

Since the treaties of Westphalia ended the Thirty Years War in 1648, the autonomous, territorially defined, sovereign nation-state has been the dominant form of legitimate political organization in international politics. While the Realist and Institutionalist paradigms of international relations differ on many methodological and theoretical issues, both groups of theorists treat sovereignty over a given territory as fundamental to international politics.[7] The institution of sovereignty is the ultimate source of a nation-state's identity and power. It enables a state to interact with others in the international system under legal equality. At the same time, it delineates the scope and domain of national authority over economic and military resources within territorial boundaries that provide it with a means of protecting and preserving this equality. Preservation of national sovereignty can be considered one of the most basic concerns of nation-states in international politics. Consequently, one would predict that nation-states are likely to challenge any

infringements upon its sovereignty.

The extension of political authority over actors and resources in foreign territories raises two issues concerning sovereignty.[8] The first involves the autonomy of the nation-state in a dependent or interdependent relationship, that is, a state's ability to formulate and implement an independent foreign and domestic policy. The second involves the ability of a territorially defined entity, the nation-state in particular, to control actors, goods and resources across international borders. This section defines "sovereignty," and "dependence" and "interdependence," and discusses the coexistence of these concepts and practices in international politics. It argues that extension of U.S. export control regulations across international borders undermines this relationship by challenging the sovereign authority of states over actors within their territory. The control of actors and resources across international borders can be an extremely robust source of political power.

A. Dependence, Interdependence, and Sovereign Autonomy

Sovereign autonomy, dependence and interdependence exist *de facto*, side by side in international politics. "Sovereignty" is a legal, political and social concept that identifies the nation-state as an autonomous, self-determined entity. In international politics, there is no authority superior to that of the sovereign state. The pervasiveness of anarchy, defined as the absence of centralized authority, does not, however, imply that states have unlimited freedom of action. Sovereignty is

not equivalent to complete independence or autarchy. The actual interdependence of nations in political, economic, military and technological matters may make it difficult for certain states to pursue independent domestic and foreign policies.

Dependence and Interdependence

The dependence or interdependence of states in international politics manifests itself in several different ways. The most visible forms of interdependent relationships among states are institutionalized in formal treaties or agreements. To mitigate the costs of interacting in an anarchical system, states may enter into various types of agreements or treaties through which they agree to limit their actions.[9] Some international agreements, the International Telecommunications Union (1865) or the Universal Postal Service (1874) for example, are primarily functional agreements to facilitate interaction while costing the participants very little. Certain arrangements, like the General Agreement on Tariff and Trade (1947), are more complex and place notable restrictions on members' freedom of action. Others, like the European Economic Community and the European Monetary System, require even greater political restraint by participating states. All of these agreements limit state action to some degree; however, states cooperate, on a voluntary basis, to further national goals. As such, membership reaffirms rather than challenges the sovereignty of participating nations.

Even when states are not formally involved in international treaties or agreements, their actions are still affected by others in the system. Schelling has

characterized this condition as one of "strategic interdependence" in which "the ability of one participant to gain his ends is dependent to an important degree on the choices or decisions that the other participant makes."[10] Game theorists, in particular, have highlighted the interaction effects between two sets of actors in a variety of different contexts. The decisions and actions made by each player are contingent upon the anticipated decisions and actions of his or her opponent. Under these conditions, each player's actions and the end result of the players' interaction depend upon the choices made by the other. When multiple actors are involved, the activities of actors are even more highly affected by others' actions. Within the international system, relations between two actors depend in part on the relations between each of these actors and others in the system. Jervis has identified this "interdependence" or "interconnectedness" of actions as a primary characteristic of actions taking place within a system.[11] This perspective expands on the insights offered by most game theory based analyses by emphasizing the fact that the interaction between two actors is influenced by factors outside of their bilateral relationship.

One interpretation of dependence is, thus, a condition in which an effect or outcome is contingent on someone or something else. Interdependence, in turn, may be interpreted as a condition of mutual dependence or mutual contingency. This definition generally corresponds to Schelling's notion of "strategic interdependence," and is similar to the concepts of "sensitivity interdependence" popularized by Cooper, Duvall and Keohane and Nye.[12]

A high level of interdependence between countries does not necessarily imply that states must relinquish their authority or that traditional power relations between them are unimportant. On the contrary, dependence of one actor on the continuation of a particular relationship with another is a primary source of power and influence in international politics. Here dependence, or asymmetries in interdependence, refers to a relationship that is costly to break. For example, larger states or firms are often in a position to use their resources to entice others to behave in certain ways, possibly by offering additional trade and aid or a guarantee of protection from attack. Conversely, such states may threaten to restrict the flow of goods and services or withhold the guarantee of protection if certain requests are not met by their partners. The relative costs of foregoing the relationship reflect the relative dependence of each actor on its continuation. The more costly the breaking of the relationship, the more dependent the actor is on its the continuation. This notion of dependence is similar to the concept of "vulnerability interdependence," popularized by Albert Hirschman and Kenneth Waltz and reflects the meaning of dependence used by earlier theorists like Niccoli Machiavelli, Montesquieu, Jean-Jacques Rousseau and Adam Smith.[13]

This study will use the second interpretation of dependence, defined in terms of the costs of foregoing a particular relationship. As will be demonstrated by the cases discussed in the next chapters, the dependence of both states and firms on American resources can be used by the U.S. to influence behavior. The threat of restricting access (or promise of increased access) to United States markets, goods

and technology is a primary source of United States' influence over the activities of firms within and beyond its borders. Similarly, the threat of restricting the flow of goods deemed necessary for sustained economic growth or national security is a primary source of American influence over the actions of the states in which these firms operate.

Sovereign Autonomy

All international transactions, particularly those in trade and monetary affairs, affect the interests of actors across national boundaries. By altering the interests of influential actors abroad, one state may affect the policy making process in another. For example, in the nineteenth century, Great Britain was able to alter the preferences of American farmers in favor of free trade by lowering its own tariff barriers, thus providing an enlarged market for agricultural goods.[14] Alternatively, several authors have argued that the international system remained relatively open in the mid-1970's due to the influence of internationally oriented firms on their home governments.[15] However, while the pressures resulting from interdependence in international politics can potentially be used to influence a state's policies, they cannot supplant its authority.

Domestically, sovereignty refers to a set of national institutions which delineate the scope and nature of authority within the nation-state. This includes a set of legal, bureaucratic and legislative structures that enable the state to make and enforce laws to govern the conduct of actors and actions taking place within its

territory.[16] Traditional trade and monetary relations between states can be used to influence decision-making within these institutions, but they do not supersede it. As system theorists argue, states remain "sovereign -- that is, able to make decisions or choices autonomously. But to realize their goals they must be concerned with the choices other actors make."[17] All enticement and enforcement actions, including blockades, boycotts, and other economic sanctions or inducements leave the territorial sovereignty of the target nation intact. As Hirschman argued, regardless of the costs of foregoing a particular arrangement, all states have the sovereign power to terminate foreign trade and monetary relations. Short of termination, each state maintains the ability to put up trade and monetary restrictions that alter preferences of actors in its favor. With the exception of military conflict, as Morgenthau argues, "on a given territory only one nation can have sovereignty -- supreme authority -- and that no other state has the right to perform governmental acts on its territory without its consent."[18] From a traditional realist perspective, even in a highly interdependent relationship, decision-making within the nation-state remains "impenetrable" to outside authority.[19]

The resulting coexistence of sovereign autonomy and interdependence in international politics is, however, undermined by extension of national regulations across international borders. The application and enforcement of United States' export control regulations abroad, *against* the interest of the states involved, violates the sovereignty of those states by undermining both the legal and physical control over resources within their borders. The problems posed by national efforts

to control transnational actors and resources is the subject of the next section.

B. Controlling Actors and Resources Across International Boundaries

Within the framework of sovereign states, each with autonomous legal control over the actors and activities within its borders, innumerable commercial and business transactions take place across national boundaries. Among these transactions are the sale and purchase of goods and services, characteristic of traditional trade among states. Additional transactions, however, include the ownership and control of transnational firms by individual investors, share holders and corporate conglomerates which reside in a number of different countries. Both the decision-making structure and the production facilities of multinational enterprises may be dispersed throughout a number of different countries. In some circumstances, particularly when components and other materials are transferred between subsidiaries or company branches in different countries, resources and technologies developed and licensed in one country may be sold in another.

At a minimum, every transaction across on international borders involves two national jurisdictions and two potentially competing national interests. The presence of United States controlled subsidiaries in a foreign country generally leads to a relatively high number of transactions between firms in that country and those in the United States. The presence of these subsidiaries also increases vulnerability on the part of the local economy to resources and technologies controlled by these firms and, consequently, to the associated regulatory measures

and political influence of the United States.[20] The application of regulatory measures and the assertion of authority over actors and the movements of resources across national boundaries challenges the "impenetrability" of the nation-state.[21]

In the past two decades, a voluminous literature has developed which addresses the impact of the multinational corporation on state sovereignty. The majority of this writing focused on the economic and political effects that multinational corporations have on the governments of developing states. This project differs from earlier research in two important ways. First, rather than focusing on the impact of multinational corporations on host governments, this project emphasizes the use of multinational corporations and their foreign subsidiaries by one state to extend its control over actors within another's territory. Specifically, it explores one state's use of dependent relationships among firms as a means of influencing a firm or subsidiary's actions within another state. For example, earlier work on multinational corporations tended to analyze the presence of a multinational such as IBM in another country in terms of its impact on the host-country's socio-economic and political development. The primary actors under consideration would be the corporation itself, in this case IBM, and the host country's people or its economic and political structure in general. In contrast, this study focuses on the interdependent relationship among firms, and the utilization of this relationship by one state to control the activities of firms in different countries. Second, this project focuses on the relationship between Western firms and states at similar levels of development rather than the somewhat unique relationships

between Northern firms and Southern states characteristic of earlier analyses.

Realists define the nation-state primarily in terms of its control over both the tangible and intangible resources within a given territory. Autonomous, sovereign control of these resources is a primary source of state power and wealth. In a drive to maximize their security, states will protect resources in their possession while they attempt to acquire relatively more resources than their neighbors. Firms represent a resource which creates both power and wealth. It follows that states will compete to control the activities of multinational firms just as they compete for the control of other resources. The rewards from this competition, however, are exceptional. When one state controls the activities of firms within another state's territory it not only decreases the physical resources at that state's disposal, but also undermines its political integrity by challenging its ability to control actors and activities within its territory.

It is important to remember that coordination of national policies concerning the activities of multinational corporations and their subsidiaries is often in the interest of all states in which these corporations operate. It is when conflicts of interests between states vying for the control over the activities of these corporations are present that extraterritoriality becomes an issue.

National Jurisdiction under International Law

Under international law, the limits of national jurisdiction are determined primarily by the extent of a state's geographical territory. The "territorial principle"

of jurisdiction is a logical extension of the concept of sovereignty itself. If being sovereign within a given territory means that a state is autonomous and not subject to any outside authority, then it follows that, except by agreement, no other sovereign or external authority may prescribe or seek to enforce laws within the territory. In a manner that parallels modern Realist arguments, Chief Justice Marshall of the United States articulated the territorial principle in 1812:

> The jurisdiction of the nation within its own territory is necessarily exclusive and absolute. It is susceptible of no limitation not imposed by itself. Any restriction upon it, deriving validity from an external source, would imply a diminution of its sovereignty to the extent of the restriction . . All exceptions, therefore, to the full and complete power of a nation within its own territories must be traced up to the consent of the nation itself.[22]

At the same time, it is generally acknowledged that a nation-state may, in some circumstances, regulate the activities of its nationals abroad. The "nationality principle" of jurisdiction confirms the territorial principle that "the laws of no nation can justly extend beyond its own territories, except so far as regards its own citizens."[23]

The territorial and nationality principles are compatible as long as no conflicts of interest are involved. For practical purposes, a limited degree of control over the activities of "nationals" abroad (both individuals and firms) is often in the interests of all states. But when the interests or perceptions of states differ, these principles may offer conflicting bases of jurisdiction. Consequently, while the

primacy of the territorial principle is generally accepted in international law, the claims of states to direct, and perhaps to reprimand, their nationals by reference to the nationality principle may be seen by others to threaten their sovereign rights.[24] This brings to light the primary question which this project seeks to answer: When conflicts of interest arise resulting from competing efforts to control actors and resources across international boundaries, which state's interests will prevail?

The clearest example of conflicting bases of jurisdiction involve the controlled foreign subsidiary of the multinational corporation. Most multinational corporations are comprised of operating entities incorporated in a host country and tied to the corporate parent (with headquarters in the home country) through full or partial equity ownership that provides some degree of managerial control. The subsidiary is usually controlled by its parent. The degree of control can range from little more than partial ownership where the subsidiary can act relatively autonomously to full parental control over the daily operational details of the firm. The parent often exports technological and managerial information to the subsidiary, and the profits from the subsidiary are in turn invested or remitted to the parent. Although the affiliates are incorporated under the laws of their host governments, the home country can influence the activities of firms outside of its borders indirectly by influencing their locally based headquarters, which, in turn, exert the desired control over their foreign subsidiaries, often against the interests of the host country's government. In this way, multinational corporations may be used to augment state power offering a means of controlling actors and resources within

another state's territory. As Vernon argued, "The network of the multinational enterprise can become a conduit through which the power of one sovereign state is projected into the territory of another."[25]

III. Alliance Dynamics and the Nature of Political Power

As a result of the dramatic expansion in the numbers and sizes of multinational corporations since World War II, states increasingly seek to assert authority beyond their borders. They seek this authority for taxation purposes, to enforce national anti-trust policies and to restrict the export of "strategic" technology. Attempts to apply export control policies abroad have provoked international disputes with both the longest historical record and the most serious ramifications for a state's economic and military security.

The primary objective of U.S. export control policy is to prevent strategically sensitive technology and products from being diverted to specific restricted countries. The success of U.S. export control policy requires the cooperation of the multinational firms, including their foreign subsidiaries, and of the host countries within which these firms operate. If the Soviet Union or other targeted states were to acquire access to comparable goods or technology from non-American sources, then the American restrictions would do little to slow the economic and military development of its adversaries. Securing the cooperation of

all potential alternate suppliers is, therefore, crucial to the success of this policy. As a result, a primary objective of any such policy is to secure international corporate and national government participation.

Limited international cooperation in the export control arena has taken place since World War II, however, U.S. controls tend to be more stringent and broader in scope than those of other countries.[26] Disagreements remain concerning the number and type of items that should be controlled. The successful application of U.S. export control policy abroad is a question of political power and influence. That is, when can the United States get its allies and firms operating in their territories to do something they would not otherwise do?

This section presents an argument linking dependence and political influence. It is argued that emphasizing dependence among states and firms provides insights overlooked by more traditional arguments, and that the proposed hypotheses provide a fruitful addition to the study and explanation of state behavior in international politics.

A. Theoretical Argument: Dependence and the Nature of State Power

This project highlights the relationship between dependence and political power.[27] Every transaction across international borders involves at least two national jurisdictions and two potentially competing national interests. The presence of U.S. controlled subsidiaries in any foreign country leads to a relatively high number of transactions between firms in that country and those in the U.S.

Their presence also creates an increased vulnerability of the local economy to resources and technologies controlled by these firms and, consequently to the associated regulatory measures and political influence of the U.S.[28] Governments frequently disagree on foreign economic policies (including the costs and benefits of export controls), and cooperation may be difficult to achieve through traditional negotiations and bargaining. Foreign dependence, however, enables the U.S. government to control their activities of firms operating abroad when it is unable to accomplish the same goal diplomatically.

Albert Hirschman was one of the first economic or political theorists to explicitly draw a link between economic dependence and political power.[29] Hirschman argued that the party which values a particular trading relationship less will suffer proportionately less from its termination and will consequently be able to exercise proportionately more influence over the other party.[30] While all states are "sensitive" to the termination or commencement of trade, in Keohane and Nye's terms, some are more or less "vulnerable" than others. A state which can respond to and compensate for the termination of an agreement, is considered less vulnerable than one which cannot do so.[31] The more vulnerable a state or firm is to the termination of an agreement, the greater the potential influence resulting from the threat of its termination.

As traditional negotiation theorists have demonstrated, the existence of bargaining options can be an extremely powerful source of bargaining leverage. For example, in order to make an embargo effective, all alternate sources of supply

must be closed off. As a result, participants in the embargo who have little personal interest in its success, can gain a degree of leverage by threatening to leave the embargo. In the same manner, member states or firms which can guarantee the supply of resources and components they need independently from the United States, remain relatively impervious to the extraterritorial application of its export legislation. When no alternate markets or sources of supply are available, however, they are at the mercy of U.S. policy.

The costs associated with terminating a trading relationship with the United States are a function of two factors: the relative proportion of trade an actor conducts with the United States, and the availability of alternate trading partners. If a large proportion of firm trade is conducted with the United States, terminating those trading arrangements will be costly. If a firm conducts only a small proportion of its trade with the United States, then terminating those trading arrangements will not be as costly. If the costs of terminating a trading relationship with the United States are greater than the costs of participating in the embargo, then participation in the embargo is likely. The costs of terminating such a relationship may, however, be minimized if alternate trading partners can be found.

The availability of alternate suppliers and alternate markets for a specific good can be interpreted as a function of the concentration of trade among all potential producers and consumers. If every country exported or imported the same amount of a particular good, then that good could be purchased or sold anywhere. The concentration of markets and suppliers would be zero. If, however, only a few

countries exported or imported a particular good, then the good could only be purchased or sold to them. The more concentrated the exports or imports of a particular good, the fewer the number of alternate markets or suppliers. In the case of a monopoly of production and export, or of monopsony and import, no alternate suppliers or markets would be available and all suppliers would be concentrated in one country.

Dependence as a function of relative dominance of American exports or imports and the concentration of world exports or imports is summarized in Table 1.1.

Table 1.1: Dependence as a Function of Trade Concentration

Concentration of World Exports/Imports	**Proportion of U.S. Exports/Imports**	
	Low	**High**
Low	Low dependence	High sensitivity but low vulnerability to dependence on US
High	High vulnerability to dependence on others	High vulnerability to dependence on US

Firm and state dependence can be further broken down into dependence on access to markets and on the supply of certain goods. If both dependence on markets and on supply is low, then restricting access to American markets or

suppliers will have little effect on state or firm action. Conversely, if dependence on both is high, then restricting access to American markets or suppliers should have a strong effect on both state and firm action.

An interesting variety of results are possible when dependence on supply does not coincide with dependence on market access. State governments are primarily concerned about the preservation of their national security. To achieve this objective, national decision makers attempt to secure the domestic production or supply of goods necessary to maintain national security. National security concerns include guaranteeing the economic health of their constituents, but guaranteeing the minimum resources necessary to maintain national military security often take precedence. In the short term, maintaining the supply of goods needed to guarantee military security will be valued more highly by national governments than securing access to foreign markets for their firms. As a result, national governments are more likely to acquiesce to American control when the supply of certain goods is threatened than when market access is restricted, especially when those goods or technologies are related to a state's national security.

In contrast, maintaining access to markets for their goods is necessary for the survival of commercial firms. Firms will often attempt to develop alternate sources of supply when access to traditional suppliers is restricted. As demonstrated by the actions of several firms in both the pipeline case and Operation Exodus, discussed above, firms are often willing to develop them

internally when alternate external suppliers are not available. Alternate markets are, however, even more difficult for firms to develop than finding alternate sources of supply. While national governments appear to be less concerned about access to foreign markets for their firms than the supply of goods they cannot obtain elsewhere, firms are more protective of market access than supply.

Firm and state reactions to U.S. initiatives against their interests are summarized as a function of dependence on market access and dependence on supply in Table 1.2.

Table 1.2: Successful Implementation as a Function of Dependence

Dependence on Supply	Dependence on Market Access	
	Low	High
Low	Firm defiance, host government intervention	Firm compliance, host government indeterminate
High	Firm indeterminate, host government acquiescence	Firm compliance, host government acquiescence

The hypothesis linking dependence and the likelihood of success can be verbalized as follows:

H_1: *Country A is far more likely to be able to extend its control over economic and security resources within the territory of another country (B) when the resources in country B involve industrial sectors that are dependent on technical assistance from country A's firms or access to A's markets than it is when those resources do not.*

Critics of this approach argue that market power (which is the result of supply and demand), is not necessarily equivalent to bargaining power between states (which is the result of the relative political evaluation of the consequences of state action).[32] Despite statements to the contrary, this criticism does not undermine the link between dependence and political influence; rather, it underscores a failure to specify the appropriate scope and domain of the influence attempt in question. Market forces of supply and demand do affect the actions of firms. When the United States is unable to alter the foreign policies of its allies directly, it can influence the activities of firms in their territory by exploiting the dependence of these firms on the supply of various components and technology from American-based multinationals.

Hirschman emphasizes political influence resulting from the threat of terminating trade relationships, but at the same time, he underemphasizes the potential influence resulting from the provision of inducements. Positive, as well as negative, incentives can influence state actions. Since World War II, the United States has offered inducements as well as threats to the allies as a means of influencing their trade policies. In addition to the Marshall plan and preferential trade agreements of the 1950's, the United States has offered the guarantee of

government contracts, most recently on S.D.I., the guarantee of alternate sources of raw materials and energy, and occasionally even outright financial compensation to both firms and allies hurt by participating in its export control policies.

B. Sources of U.S. Influence

The United States had three primary means of securing the participation of allied governments and firms with its export control policy. First, it can attempt to persuade the others that the policy was an appropriate and necessary response to the Soviet threat. Using bilateral and multilateral fora, the American government has tried continuously to obtain voluntarily compliance and support from its allies and the international business community. It has sought to increase the monitoring and enforcement practices of the Coordinating Committee on East-West Trade (CoCom), and the number of items restricted by CoCom regulations. Second, the United States seeks to prevent violations by both the CoCom controls and its own export control laws through early detection and by closely reviewing license applications. Third, the United States government can use positive and negative sanctions to induce or coerce participation in its control policy.

When diplomatic persuasion and early detection efforts fail to secure participation in its export control policies, the United States government can use positive and negative sanctions to secure compliance. Promises of a government contract or access to sophisticated technology, such as S.D.I., can be effective positive incentives for participation in American policy initiatives. Alternatively,

threats may be used to enforce compliance. The United States has two primary means of inflicting negative sanctions on uncooperative actors operating abroad. First, the United States has sought to deter violators by demonstrating its willingness to aggressively use criminal and Administrative sanctions available under the Trading with the Enemy Act of 1917 and the Export Control Act of 1949, and subsequent revisions.[33] Second, the United States can threaten to terminate all foreign access to its country, its resources, its people and their consumer market.

The primary means of inflicting costs on non-cooperative international actors is through the use of denial lists that restrict foreign access to American firms and individuals. Within the United States, several lists are maintained of firms to whom exports should be scrutinized. These include the Economic Defense list (also known as the Gray list) and "Atlas" (also known as the Black list).[34] The lists effectively terminate access to American suppliers and the American market. These lists provide a means of influencing firms at home and abroad without formally extending United States' regulations beyond its borders. The denial lists are maintained by the Department of Commerce and apply only to the export of goods from the United States, and, therefore, despite their extraterritorial affect, they do not "legally" extend abroad. It is illegal for an American company or individual to conduct business with any firm that appears on these lists. As a result, the threat of placing firms on the Gray or Black lists provides the American government with a very potent means of exploiting foreign dependence on

American suppliers and access to American markets.

Multinational firms generally try to avoid conflict with their home or host government by not applying for licenses they think will be denied or that could lead to tensions. By avoiding prohibited business and advising their affiliates to do the same, they inadvertently fulfill the goals of U.S. policy. In essence, by anticipating the reactions of the United States, the firm has enabled the it to successfully implement its policies without ever overtly applying or enforcing them.

IV. Competing Theories of Political Power and Alliance Dynamics

This section presents and critiques prominent competing arguments of political power and alliance dynamics based on the presence of an external threat or the distribution of resources among states. None of these competing theories provides a sufficient explanation of variations in the United States' influence over allied export control policy. Furthermore, the finds of each of these theories can be explained in terms of dependent relationships among states as defined above.

A. External Threat

Both balance of power and balance of threat theory attribute the key motivation for alliance formation and acquiescence to an alliance leader to the leader's ability to prevent the rise of a state (or group of states) that could threaten the existing order. The presence of an external threat provides states with a common interest in setting aside their differences and cooperating to counter a

common menace. As long as the threat remains, allies are dependent on the alliance and alliance cohesion will be strong. Once the threat diminishes, a primary motivation for the alliance disappears and old conflicts among allies may return.[35]

The basic premise underlying balance of threat is that states seek out and maintain allies in order to maximize their security against a potential aggressor.[36] The relationship between threat and alliance cohesion is the result of each state's dependence on others within the group for its security. The more a state contributes to the security of the alliance, the greater the dependence of the alliance on its contributions and the greater the impact of their cessation. The threat of abandoning the alliance or of cutting off support for a non-cooperative member provides the dominant state in the alliance with a potent form of political influence.

From this argument, one can hypothesize:

> H_2: *As the security threat from the Soviet Union diminishes, allied dependence on the United States and the Western alliance for their security will diminish. As a result, alliance cohesion will diminish and the allies will be more willing to challenge infringements by other member states upon their sovereignty for the sake of the alliance or alliance leader.*

As the escalation of the Iraqi invasion of Kuwait demonstrated, there may be other sources of threat that may serve to solidify the Western alliance. Yet, unlike the threat from the Soviet Union, the United States is not the only country able to challenge the aggressor and the battle is not likely to be fought on European soil. As a result, while the Western alliance may be strengthened, the superpower will be

less able to use the threat of abandonment to get the allies to do its bidding.

The existence of a threat is often equated with the possession of a disproportionate amount of economic or military resources by a potential adversary. In addition to sheer capability and the physical capacity to inflict harm, additional factors are taken into account. For example, Walt lists several factors which include geographical proximity, offensive capabilities, and perceived intentions.[37] The principal insight of this analysis is also its principal weakness. Power resources have many potential uses and the anticipation of their future use is a matter of subjective interpretation on the part of the actors involved. Because these interpretations are subjective, it is difficult to operationalize this concept. As a result, the predictive capability of this approach is greatly diminished. In order to avoid additional methodological complications and to maximize consistency with the existing literature, Walt's definition of operational definition of threat will be used.[38]

The presence of an external threat is not a sufficient explanation of alliance cohesion after World War II. First, when a significant external threat is present, it provides states within an alliance with a common goal -- that is, to balance against or eliminate the threat. In addition to problems of free riding ignored by this approach, however, cooperation within the alliance may be difficult to achieve due to disagreements over both the exact nature of the threat and the appropriate means of responding to it. Even at the height of the Cold War, European and American perceptions of the Soviet threat and desired means of addressing that threat

diverged.

As early as 1949, the allies agreed that restricting the export of certain strategic goods was a prudent response to the threat of a Soviet military buildup and potential military aggression. The Coordinating Committee on East-West trade was formed by multilateral agreement to monitor alliance trade with the East. Virtually from its inception, however, the allies have disagreed on the number of items that should be restricted, what items should be added or taken off the embargo lists, and the means of enforcing CoCom policies. For example, independent Soviet production of the hydrogen bomb in the 1950's was interpreted by the United States as an indicator that existing export controls over strategic items to the Soviet Union were not sufficient and needed to be more strongly and more widely enforced. European states, on the other hand, interpreted the same event as an indication that the export embargo was an ineffective and inappropriate means of restricting Soviet military development. As a result, their reliance on this component of the alliance as a means of furthering their security was completely undermined. Over time, divergence on this issue has increased and European dependence in this area has decreased. Rather than unifying force within the alliance, disagreements over the threat of Soviet aggression and how best to respond to it have been a continual source of alliance conflict and dispute. In the language of Ernst Haas, a goals-means nexus was not achieved; the alliance partners agreed neither on the goals the alliance was to pursue nor the appropriate means of doing so.[39]

Second, the level of military threat can be interpreted, not as a direct cause of alliance cohesion, but rather as one source of state dependence on an alliance or alliance leader. The cases discussed below will demonstrate quite strikingly that effects of military, economic and technological dependence may lead to policy changes or cooperation on a sectoral level in one area but not in another. This point is best clarified with a brief example. In 1981, French perceptions of the level of threat from the Soviet Union were greatly increased by the discovery of a secret Soviet document which came to be known as the "Farewell Letter." The Farewell Letter consisted of a set of secret internal reports on the whole range of Soviet technical espionage in the West obtained by French counter-intelligence between 1980 and 1982.[40] The documents it contained provided a window into the organization and depth of Soviet technological espionage between 1978 and 1980, more extensive than had ever been available. The documents included charts showing the fulfillment of tasks in the case of rocket and space technology, a detailed list of collection tasks for 1981-1985, and a list of Western companies which produced the desired items. As a result of the documents, the French shifted their policy regarding the control of high technology items from one of neglect and continuous confrontation with the United States, to one of strict enforcement and promotion of the U.S. export control standards. If the "level of threat" is interpreted in the Waltian sense, one would expect that overall French policy toward the Soviet Union should have shifted in a similar manner. This was, however, not the case. Despite a shift towards cooperation with the U.S. in the high technology sector, the

French remained an ardent opponent of U.S. actions against the Soviet Union in the oil production and transport industries, especially during the alliance disputes over the trans-Siberian pipeline.

Focusing on dependent relationships among states and firms will help to clarify what factors will be perceived as threatening and how each actor would most likely respond to that threat.

B. Distribution of Resources: System Polarity and Hegemony

A second set of realist theories of state behavior emphasize the distribution of economic and military resources among states and the position of each state relative to others in the international system as primary determinate of state power and alliance dynamics. The first of these approaches focuses on the distribution of resources among opposing states or alliances in terms of system polarity. In a multipolar world, three or more states control a disproportionate amount of economic and military resources. As a result, no single state has the capability to protect itself from an attack by a coalition of other states in the system. Consequently, states form alliances and remain highly dependent on others for the preservation of their security. Dependence on a particular state may, however, be fleeting. Since security can be ensured through an alliance with a variety of different partners, alliances and alliance partners will tend to be rather fluid.

When two states or groups of states control a disproportionate amount of global resources, the international system is considered to be bipolar. Dependence

of the two dominant powers on others in the system is lower than in a multipolar system. By virtue of their size, the two dominant states are more self-sufficient and can balance "internally" against both external military and economic competition.[41] As a result, the superpowers have more autonomy and may be less concerned with their allies' interests. Thus, they can afford to alienate their allies. At the same time, their allies may be equally or more dependent on the super powers than they were in a multipolar world. The asymmetry of dependence in this relationship may enable the Superpowers to entrap the allies into doing their bidding through threats of alienation or potential abandonment.

In the absence of a major war, the transition from a bipolar to a multipolar system is rather difficult to pinpoint and is open to interpretation. Given this caveat, the decline of the Soviet Union and COMECON within the Eastern bloc since the early 1980's, and the congruent economic rise of Germany, Japan and the European Common Market, indicate that the system increasingly reflects multipolar characteristics. As the system becomes increasingly multipolar, the asymmetry of interdependence lessens and the allies become more important to the dominant powers. In a reciprocal manner, as the United States and the Soviet Union become increasingly dependent on their allies, their particular importance to the furtherance of allied interests diminishes.

The hypothesis can be stated as follows:

H_{3a}: *As the international system becomes multipolar, the influence of the two dominant states over others in the system will diminish. The extension of regulations abroad by the dominant states are less likely to be tolerated and implementation less likely to be successful in a multipolar world than in a bipolar one.*

This proposition identifies a link between asymmetries in interdependence and political power which is very similar to that developed by Albert Hirschman which is discussed below. The weakness of this approach is that interdependence is considered solely a function of the aggregate distribution of capabilities among the actors in the system. As a result, variations in the distribution of particular resources and the ability of states to exploit other countries' dependence in particular sectors while not in others are overlooked. These points will be elaborated upon in the discussion of interdependence and political power that follows.

A second set of explanations of state behavior in international politics focuses on the distribution of resources within a particular alliance. Theories of hegemony predict that control over a disproportionate amount of economic, military or cultural resources will enable a state, or hegemon, to induce or coerce others to act in its interest.[42] A hegemon's influence over others will vary over time as a function of its relative control over these resources. The hypothesis may be stated as follows:

H_{3b}: *As a state's economic or military hegemony declines its ability to entice or coerce others into doing its bidding declines as well. American attempts to implement its export control policy abroad against the interests of host countries and their firms are less likely to succeed as its hegemony declines.*

The precise meaning of "hegemony" is often left unclear. For the purposes of this dissertation, hegemony will be considered in three different ways: hegemony as dominance in the world economy; hegemony as dominance in world politics; and hegemony as dominance in a particular issue area or industrial sectoral.

Hegemony as Dominance in the World Economy

Charles Kindleberger initially used the concept of hegemonic stability to describe a condition under which an open economic system could be maintained. The dominant state, or hegemon, is distinguished by both its ability and willingness to provide a collective good. Since it is difficult to exclude states that do not contribute to the cost of producing a collective good, such as international economic stability, each state has an incentive to take advantage of the good while not contributing to its production.[43] Yet, rather than using its capabilities to force other states to contribute, the hegemon gains the cooperation of other states in exchange for the benefits they receive from taking advantage of, or "free riding" on, the public good the hegemon provides.[44] While the relative size of the hegemon is an important factor, this derivation of hegemony emphasizes the hegemon's

dominant interest in providing a collective good, like stability in the international economy. As long as the benefits of providing the collective good outweigh the costs, the hegemon may be willing to bear the majority of the burden for its provision.

As a hegemonic leader, the United States has often taken unilateral action in the name of the Western alliance. Such action sets an example for allied behavior by demonstrating the hegemon's commitment to a particular issue and its willingness to bear the costs of responding to that issue. Since 1949, the United States has been willing to bear the burden of a far more comprehensive list of export restrictions than those agreed to in CoCom or restricted unilaterally by the allies. Bearing a proportionately larger burden has been used as a justification for U.S. insistence that the allies should follow suit. Such action often leads to frustration when other states do not respond in kind, but allies are even less likely to bear burdens that the hegemon is unwilling to accept. As David Baldwin argued, relaxing the grain embargo restrictions in the United States in 1980, while simultaneously demanding that the Europeans expand their export controls to the Soviet Union, greatly undermined the American bargaining position.[45]

In the case of East-West trade sanctions, the "collective good" may be defined as the international security gained by limiting Soviet, Chinese, or Cuban access to particular strategic goods. All members of the Western alliance may simultaneously benefit from this security and none may be excluded from its benefits. Sometimes, however, sanctions maybe considered unnecessary for the

provision of the "good" of international security. In this case, the trade-off between their disputed benefits and the costs of the sanctions may become unacceptable to the allies -- even though the hegemon is carrying the majority of the burden itself! In other words, the value of the inducement may be context specific. For it to have the desired effect the bribe, so to speak, must be in an appropriate currency.

The "value" the allies place on the burden born by the hegemon is dependent on their belief that this burden is both an appropriate and effective means for achieving the desired collective good. Since 1953, the appropriateness of economic controls as a means of controlling the economic and military growth of the Soviet Union has been a matter of dispute within the Western Alliance. Furthermore, as recently as 1982, all of the allies have condemned the unilateral extension of U.S. export controlled to firms acting within outside of the United States. Given this interpretation, the allies were not willing to bear the economic and political costs of U.S. regulations. As will be demonstrated in the following two chapters, the maintenance of international security does not provide a sufficient "good" to induce continued allied acquiescence.

Hegemony as Dominance in World Politics

A second set of hegemony theorists argue that the hegemon need not provide a collective good to influence other states. By virtue of its economic and military superiority, the hegemon is able to coerce or, in essence, tax subordinate states in order to ensure compliance. Following March's "basic force" model in

which outcomes reflect the capabilities of actors, a hegemon, by virtue of its preponderance will be able to favorably influence the outcome of any bargaining situation.

Taking this theory to its logical, though unlikely, conclusion, Robert Gilpin argues that military resources are the ultimate determinant of all bargaining among states. Military capability is the ultimate source of power. While "the bargaining among states and the outcomes of negotiations are determined principally by the relative prestige of the parties involved; behind such negotiations there is the implicit mutual recognition that deadlock at the bargaining table could lead to decision on the battlefield."[46]

Despite pervasive acceptance of the assumption that military power is the *ultimo ratio* in international relations, this proposition is both theoretically and empirically limited. Its primary weakness results from a failure to consider the potential impact of power resources in terms of the specific context and situation in which they are to be used. Power resources may not be completely fungible. A state which is powerful in one issue area, such as military technology, may not be able to "convert" its military power into control over outcomes in other issue areas, such as trade policy. Knorr has attempted to get around this problem by distinguishing between actualized and putative or potential power. Knorr explains any "paradox of unrealized power" in terms of a state's ability to convert potential power into actualized power or its unwillingness to do so.[47] While highlighting an important problem, this proposition can never be disproved. As a result, it is not

particularly useful.

Issue Specific Hegemony

By relaxing the assumption that military power is necessarily useful for achieving one's ends in all issue areas, the "paradox of unrealized power" can be explained far more easily. Criticizing the earlier approach, Lasswell and Kaplan argue that:

> Failure to recognize that power may rest on various bases, each with a varying scope, has confused and distorted the conception of power itself, and retarded the inquiry into the conditions and consequences of its exercise in various ways.[48]

Disaggregating the general concept of hegemony as world dominance into hegemony as dominance in particular issue areas may help to expand the predictive capability of this concept.[49] An issue area specific analysis of hegemony offers several distinct advantages over the aggregate analysis of economic and military resources. In exchange for a little parsimony, the predictive capacity of this approach may be greatly expanded by highlighting particular resources which may be useful in achieving a specific objective and discounting those which are not.

Following the advice of Lasswell, Kaplan and Keohane, it may be useful to interpret hegemonic dominance in a particular issue area or sector. Defining hegemony in this way makes many of the predictions about successful U.S. influence in the Western alliance converge with those based on dependence,

discussed above. This is useful because it highlights the relationship between certain properties generally associated with "hegemony" and the dependence of other states on the hegemon.

Issue-specific analyses of hegemony are, however, still potentially misleading. They infer the actions of others based on the characteristics of one state rather than analyzing the relationships among the actors and imply, therefore, that only a "hegemon" is likely to influence others successfully. While the large consumer market and relatively productive industrial sectors characteristic of a hegemon may engender dependence from other states, emphasizing the dependence relationship between the actors involved rather than the hegemony of one of them highlights the fact that dependence is a two-way street and that the hegemon may be dependent upon others in the system. For example, in 1987, despite U.S. "hegemony" in the international computer industry the Japanese company Toshiba, was able to mitigate the threat of U.S. sanctions against it due to the American military's dependence on computer chips jointly produced by Texas Instruments and Toshiba in Japan. (This case is discussed in Chapter 5).

Hegemony within a particular sector may be defined in terms of two factors. The first is the possession of technological knowledge and the disproportionate production of technical components in a given industry. This factor emphasizes the importance of technological superiority within a particular industry. Dominance in a particular sector may serve as a source of political power. But it will only be an effective source of political power if other actors are dependent on the resources

that particular industry produces. If alternate suppliers of its products are available, potential political power resulting from technological superiority may be completely undermined. The second factor concerns the relative size of a state's consumer market in a particular sector. A large domestic consumer market has two implications, the value of which are also a function of other's dependence on that market. First, the more local industries can rely on the domestic market for their livelihood, the less important access to foreign markets will be for firms in that sector. Second, if the domestic consumer market represents a large proportion of the world consumer market, then access to that market is relatively important to foreign firms. The larger the relative size of the market, the more dependent foreign firms will be on access to it and the more influence the hegemon may be able to induce by promising increased or threatening decreased access to it. However, again, the size of the American market is not the only factor. If alternate markets are available, threatening to cut off access to the American consumer market, no matter how large, may not increase U.S. influence over firms operating abroad. Firm dependence on American suppliers and the American market, rather than the relative number of these suppliers or size of its market, is a source of political power.

Interpreting U.S. actions in terms of dependence rather than issue-specific hegemony has several interesting implications for the current debate on the relative decline of U.S. hegemony in world politics. For example, it has been argued that the Japanese development of advanced consumer electronics, such as the Digital

Audio Tape (DAT), well in advance of any American competitor is a symbol of American decline. Judging this event considering the first factor alone, technological dominance, one could reach a similar conclusion. If the second factor, the relative size of the U.S. consumer market, is considered, however, the conclusion must be reconsidered. The Japanese first produced the DAT and are likely to dominate its production in the near future. However, Japanese firms do not control the form of the DAT or the standards by which it will be produced. These functions are determined by the standards set in the U.S. consumer market. Furthermore, not only are the products designed and redesigned to fit the specifications of U.S. regulators, continued access to the U.S. market is crucial for the Japanese firms to achieve the economies of scale necessary to market the DAT profitably. Threats to restrict the flow of technological knowledge or technological components from the United States to Japan may not gain the U.S. any leverage in this case. However, threats to restrict access to the U.S. market will be taken very seriously and provide a means of exerting influence both on the firms involved and their government.

While this may not be worth the political costs at the present time, it is a current example of the implications of the theories that will be tested through an analysis of European reactions to U.S. export control policy below.

C. Evaluation of Existing Theories

The hypotheses drawn from Realist theories of international relations discussed above are useful, but are often over-predictive. All three sets of theories present systemic analyses of international relations. As a result, each one ignores the dynamic nature of the relationships among the actors in international politics. Most importantly, each one treats dependence and interdependence as byproducts of state interaction and underemphasizes the effect of dependence among states and firms on the successful exercise of political influence.[50] The explanatory power of each of the arguments and hypotheses above can be improved if they are expanded to take the interdependent relationships among actors in international politics into account.

Interpreting the relations among states in terms of dependence relationships has several advantages over traditional conceptions of international politics in terms of external threat and the distribution of resources among them.[51] First, interdependence emphasizes the interconnectedness of state action. It emphasizes that these links and the number of alternate options a state has are as important a source of political power as the actual resources it possesses. Furthermore, it allows for the fact that these links may include the control of transnational resources and the possibility that several states may exert control over them. Traditional conceptions of the territorial state and state power overlook these links and their use as sources of political influence.

Second, interdependence underscores the fact that influence attempts may be

reciprocal. Despite possession of a preponderant amount of economic and military resources, the United States may not always choose to extend its controls unilaterally. As will be discussed below, the United States has granted exceptions to its general policy or sought to establish a compromise agreement with host country governments in order to avoid the diplomatic costs of antagonizing an ally. The dependence of firms and states on others may be used by all states as a source of political influence to some degree. The implications of this argument are that despite its continued dominance in both the world economy and in world politics, the growth of alternate markets and sources of supply in other countries, such as Germany or Japan, will limit United States influence and may result in its increased dependence on others in particular areas. This again indicates the importance of taking the context of interaction into account when evaluating the outcome of a particular event.

V. Conclusion

National efforts to control actors and resources across international borders challenges the sovereign autonomy of nation-states in international politics. The extension of American export control regulations abroad, against the interest of its allies, defies the sovereign integrity of these states by undermining both the legal and physical and political control of actors and resources within their territories. Traditional arguments of alliance dynamics and political influence fail to explain

variations in the U.S. government's ability to implement its export control policy abroad successfully.

These theories provide insufficient explanations of state and firm behavior because they treat dependence as a byproduct of state action and underestimate the affect of dependence on political power and influence. Evaluating state and firm behavior in terms of dependent, and interdependent, relationships bolsters some of the predictions from theories that link hegemony and political power. At the same time, emphasizing dependence highlights aspects of state interaction and political power these theories cannot explain. As a result, hypotheses based on firm and state dependence provide a fruitful addition to the study of state interaction and political power in international politics.

In the next chapter, the variables of success, dependence, and hegemony are operationalized. Proposed and competing arguments of political power are then tested against 47 American influence attempts since 1949 using statistical analyses. Chapters 4 and 5 supplement the statistical analyses with a detailed comparative study of two sets of cases in the 1980's. The cases demonstrate that United States' attempts to assert its export control policy abroad are most likely to succeed if actors in the industrial sectors affected by the policy are dependent on access to American suppliers or American consumer markets, regardless of U.S. hegemony or the presence of an external threat to the alliance.

Table 2.3: Proposed Hypothesis

Proposed Hypothesis: Interdependence and Influence

H_1: *Country A is far more likely to be able to extend its control over economic and security resources within the territory of another country (B) when the resources in country B involve industrial sectors that are dependent on technical assistance from country A's firms or access to A's markets than it is when those resources do not.*

Table 2.4: Competing Hypotheses

A. Hypotheses Based on External Threat

H_2: *As the security threat from an opposing Superpower diminishes, alliance cohesion will diminish. The allies will be more willing to challenge infringements on their sovereign autonomy for the sake of the alliance or alliance leader and, as a result, successful implementation will be less likely.*

B. Hypotheses Based on System Polarity and of Hegemony

H_{3a}: *As the international system becomes multipolar, the influence of the two dominant states over others in the system will diminish. The extension of regulations abroad by the dominant states are less likely to be tolerated and implementation less likely to be successful in a multipolar world than in a bipolar one.*

H_{3b}: *As a state's economic or military hegemony declines its ability to entice or coerce others into doing its bidding declines as well. American attempts to implement its export control policy abroad against the interests of host countries and their firms are less likely to succeed as its hegemony declines.*

Citations

1. The exclusive authority of a state over its territory has been challenged since the formation of the nation-state system in the Treaty of Westphalia in 1648. Since the early 1800's, the European powers and the United States have asserted extraterritorial rights in China, the Ottoman Empire, Egypt, and areas of the Persian Gulf. See Stephen Krasner, "Sovereignty: An Institutional Perspective," *Comparative Political Studies*, 21, 1 (April 1988).

2. Through the Coordinating Committee on East-West trade, CoCom members have agreed to control a wide variety of "strategic goods." The cases discussed below involve severe conflict and divergent of opinion among the CoCom members, but should not be taken as an indicator that mutual interest in the controls did not exist or that all cooperation among the CoCom members was coerced. See: Kenneth Abbott, "Collective Goods, Mobile Resources, and Extraterritorial Trade Controls," *Law and Contemporary Problems* 50, (Summer 1987), pp. 118-119. For a discussion of the policy implications of U.S. export-import policy and its application abroad, see: U.S. Congress, Panel on the Impact of National Security Controls on International Technology Transfer, Committee on Science, Engineering, and Public Policy, National Academy of Sciences, *Balancing the National Interest: U.S. National Security Export Controls and Global Competition* (Washington, D.C. National Academy Press, 1987); Kevin Cahill, *Trade Wars* (London: W.H. Allen, 1986), and J.G. Castel, *Extraterritoriality in International Trade* (Toronto: Butterworths, 1988).

3. In July of 1984, a compromise on trade policy was reached in the multinational Coordinating Committee on East-West trade (CoCom). The U.S. agreed to shorten the lists of high technology products restricted by CoCom regulations in exchange for allied agreements to enforce the remaining export restrictions more stringently. This compromise was followed by a revision of U.S. export-import control policy through the 1985 Export Administration Amendments. The new policy specifically addressed such issues as the sanctity of contracts, which had been a source of extreme tension between the U.S. and Europe since the 1981-82 conflict over the trans-Siberian Pipeline, but, as became evident during Operation Exodus, it did not limit the continuing application of U.S. regulations abroad in other areas.

4. The specific point at which American hegemony began to decline, or whether or not it has declined relative to other nations, is a matter of dispute. Several prominent proponents of theories of hegemonic stability argue that U.S. hegemony declined in the late 1970's and 1980's relative to both Europe and Japan.

For example, see: Robert Gilpin, *The Political Economy of International Relations* (Princeton: Princeton University Press, 1987), and Stephen Krasner, "State Power and the Structure of the International Trading System." *World Politics* 28 (1976).

5. For a discussion of threat perception, see: Stephen Walt, *Origin of Alliances* (Ithaca: Cornell University Press, 1987).

6. See: Kenneth Waltz, *Theory of International Politics* (Reading: Addison-Wesley, 1979).

7. Realists define the state primarily in terms of its control over both the tangible and intangible resources within its territory. Autonomous, sovereign control of these resources is a primary sources of state power and wealth. The Institutionalist paradigm emphasizes the interactive effect of rules, norms and institutionalized practices on state interests and behavior. Interests and actions cannot be fully understood without analyzing the institutional context in which the interests were formed and the actions took place. In international politics, the interaction of states can only be understood against the background of the constraints and opportunities provided by the practice of sovereignty. Internationally, sovereignty refers to the authority claims of a particular state as linked to international institutions and the practices of other states. This authority defines the state and enables it to interact with others.

For examples of the Institutionalist, "Neo-Institutionalist," "Reflective," or "Grotian" perspective, see: Hedley Bull, *The Anarchical Society* (New York: Columbia University Press, 1977); Friedreich Kratochwil, *Rules, Norms and Decision* (New York: Cambridge University Press, 1989); Friedreich Kratochwil and J. Girard Ruggie, "International Organization: A State of the Art on the Art of the State," *International Organization* 40 (1986); Oran Young, *International Cooperation: Building Regimes for Natural Resources and the Environment* (Ithaca: Cornell University Press, 1989); and Robert Keohane, "International Institutions: Two Approaches," *International Studies Quarterly* 32 (1988); Stephen Krasner, "Sovereignty: An Institutional Perspective," *Comparative Political Studies*, 21, 1 (April 1988); and Stephen Krasner, *Structural Conflict: The Third World Against Global Liberalism* (Berkeley: University of California Press, 1985).

8. Similar debates concerning the autonomy of the state and the extent of congruity between the state and its environment have been of central concern to theorists arguing about the evolution of the state and the role of the state relative to society. These debates have generally been framed in term of statist v. pluralist arguments. The argument developed in this project accepts a modified statist view arguing that a state can control societal actors within another state's territory. For a

summary of current debates in the field, see: Stephen D. Krasner, "Approaches to the State: Alternate Conceptions and Historical Dynamics," *Comparative Politics* (January 1984), pp. 223-246.

9. Keohane uses the Coase theorem to demonstrate that states will cooperate in the formation and maintenance of international regimes in order to mitigate the transaction and information costs of interacting under anarchy. See: Robert Keohane, "Demand for Regimes," in Stephen Krasner, ed., *International Regimes* (Ithaca: Cornell University Press, 1983).

10. Thomas Schelling, *Strategy of Conflict* (Cambridge: Harvard University Press, 1960), p. 5; also cited in Helen Milner, "The Assumption of Anarchy in International Relations Theory: A Critique," *Review of International Studies* 17 (1991), pp. 67-85.

11. See the chapter on system dynamics by Robert Jervis in: Paul Lauren, editor, *Diplomacy: New Approaches in History, Theory and Policy* (New York: Free Press, 1979).

12. See Raymond Duvall, "Dependence and Dependencia Theory: Notes Toward Precision of Concept and Argument," *International Organization* 32 (Winter 1978), pp. 61-68; Robert Keohane and Joseph Nye, *Power and Interdependence: World Politics in Transition* (Boston: Little, Brown, 1977); Thomas Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966). For a discussion of the concepts of dependence and interdependence see: David Baldwin, "Interdependence and Power: A Conceptual Analysis," *International Organization* 34, 3 (Autumn 1980), pp. 471-506.

13. For a discussion of this point, see David Baldwin, "Interdependence and Power," pp. 481-486. Also see: Albert Hirschman, *National Power and the Structure of Foreign Trade* (Stanford: University of California Press, 1945, 1980); and Kenneth Waltz, *Theory of International Politics* (Reading: Addison-Wesley, 1979).

14. See David Lake and Scott James, "The Second Face of Hegemony," *International Organization* 43, 1 (1989).

15. See: Helen Milner, *Resisting Protectionism* (Princeton: Princeton University Press, 1988).

16. See: Stephen Krasner, "Sovereignty: An Institutional Perspective," *Comparative Political Studies* 21, 1 (April 1988).

17. Helen Milner, "The assumption of anarchy in international relations theory: a critique," *Review of International Studies* 17 (1991), p. 82, and several discussions regarding this paper in the Summer of 1989. De Gaulle's assertions of French sovereign autonomy over early attempts to expand European integration support this proposition. French actions demonstrated the fragility of the "spill over" effect foreseen by functionalists such as David Mittrany and Paul Taylor by showing that even mutually profitable regional integration was limited by the sensitivity of governments to relinquishing authority to other actors or institutions. For an interesting discussion of the failure of functionalism and the potential for a neo-functional approach, see Ernst Haas, *The Uniting of Europe*, op. cit.

It is interesting to note that this argument about interdependence fits with Baldwin's definition and is very similar to the propositions of systems theorists concerning the intended/unintended consequences of state action within the international system. See Jervis, "Systems . . " in Lauren, ed. *Diplomacy: New Approaches in History, Theory and Policy*, and chapter 1 in Jervis, *Perceptions and Misperceptions in International Politics*, (Princeton: Princeton University Press, 1976).

18. Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Knopf Press, 1966), p. 301.

19. Hans Morgenthau, *Politics Among Nations*, p. 301.

20. Raymond Vernon, *Sovereignty at Bay* (New York: Basic Books, 1971), p. 232.

21. There is a fundamental conflict between the rather static conceptions of the state characteristic of traditional realist analyses, and the high degree of mobility and interdependence of economic and security resources in international politics. Defining a state in terms of authority within a set territory severely limits the analysis of state power and authority beyond its territory and within other states. Since the early 1800's, the European powers and the United States have asserted extraterritorial rights in China, the Ottoman Empire, Egypt, and areas in the Persia Gulf. The extent and limitations of state power and national sovereignty should be evaluated in terms of the interpretations and actions of other states. As Hans Morgenthau argues, a strictly legalistic interpretation of sovereignty is not particularly useful. As John Ruggie argued, on an international dimension, sovereignty refers to the authority claims of a particular state as linked to

international institutions and the practices of other states. This authority defines the state and enables it to interact with others. Regardless of the letter of the law or international agreements made on the legal boundaries and limits of state action, states will and can extend their authority as far as other states will permit that action to go. For an institutionalist debate on this subject, see: Stephen Krasner, "Sovereignty: an Institutional Perspective," *Comparative Political Studies* 21, 1 (April 1988).

22. *Schooner Exchange v. M'Faddon*, 11 U.S. (7 Cranch) 116 (1812). Also cited in: A. D. Neale and M. L. Stephens, *International Business and National Jurisdiction* (Oxford: Claredon Press, 1988), p. 12.

23. Emphasis added. A.D. Neale and M.L. Stephens, *International Business and National Jurisdiction*, p. 12.

24. A.D. Neale and M.L. Stephens, *International Business and National Jurisdiction*, p. 13.

25. Raymond Vernon, *Storm over Multinationals* (Cambridge: University Press of America, 1977), p. 177.

26. As early as 1949, the allies agreed that restricting the export of certain strategic goods was a prudent response to the threat of a Soviet military buildup and potential military aggression. The Coordinating Committee on East-West trade was formed by multilateral agreement to monitor alliance trade with the East. Virtually from its inception, however, the allies have disagreed on the number of items that should be restricted, what items should be added or taken off the embargo lists, and the means of enforcing CoCom policies. For example, independent Soviet production of the hydrogen bomb in the 1950's was interpreted by the United States as an indicator that existing export controls over strategic items to the Soviet Union were not sufficient and needed to be more strongly and more widely enforced. European states, on the other hand, interpreted the same event as an indication that the export embargo was an ineffective and inappropriate means of restricting Soviet military development. As a result, their reliance on this component of the alliance as a means of furthering their security was completely undermined. Over time, divergence on this issue has increased and European dependence in this area has decreased. Rather than unifying force within the alliance, disagreements over the threat of Soviet aggression and how best to respond to it have been a continual source of alliance conflict and dispute. In the language of Ernst Haas, a goals-means nexus was not achieved; the alliance partners agreed neither on the goals the alliance was to pursue nor the appropriate

means of doing so. See: Gunnar Adler-Karlsson, *Western Economic Warfare, 1947-1967* (Stockholm: Almquist and Wiksell, 1968), and Ernst Haas, "Why Collaborate? Issue-Linkage and International Regimes," *World Politics* 32 (April 1980), pp. 357-405.

27. In the study of international relations, the concept of interdependence has varied over time and across the discipline of political science. For an interesting review of the history of the concept, see David A. Baldwin, "Interdependence and Power: A Conceptual Analysis;" and Robert Keohane and Joseph Nye, "*Power and Interdependence Revisited*," *International Organization* 41, 3 (Autumn 1987).

28. Raymond Vernon, *Sovereignty at Bay* (New York: Basic Books, 1971), p. 232.

29. Power may be defined in Dahl's terms as the ability to get someone to do something he would not otherwise do. Defined as such, the exercise of power exchange may be characterized by the its scope, domain, and weight. Counter to Gilpin's conception, power is context rather than resource specific. Politics may be defined as any persistent pattern of human relationship that involves power, rule or authority. Economics, like politics, involves a social relation. Economics may be defined as all aspects of social life involving the production and consumption of wealth that is measurable in terms of money. Economics is inherently political, and conversely, the interruption (or formation) of economic processes (such as trade or monetary relations) may serve as a power base or may be manipulated as a means of exercising power.

30. See Albert Hirschman, *National Power and the Structure of Foreign Trade*; A. Rapoport, T. P. Hopmann, Nash, Walton and McKersie have all applied similar reasoning to the game theoretic analysis of asymmetrical preferences or information. See for example: A. Rapoport, *Two Person Game Theory* (Ann Arbor: University of Michigan Press, 1969), and T. P. Hopmann, "Asymmetrical Bargaining."

31. See: Robert Keohane and Joseph Nye, *Power and Interdependence*, op. cit. The immediate loss from the termination of trade is much greater than the ultimate loss after resources have been reallocated. While modern trade theory insists that this is not necessarily true, Keohane and Nye's analysis must take into account the fact that harassed decision makers generally have short-run views and interests. Given a certain ultimate loss, the influence which one country exercises upon another through foreign trade is therefore likely to be larger the greater the immediate loss which it can inflict by the stoppage of trade.

32. For a further discussion on this point and an in depth critique of Hirschman's analysis, see Wagner, "Economic Interdependence, Bargaining, Power and Political Influence," *International Organization* (1988).

There is also a voluminous literature among power theorists concerning debates over the fungibility of power. For an example of this debate, see: David Baldwin, "Power Analysis and World Politics: New Trends versus Old Tendencies," *World Politics* 24 (1971); and Klaus Knorr, *The Power of Nations* (New York: Basic Books, 1975); and Ray, "Power Disparities and Paradoxical Outcomes," *Journal of Conflict Resolution* 12 (1986).

33. The United States government invoked both the of these arguments to prohibit trade with North Korea, Vietnam and Cambodia, Cuba, and the Soviet Union following its crackdown in Poland. In response to the Arab boycott of Israel and the seizure of hostages in Iran, the United States justified the extraterritorial extension of its regulations on the basis of firm association with American individuals or American corporations; while its actions against Libya were applied against all firms trading in United States origin goods and technology regardless of their affiliation with American firms. See Douglas Rosenthal, William Knighton, *Chatham House Papers #17: National Laws and International Commerce: The Problem of Extraterritoriality* (London: Routledge & Kegan Paul, 1982), pp 58-59.

For a discussion of the legal and political debate surrounding these regulations, see: Kenneth, Abbott, "Collective Goods, Mobile Resources, and Extraterritorial Trade Controls," *Law and Contemporary Problems* 50 (Summer 1987); A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, 2nd ed. (New York: Matthew Bender, 1983); and Lowe, "Public International Law and the Conflict of Laws," *International and Comparative Law Quarterly* 33, 515 (1984).

34. A.L.C. de Mestral, and T. Gruchalla-Wesierski, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.* (London: Martinus Nijhoff Publishers, 1990) p. 78; A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, p. 22.

35. At least in peacetime, the relationship between threat and alliance cohesion is considered to be linear. Curiously, during wartime, the relationship between level of threat and alliance cohesion may become curvilinear. When it appears that one side in a conflict is likely to lose, the level of threat is extremely high. To minimize the cost of loosing, states may seek to bandwagon or make a separate peace, causing their alliance to fragment. For an interesting discussion of this perspective, see: Patricia Weitsman, "Alliance Dynamics in War and Peace," Ph.D. Dissertation, Columbia University, 1992.

For a general discussion of alliance formation and the relationship between

threat and alliance cohesion, see: Stephen Walt, *The Origins of Alliances* (Ithaca: Cornell University Press, 1987); Kenneth Boulding, *Conflict and Defence: A General Theory* (New York: Harper Publishers, 1962); George Liska, *Nations in Alliance: The Limits of Interdependence* (Baltimore: Johns Hopkins University Press, 1962); and Arnold Wolfers, *Discord and Collaboration* (Baltimore: John Hopkins University Press, 1962).

36. Holsti, Hopmann, Sullivan *Unity and Disintegration in International Alliances* (New York: Wiley & Sons, 1973), and Stephen Walt, "Testing Theories of Alliance Formation," *International Organization* 42, 2 (Spring 1988).

37. Stephen Walt, "Testing Theories of Alliance Formation," *International Organization* 42, 2 (Spring 1988), p. 2.

38. Stephen Walt, "Testing Theories of Alliance Formation," p. 2.

39. Ernst Haas, "Why Collaborate? Issue-Linkage and International Regimes," *World Politics* 32 (April 1980), pp. 357-405.

40. "The Spies who steal Computers," *Financial Times*, 17 May 1986, pp. I, XIII.

41. See Kenneth Waltz, *Theory of International Politics*, op. cit. There is a lively debate on whether bipolarity produces stability or instability. For a summary of these and other debates on alliance dynamics, see P. Terrence Hopmann and Ole Holsti, *Unity and Disintegration of Alliances* (New York: Wily Press, 1973); and Stephen Walt, *Origins of Alliances* (Ithaca: Cornell University Press, 1987).

42. For a discussion on hegemony and hegemonic stability see: Charles Kindleberger, *The World In Depression, 1929-39* (Berkeley: University of California Press, 1986); Stephen Krasner, "State Power and the Structure of the International Trading System," *World Politics* 28 (1976); David Lake, "International Economic Structures and American Foreign Policy," *World Politics* 35 (July 1983); Robert Gilpin, *War and Change in World Politics* (New York: Cambridge University Press, 1981); and *The Political Economy of International Relations* (Princeton, Princeton University Press, 1987).

For a critique of hegemonic stability theory due to both its poor conception of power in terms of resources and in terms of its limited empirical verifiability see: B. Russett, "The Mysterious Case of Vanishing Hegemony; or, Is Mark Twain Really Dead?" *International Organization* 29, 2 (Spring 1985); and T. McKeown, "Hegemonic Stability Theory and 19th Century Tariff Levels in Europe,"

International Organization 37 (1983).

43. The hegemon fulfills this role by acting as a counter-cyclical lender, maintaining a market for distressed goods and acting as a lender of last resort.

44. While none of the allies are likely to be excluded from enjoying a stable or secure international system, violation of a trade embargo by any state reduces the benefits it produces for all participants. When all participating states agree on the use of export controls as a means of economic warfare, the alliance dynamics are similar to the situation described in the game of Stag Hunt. All states prefer to cooperate and will do so as long as they believe that others will do the same. Success, however, requires unanimous cooperation. If any one state defects the benefits others receive for cooperating disappear. As the potential for defection and uncertainty grows, cooperation becomes increasingly difficult. In the international system, cooperation is further hampered by the high transaction costs of international bargaining and relatively scarce information.

Cooperation becomes even more difficult if the participants begin to dispute the value of the common goal or the appropriate means of achieving that goal. Under such circumstances, there are often powerful incentives pulling against cooperation, even at the expense of optimal results. Under such conditions, the Stag Hunt game degenerates into a multiple person Prisoner's Dilemma game.

For a general discussion of this version of hegemonic stability theory, see: Charles Kindleberger, *The World In Depression, 1929-39* (Berkeley: University of California Press, 1973), p. 249.

45. See David Baldwin, *Economic Statecraft* (Princeton: Princeton University Press, 1985).

46. Robert Gilpin, *War and Change in World Politics*, p. 31.

47. Klaus Knorr, *The Power of Nations*. This approach is very similar to March's "activation force" model.

48. Harold Lasswell and Abraham Kaplan, *Power and Society* (New Haven: Yale University Press, 1986), p. 85. Also see David Baldwin. "Power Analysis and World Politics."

49. As Keohane has argued, "careful disaggregation of power-resources by issue area may . . . enhance and clarify an understanding of how resources affect behavior in certain situations . . . [and] help to improve [their] predictive

capability." Robert Keohane, ed., *Neorealism and Its Critics* (New York: Columbia University Press, 1986), p. 190.

50. In the volume, *Neorealism and its Critics*, Robert Keohane argues that more attention should be paid to the concept of power and its relationship to the context of action. In an argument similar to that of the community power theorists, Keohane calls for the development of a "modified structural" approach, stating that "careful disaggregation of power-resources by issue area may help to improve the predictive capability of structural models, at the risk of reducing theoretical parsimony." This project is one response to Keohane's challenge. Rather than focusing on aggregate indices of economic and security interdependence between states, emphasis will be given to the dependence of various industries on the transborder movements of particular resources and technologies.

51. For an interesting argument promoting interdependence as an alternative structural approach to international politics, see: Helen Milner, "The assumption of anarchy in international relations theory: a critique," pp. 67-85.

Chapter 3

Allied Responses to U.S. Export Control Policy, 1949-1987

I. Introduction: Methodological Issues and Method of Analysis

This chapter provides preliminary analyses of competing arguments about the factors behind the American government's ability to implement and enforce its policies across international boundaries. The primary hypotheses presented in the previous chapter argue that economic dependence provides a source of political influence. Firm and state dependence on access to American suppliers and to the American consumer markets gives the United States' government a source of leverage over actors across international borders. Threats or promises to deny or allow access to American suppliers or to American markets have enabled the United States to implement its export control policy abroad since 1949, and can be used today as a means of pursuing other foreign policy goals.

This argument is tested in two ways. In this chapter, statistical analyses are performed on a series of allied corporate and state reactions to United States export controls from 1949 through 1987. In the following chapters, two in-depth comparative case studies are analyzed. These cases include failed U.S. attempts to stop European construction of a trans-Siberian pipeline from 1980 to 1984, and largely successful American efforts to control the movements of computer and other high-technology goods through Operation Exodus from 1981 through 1987. The statistical analyses in this chapter provide a preliminary test of primary and competing hypotheses. By illuminating the general relationship between

dependence and political power, these findings provide a justification for the more detailed comparative analyses in the following chapters. Further, they demonstrate that the cases chosen for comparative analysis are representative of extraterritorial disputes in the post-World War II era.

If the hypotheses presented above are correct in predicting when the United States will be able to implement is export control policy abroad, the statistical analyses should document the role of firm and state dependence on access to American markets and American suppliers. When states or firms are dependent on the United States, one would expect the implementation of American policy to be successful; when they are not, it should not be. This chapter argues that the actions and reactions of all states and firms throughout this period can be explained in terms of their dependence on the United States, regardless of changes in American hegemony, systemic polarity or the perception of an external threat to the alliance.

Chapter Outline

This chapter is divided into four sections. Following the introduction, section two discusses methodological issues associated with testing the hypotheses. Independent and dependent variables used in this study are defined and operationalized, and the case selection process is discussed. Section three analyzes 47 American attempts to implement its export control policy abroad. Based on these results, competing hypotheses of U.S. influence are interpreted. The final section of this chapter concludes with a summary of the findings and predictions

relative to the actual outcome of U.S. influence attempts since World War II. A synopsis of the cases used in the analysis is provided in an Appendix to this chapter.

II. Methodology

A. Variable Definitions

This dissertation provides an explanation of political influence and alliance dynamics in international politics. The principle argument developed above is that the United States' attempts to implement its export control policy abroad are more likely to succeed if actors in the industrial sectors affected by the policy are dependent on American suppliers or access to the American consumer market, regardless of U.S. hegemony or the distribution of resources. Proposed and competing explanatory factors behind the successful U.S. influence in the Western alliance include: dependence, economic and military hegemony, and host government intervention.

The Dependent Variable: Successful U.S. Influence

The dependent variable for all hypotheses to be tested is U.S. influence over states and firms operating across international boundaries. The study focuses on cases involving American attempts to implement its export control policy abroad since World War II. Successful implementation of this policy requires not only the cooperation of the multinational firms, including their foreign subsidiaries, but also

the acquiescence of the host countries within which these firms operate. A primary goal of U.S. influence attempts is to secure the compliance of allied governments and their firms with its export control policy.

U.S. influence over the actions of these actors has two components: influence over decision/policy-making, and influence over the implementation of U.S. policies regardless of an actor's policies or preferences. Through bilateral and multilateral negotiations, the United States has attempted to influence decision making of foreign actors by persuading them that its export control policy is an appropriate and necessary response to the Soviet Union and other target states. When these efforts fail, the United States' government has sought to implement its policies unilaterally regardless of others' policies or preferences. The United States seeks to prevent violations of both the CoCom controls and its own export control laws through early detection and by closely reviewing licensing applications. To supplement these efforts, it has used positive or negative sanctions to enforce compliance.

Since 1949, the U.S. government has sought to deter violators of its export control regulations by demonstrating its willingness to aggressively use criminal and Administrative sanctions available under the Trading with the Enemy Act of 1917, and the Export Control Act of 1949. In each of the cases chosen for analysis, diplomatic persuasion and early detection efforts have failed and the U.S. government has attempted to enforce its embargo policies against will or current policy of the countries and firms involved.

Operationalization of Success

Success involves the ability of the United States to implement and enforce its policies abroad. This includes the ability to implement its policies as desired, and the ability to punish actors that fail to cooperate. U.S. influence is treated as a dichotomous variable. U.S. influence over actors operating abroad will be considered "successful" when the items it is seeking to control are not exported by the firms or countries in question, regardless of public statements or legislation reflecting discontent. American efforts to control these actors will be considered "unsuccessful" when the items the United States seeks to control are exported to third parties.

U.S. influence over allied governments will also be considered "successful" if, when a violation is detected, the American government is able to punish the firm or individual that violated its policy. Even though this implies that U.S. export control regulations have been breached, the ability to inflict punishment requires the cooperation of host-country governments and represents acceptance of U.S. authority within their borders. If host governments grants legitimacy to the actions of a wayward firm by intervening to prevent the United States government from imposing a fine or other punishment on the firm, the U.S. enforcement actions have failed. If, however, the host country government allows the United States to inflict penalties for non-compliance on firms operating abroad, then the host country government has consented to U.S. authority and granted legitimacy to U.S. actions. In this case, U.S. influence attempts will be considered to be successful.

Unique Characteristics of the Dependent Variable

These definitions of success and failure accept a limited, instrumental interpretation of state behavior. They are not intended, however, to minimize the importance of symbolic action. As David Baldwin argues in *Economic Statecraft*, "When a state -- especially a powerful state -- goes out of its way to clarify its values and intentions for others, such actions are neither frivolous nor pointless."[1] Symbolic action in the form of diplomatic protest, bilateral and multilateral negotiation, legal action or the imposition of blocking legislation will be interpreted as an indicator of state preferences and diplomatic positions. Focusing on an instrumental definition of success and failure does not neglect the role of symbolic actions; rather, it enables the analysis of specific influence attempts in terms of the conflict of interests the symbolic actions represent.

The majority of research and writing about the use of economic sanctions focuses on the effects the sanctions have on a particular adversary. In particular, most of these studies have focused on the American government's use of economic statecraft as a means for changing the policies of target states like the Soviet Union, the People's Republic of China or Cuba. These studies have debated at length the multiple objectives and qualified effectiveness of various embargoes.[2] At a minimum, the inferred objective of this economic statecraft has been to do "something that at least serves as a clear signal to everyone that what the receiving [i.e., target] nation has done is disapproved of."[3]

This project also focuses on American use of the supply and influence

effects of trade to achieve instrumental economic and political objectives and it uses East-West trade policy to demonstrate its arguments; however, it focuses on very different targets and objectives. It is important to note these differences. The primary U.S. objective in the cases discussed below is assumed to be the implementation of its own embargo policies, rather than the ultimate effect their implementation will have on the targeted state. Signaling discontent is not sufficient to achieve this objective. When a state is unable to entice or coerce others to participate with a particular policy, it may attempt to pursue its policy without their support. Rather than merely signaling its discontent when allied cooperation is not forthcoming to the extent it desires, the United States has often attempted to implement its policies unilaterally. The eventual outcome or effect the strategic embargo and export controls have on the Soviet Union, Cuba or other target states is not of immediate concern; rather, the focus of this project is on power relationships within the Western alliance as reflected in the successful implementation of U.S. regulations abroad despite a lack of allied support. Uncovering the sources and limitations of U.S. power in these cases will demonstrate the implications of dependence on political power for all states in international relations.

The Proposed Independent Variable: Dependence among States and Firms

The primary independent variable in this project is dependence among firms and states. Dependence is interpreted in terms of the costs of foregoing a particular

relationship. The more costly it is for an actor to forego a particular relationship, the more dependent the actor is on the maintenance of that relationship. Treating dependence in terms of the costs of foregoing a relationship highlights the links between dependence and political power.

Hirschman argues that the party which values a particular trading relationship less will suffer proportionately less from its termination and will, consequently, be able to exercise proportionately more influence over the other party.[4] While all states are "sensitive" to the termination or commencement of trade, in Keohane and Nye's terms, their degrees of "vulnerability" to these changes vary. A state which can respond to and compensate for the termination of an agreement is considered less vulnerable than a state that cannot do so.[5] The more vulnerable a state or firm becomes to the termination of an agreement, the greater the potential influence resulting from the threat of its termination by another party.

The costs associated with terminating a trading relationship with the United States are a function of two factors: the relative proportion of trade an actor conducts with the United States, and the availability of alternate trading partners. If a large proportion of firm trade is conducted with the United States, terminating those trading arrangements will be costly. If a firm conducts only a small proportion of its trade with the United States, then terminating those trading arrangements will not be as costly. If the costs of terminating a trading relationship with the United States are greater than the costs of participating in the embargo, then participation in the embargo is likely. The costs of terminating such a

relationship may, however, be minimized if alternate trading partners can be found.

As discussed in Chapter 2, the availability of alternate suppliers and alternate markets for a specific good can be interpreted as a function of the concentration of trade among all potential producers and consumers. If every country exported or imported the same amount of a particular good, then that good could be purchased or sold anywhere. The concentration of markets and suppliers would be zero. If, however, only a few countries exported or imported a particular good, then the good could only be purchased or sold to them. The more concentrated the exports or imports of a particular good, the fewer the number of alternate markets or suppliers. In the case of a monopoly of production and export, or of monopsony and import, no alternate suppliers or markets would be available and all suppliers would be concentrated in one country.

Dependence as a function of relative dominance of American exports or imports and the concentration of world exports or imports is summarized in Table 3.1.[6]

Table 3.1: Dependence as a Function of Trade Concentration

Concentration of World Trade (Exports, Imports)	Proportion of U.S. Trade (Exports, Imports)	
	Low	**High**
Low	Low dependence	High sensitivity but low vulnerability to dependence on US
High	High vulnerability to dependence on others	High vulnerability to dependence on US

Firm and state dependence can be further broken down into dependence on access to markets and on the supply of certain goods. If both dependence on markets and on supply is low, then restricting access to American markets or suppliers will have little effect on state or firm action. Conversely, if dependence on both is high, then restricting access to American markets or suppliers should have a strong effect on both state and firm action.

An interesting variety of results are possible when dependence on supply does not coincide with dependence on market access. States and firms value dependence on markets and dependence on supply differently. National governments are more likely to acquiesce to American control when the supply of certain goods is threatened than when market access is restricted, especially when those goods or technologies are related to a state's national security. In contrast, firms will often attempt to develop alternate sources of supply when access to

traditional suppliers is restricted. As demonstrated by the actions of several firms in both the pipeline case and Operation Exodus, discussed above, firms are often willing to develop them internally when alternate external suppliers are not available. Alternate markets are, however, even more difficult to develop than finding alternate sources of supply. While national governments appear to be less concerned about access to foreign markets for their firms than the supply of goods they cannot obtain elsewhere, firms are more protective of market access than supply.

Firm and state reactions to U.S. initiatives against their interests are summarized as a function of dependence on market access and dependence on supply in Table 3.2.

Table 3.2: Successful Implementation as a Function of Dependence

Dependence on Supply	Dependence on Market Access	
	Low	**High**
Low	Firm defiance, host government intervention	Firm compliance, host government indeterminate
High	Firm indeterminate, host government acquiescence	Firm compliance, host government acquiescence

Operationalization of Dependence

Each set of equations is estimated twice. The first set of analyses relies on data compiled from a detailed study of individual case histories. These data use the perceptions of corporate and national decision makers to determine firm and state dependence on American markets and American suppliers. In this data set, dependence is coded dichotomously as High or Low; all other variables remain the same. A summary of these cases is provided in an Appendix to this chapter. The second set of analyses uses a combination of the proportion of an actor's trade and the Hirschman-Herfindahl concentration index to calculate an objective measure of dependence on the United States. Comparing the results from these two data sources enables the researcher to evaluate the predictions based on aggregate analyses of trade flows against the perception of the actors themselves.

The first set of analyses treats dependence on access to the American consumer markets (Market1) and dependence on the supply of resources from American sources (Supply1) as dichotomous variables. Firm and state dependence is either high, (Market1, Supply1 = 1) or low, (Market1, Supply1 =0). These values are derived from a combination of interviews and subjective analyses of individual firm and state actions in response to U.S. influence attempts since 1949. A synopsis of several case histories is provided in an Appendix to this chapter.

The second set of analyses estimate dependence as a function of aggregated trade flows between countries and firms in particular industries. World trade data are gathered from both United Nations and the Organization for Economic

Cooperation and Development publications. Three digit Standard International Trade Classification (SITC) codes are used to break down trade pattern by industry. As will be discussed below, the results from these two sets of analyses are very highly correlated, indicating that the aggregate indicies provide a good indication of national and corporate perceptions of dependence.

As presented in Table 3.1, dependence is a function of two factors: the proportion of trade accounted for by the United States, and the availability of alternate suppliers. The proportion of a country's exports in a particular industry, (P_x), that are accounted from by the United States is an aggregate indicator of reliance on access to the American consumer market. Similarly, the proportion of a country's imports in a particular industrial sector that come from the United States, (P_m), is an indicator of reliance on American suppliers. The validity of this indicator is based on the assumption that firms and states in question are dependent on external, rather than domestic, markets and suppliers. To verify the validity of this assumption, the perceptions of corporate and national decision makers regarding their dependence on foreign trade, especially trade with the U.S., are used to create a second set of estimates regarding firm and state dependence. Comparing the results from these two data sets, below, demonstrates that the assumption is valid and that aggregated indicators of dependence provide a good approximation of decision makers perceptions of their dependence on external suppliers and markets.

An actor's proportion of trade with the United States (P_m, P_x) may range from zero to 100%. If the proportion of trade is low, the actor does not rely

heavily on U.S. suppliers or access to the American consumer market. As a result, the availability of alternate trading partners is inconsequential. The actor is not dependent on trade with the United States. If, on the other hand, the proportion of trade is high, then the actor may be dependent on the United States. The degree of the actor's dependence on trade with the United States becomes a function of the availability of alternate suppliers or markets for its goods.

The second component of dependence is the availability of alternate suppliers. Albert Hirschman and Orris Herfindahl devised an index of industrial concentration which is particularly useful in this regard.[7] The Hirschman-Herfindahl index can be applied to both imports and exports of a particular firm or industry as a general indicator of the availability of alternate suppliers or markets.

The Hirschman-Herfindahl index (HH Index) of trade concentration can be characterized as:

Hirschman-Herfindahl Index of Trade Concentration

(1) $HH = \sqrt{\Sigma(\alpha_i/A * 100)^2}$

where α_i = exports or imports of each firm and $A = \sum_{i=1}^{n} \alpha_i$ and n is the number of actors

or

(2) $HH = \sqrt{\Sigma(\%\text{ world exports or imports} * 100)^2}$

The index can take over values ranging from 1/n to 100.[8] This study uses a

standardized form of the Hirschman-Herfindahl index to avoid sensitivity to the number of actors in each case. The standardized Hirschman-Herfindahl index becomes:

Standardized Hirschman-Herfindahl Index

$$(3) \qquad HH_{standardized} = \sqrt{\frac{(HH - 1/n)}{(1 - 1/n)}}$$

The standardized version of the Hirschman-Herfindahl index ranges from 0 to 100. The standardized Hirschman-Herfindahl index is equivalent to a general concentration index used widely in strategic studies.[9] Unless otherwise stated, all references to the Hirschman-Herfindahl index (HH) refer to the standardized form of the index.

The higher HH, the more concentrated the distribution of exports or imports in the international system. The value of 100 indicates the presence of a single, monopolistic country -- no alternate suppliers or markets are available; the value of zero indicates that exports and imports are distributed uniformly among all actors in the system -- alternates are readily available, no market or supplier dominates the industry. ConM represents the concentration of world imports (markets) in a particular industry, and ConX represents the concentration of world exports (suppliers) in a particular industry. For example, a value of ConM = 100 indicates that there is only one market for goods in question. Controlling access to such a market can provide a potent source of influence over actors that wish to sell those

goods.

Limitations

The Hirschman-Herfindahl index has three limitations. First, the lower bound of the Hirschman-Herfindahl index is affected by the number of actors involved in each case. The larger the number of actors, the smaller the lower limit of the index.[10] This problem is avoided by standardizing the Hirschman-Herfindahl index and incorporating insights from more general concentration indices.[11] A standardized form of the Hirschman-Herfindahl index that is not sensitive to the number of actors in each case is used throughout this analyses. The standardized form of HH index ranges from 0 to 100, but maintains all other characteristics of the non-standardized index.

Second, the value of the index can reflect a variety of different relative distributions of imports and exports among countries. For example, the value for the index may be roughly the same whether two countries account for 2/3 of the world's trade or one country possesses 1/3 and half of the remainder is divided among two other countries. As a result, it is important to interpret the concentration index in tandem with the proportion of trade accounted for by each state in the analysis. If, for example, the concentration index is high and country A is exporting 50% of the world's supply of X, B may be vulnerable to the termination of its trade agreement with country A for X. However, if countries B and C possess enough of the world's supply of X to satisfy B's needs and they are

willing to trade with B, then B's vulnerability relative to A will be small even through the concentration index is high.[12]

Third, the Hirschman-Herfindahl index is calculated using aggregate national trade data broken down by industrial sector rather than using trade data from individual firms. Many production figures, including import and export volume and levels of inter-firm trade for specific firms, are often held as proprietary information and are not accessible to the public. This is particularly true when the firms are involved in the production of goods or technology that may have implications for national security -- as do all of the cases analyzed for this project. In order to bypass this problem, the statistical analyses rely on aggregated trade data between countries broken down by standard international trade codes as provided by the United Nations and OECD publications. In addition, comparing the predictions based on these estimates with those made using the subjective analysis of firm and state dependence should highlight any discrepancies resulting from use of aggregated data.

The Hirschman-Herfindahl index also has the advantage that it may be used with grouped or incomplete data. Consequently, more specific trade data among firms can be used when available. As Hirschman points out, even when little or no individual data are accessible, the index may be used when somewhat detailed frequency distributions are available in terms of particular classes or sectors of an industry.[13]

With the measures taken to compensate for the limitations of the HH,

including using a standardized form of the index, combining its use with additional data on the distribution of trade, and complimenting the aggregated index with data based on actors perceptions of dependence; the index will be considered a reliable indicator of the availability of alternate suppliers around the globe.

Competing Independent Variables: Economic and Military Hegemony

As discussed in the last chapter, the measurement and operationalization of hegemony have been criticized and debated almost as much as the definition of "hegemony" itself. To avoid creating further debate, indicators of hegemony are adopted from current work in the field.[14] For the purposes of this analysis, hegemony is broken down into two components representing the economic and military characteristics traditionally associated with the concept.

The economic component of hegemony is defined in terms a nation's position within the international economic structure. A nation's position with the international economic structure can be operationalized in terms of the proportion of world trade accounted for by a particular country. The proportion of world trade is defined as the sum of imports to country A and exports from country A divided by total world exports and imports.

The Economic Component of Hegemony

$$(4) \qquad \text{Size} = \frac{\text{Imports to Country A} + \text{Exports from Country A}}{\text{Total World Imports} + \text{Total World Exports}}$$

This indicator is equivalent to the economic "Size" variable used by David Lake in his discussion of British hegemony at the end of the 19th century.[15] Alternatively, relative Gross National Product (GNP) or Gross Domestic Product (GDP) could be used as indicators of national size. For the purposes of this study, proportion of world trade rather than GNP or GDP was chosen as an indicator of size in order to maintain consistency among the data sources used to calculate hegemony and those used to calculate dependence. Statistical analyses using relative GNP as an indicator of economic hegemony are included in the Appendix to this chapter. The results from these analyses are comparable to those using SIZE as an indicator of the economic component hegemony.

Relative productivity is also commonly associated with economic hegemony. As argued by David Lake, however, this aspect of hegemony is difficult to operationalize as there are not accepted definitions of productivity especially when used for comparative purposes between different countries.[16] Accepting potential problems with the index, relative GNP per capita (GNPPCP) may be used as an indicator of relative productivity.[17] Despite its limitations, the economic component of hegemony is, therefore, operationalized in terms of the proportion of world trade accounted for by a particular country and the relative size of its GNP per capita.

In addition to the works of Charles Kindleberger, Stephen Krasner, David Lake and others that emphasize the economic aspects of hegemony, another school of thought emphasizes the military component of hegemony. As represented by

Robert Gilpin, this group of theorists emphasize political-military power as the primary indicator of political power and influence a state possesses in international politics.[18] Most of these studies define military hegemony in terms of a combination of the following factors: the relative number of armed forces, military expenditure, and nature of national weaponry. For the purposes of this analysis, the military component of hegemony is operationalized in terms of the proportionate size of a state's military expenditure (MILEXP) in comparison to the total military expenditure of all members of its alliance. In the Western alliance, relative military expenditure of each state is very highly correlated with the proportional number of armed forces in each state relative to the total number of armed forces in the Western alliance.[19] Using relative number of armed forces as an indicator of the military component of hegemony provides comparable results to analyses which use relative military expenditure.

The Intervening Variable: Host Government Intervention

Host government intervention is an intervening variable between dependence and implementation. Successful implementation requires the cooperation of both firms operating abroad and the national governments of the countries in which the firms operate. National governments may either challenge or acquiescence to U.S. attempts to implement its policies within their territories. If the host country's government acquiesces to U.S. policy, then firm responses and, consequently, successful implementation will remain a function of the firm's dependence of the

American market or American suppliers. Inaction or lack of specific action on the part of the host country has the same effect as acquiescence and will therefore be considered as such. The host country's government may, however, choose to challenge the extraterritorial extension of U.S. policy. On its own initiative or at the request of its firms, the host government may enact national legislation to forbid the implementation of U.S. policy initiatives. Such legislation represents an assertion of national sovereignty that can effectively negate the direct effect of dependence on the implementation of U.S. policy abroad. As a result, regardless of firm preferences, host government intervention against the United States can effectively challenge American influence attempts within its national borders.

B. Case Selection

The U.S. has asserted its authority abroad most frequently as a consequence of disputes concerning taxation, anti-trust policy and the restriction of exports of "strategic" technology. Of these issue areas, disputes over export controls have the longest historical record as well as the most serious consequences for a state's economic and military security. Therefore, this project focuses on cases involving the unilateral extension of U.S. export control policy.

Case selection and analysis follows two research strategies. First, this chapter analyzes 47 U.S. attempts to implement its export control policy abroad from 1949 through 1987. Each case is coded and analyzed in terms of the

independent and dependent variables described above. A brief summary of each case is presented in an Appendix to this chapter. Second, two sets of cases, involving conflicts surrounding the trans-Siberian pipeline and Operation Exodus, are discussed in detail in Chapters 4 and 5. Comparing the divergent outcome of these two cases in provides a more detailed explanation of the specific events which led to particular outcomes. Combining these two research strategies allows for a more detailed understanding of the implications of these cases on the exercise of political influence in international relations than either method alone.

The cases chosen for statistical analyses represent the accumulation of all cases involving U.S. export control policy for which data are available in the public domain. Data sources for both the statistical over view and comparative case studies are very limited. The United States' export control policy involves issues of national security as well as national economic policy. As a result, data from the majority of national, bilateral and multilateral negotiations surrounding these cases are confidential and not available in the public domain. Consequently, only those cases which have been discussed by other scholars or the media are available for analysis. Data on the cases were accumulated through a thorough survey of literature in international law, business and politics and the general press since 1949. Import and export data for each sector are from the January/December issue of OECD Foreign Trade for each appropriate year. All cases for which sufficient data are available are considered. The data is summarized in the appendix to this chapter.

This implies that the cases selected for analysis represents only a subset of the actual cases of American influence in the export control arena. Reliance on these data sources also means that the vast majority of cases reported in the media involve conflict. Little public attention has been given to cases in which no conflict of interest was present or where firms and other states chose not to challenge U.S. initiatives. This may cause the results to be skewed since one would expect that the greater the success of American policy, the smaller the number of cases reported and available for analysis.[20]

It is always important to consider the cases not analyzed because of the counter-factual problem -- the dog that didn't bark -- however, the available data should be skewed in a manner which challenges rather than compliments the primary hypothesis. In situations where conflicts of interest exist and are part of the public domain, states would be more likely to challenge U.S. infringements on their sovereignty than when this is not the case. As a result, using these limited data, one would expect to find a larger percentage of cases resulting in failed U.S. influence attempts than in the general population of export control cases. This trend is supported by the assumption that most unreported cases tend to favor the U.S., therefore biasing the available data against it. Consequently, it is assumed that these cases will tend to underestimate the extent of U.S. influence and can consequently be taken as valid indicators of U.S. influence when the United States is successful. They might even be considered "crucial cases" for the study of state power within the Western alliance.

III. Statistical Analyses of U.S. Influence Attempts, 1959-1987

This section presents statistical analyses of U.S. efforts to influence states and firms operating abroad from 1949 through 1987. Models of the hypotheses proposed in Chapter 2 are presented, and the expected affects of each variable in the model on the likelihood of U.S. influence is analyzed. The models are then tested using logit analyses of 47 U.S. influence attempts. Predictions from these analyses are compared with the actual outcome of the cases, and the proposed and competing hypotheses are evaluated in terms of the results. Tables presenting variable definitions, a summary of the data, and supplemental analyses are included in the Appendix to this chapter, along with a synopsis of individual case histories used in the analyses.

A. The Model

The purpose of this project is to determine the conditions under which one state can influence the activities of actors and resources across international borders. This is done by identifying the conditions under which the United States has been able to implement its export policy abroad against the interests of its allies and the firms operating within their borders. The primary hypotheses predict that U.S. influence attempts to assert its export control policy abroad are most likely to succeed if the industrial sectors affected by the policy are dependent on American suppliers or access to American markets, than if they are not; regardless of U.S. economic or military hegemony.

The general equations linking dependence, hegemony, host government intervention and success is as follows:

(5) **Success** = a + b_1 Dependence + b_2 Hegemony + b_3 Host Government Intervention + e

(6) **Host Government Intervention** = a + b_1 Dependence + b_2 Hegemony + e

Expectations are that b_1 and b_2 in equation 5 are positive and b_3 is negative. As dependence on the United States increases, the likelihood of a successful U.S. influence attempt grows. If U.S. hegemony declines, or host governments intervene on behalf of their firms, the likelihood success decreases. In equation 6, b_1 is expected to be positive and b_2 negative. Host government intervention against the United States becomes more likely as dependence decreases or as U.S. hegemony declines.

B. Specification of the Equation

Each model is calculated twice using different indicators for firm and state dependence on the United States. First, aggregate trade data within specified industrial sectors are used to estimate dependence. Firm and state dependence on the United States is estimated as a function of the proportion of trade accounted for by the United States in a particular sector (P_x, P_m), and the availability of alternate suppliers or markets in that sector. The availability of alternate suppliers and

markets is inversely related to the concentration of world exports (ConX) and the concentration of world imports (ConM). Firm or state dependence results when both the proportion of trade with the U.S. is high and the world concentration of trade is high (availability of alternate suppliers is low). Therefore, dependence is coded an a interaction term combining the effects of P_x and ConM (or P_m and ConX) is included in the equation.

Use of aggregate trade data as indicators of dependence has a potential limitation because it assumes, but does not account for, the importance of foreign suppliers and markets relative to domestic suppliers and markets. Justification for this assumption is provided above. Potential problems with relying on this assumption are avoided by estimating the models a second time using the perceptions of corporate and national decision makers to determine firm and state dependence on American markets and American suppliers.

In the second set of equations, actors perceptions of their dependence on the United States, informed from individual interviews and a detailed reading of case histories, are coded as indicators of firm and state dependence. Dependence on access to the American market, (MARKET1), and dependence on American suppliers, (SUPPLY1), are coded dichotomously as High or Low. All other variables are remain the same. Comparing the results from these two data sources enables the researcher to evaluate the predictions based on aggregate trade flows against the perceptions of the actors themselves.

U.S. hegemony is broken down into two components. The military

component of hegemony, (MILEXP), is represented by the proportion of U.S. military expenditure in the Western alliance. Other authors have used the relative size of U.S. armed forces and indicator. In the Western alliance, relative military expenditure and relative size of armed forces are, however, very highly correlated and changing the indicator does not effect the results. The economic component of hegemony (SIZE) is the combination of U.S. exports and imports as a proportion of total OECD exports and imports. The relative size of U.S. gross national product (GNPp) is an alternate indicator of the economic component of hegemony. SIZE was chosen as an indicator because it relied on the same data sources as the indicators of firm and state dependence. The relative productivity of the United States is also considered a component of economic hegemony. Relative per capita gross national product (GNPp) is used to represent relative productivity of the United States and its firm, operating at home and abroad. Estimates of the model using GNPp as an indicator of hegemony in place of SIZE are included in the Appendix.

Finally, the hypotheses argued that host government invention represents an intervening variable between dependence, hegemony and success. Host government intervention, (GOVINT), is coded dichotomously as Yes or No. Subsidiary hypotheses about the affects of dependence and U.S. hegemony are also tested. Variable definitions and a summary of the data used for the statistical analyses are located in the Appendix to this chapter. The models are fully specified in equations 7 and 8, below.

Logit Models of Success:

(7) $l_{suc} = a + b_1 \text{ MARKET1} + b_2 \text{ SUPPLY1} + b_3 \text{ MILEXP} + b_4 \text{ SIZE} + b_5 \text{ GNPPCPp} + b_6 \text{ GOVINT} + e$

Using aggregated trade data, this equation becomes:

(8) $l_{suc} = a + b_1 P_x + b_2 \text{ ConM} + b_3 P_m\text{*ConX} + b_4 P_x + b_5 \text{ ConM} + b_6 P_x\text{*ConM} + b_7 \text{ MILEXP} + b_8 \text{ SIZE} + b_9 \text{ GNPPCPp} + b_{10} \text{ GOVINT} + e$

Logit Models of Host Government Intervention:

(9) $l_{gov} = a + b_1 \text{ MARKET1} + b_2 \text{ SUPPLY1} + b_3 \text{ MILEXP} + b_4 \text{ SIZE} + b_5 \text{ GNPPCPp} + e$

Using aggregated trade data, this equation becomes:

(10) $l_{gov} = a + b_1 P_x + b_2 \text{ ConM} + b_3 P_m\text{*ConX} + b_4 P_x + b_5 \text{ ConM} + b_6 P_x\text{*ConM} + b_7 \text{ MILEXP} + b_8 \text{ SIZE} + x_9 \text{ GNPPCPp} + e$

C. Data Analysis

Implications of the Model

Analyzes of allied corporate and national reactions to United States' export control policy facilitates the determination those conditions under which one state can exercise control over actors and resources within another state's territory. It is argued that dependence among states and firms is a critical and often overlooked source of political power. The statistical analyses are used to demonstrate that dependence on American suppliers and access to American consumer markets in certain industries has enabled the United States to implement its export control policy abroad, and can be used by all states as a source of political influence.

These analyses serve as a preliminary test of competing hypotheses as well as a spring board for the comparative case studies examined in Chapters 4 and 5. If the predicted relationship between dependence and political power is found in cases ranging from 1949 through 1987, then a detailed analyses of several of the cases is justified. The comparative analyses of specific cases of success and failure illuminate the political process that links dependence with political power. The detailed comparative analysis of specific cases in Chapters 4 and 5 bolster the findings in this chapter by identifying the causal links implied by the statistical analyses. The statistical analyses, in turn, demonstrate that the cases chosen for comparative analysis are representative of U.S. influence attempts in the export control arena.

Expectations of the Results

The primary hypotheses argue that United States' influence attempts are most likely to succeed if actors in the industrial sectors affected by the policy are dependent on American suppliers or access to American markets, regardless of changes in hegemony or the distribution of global resources. Consequently, the statistical analyses of U.S. influence attempts should indicate a positive relationship between foreign dependence on American markets and American suppliers and the success of U.S. influence attempts. A subsidiary hypotheses was proposed indicating that firms respond more readily to dependence on market access, whereas states are more likely to respond to conditions of dependence on access to foreign suppliers. One would expect the models to indicate that dependence on markets access has a strong, positive effect on U.S. influence over firms. At the same time, one would expect the models to indicate that dependence on American suppliers should have a strong, negative effect on host government intervention against the United States. Finally, the hypotheses predict that the effect of American hegemony on the likelihood of success and host government intervention will be minimal.

Analysis of the Models

Maximum likelihood estimations using Logit analysis provide probability estimates for the likelihood of a successful U.S. influence attempt. Logit, rather than Ordinary Least Squared (OLS) regression analysis, is used to evaluate the data

because the dependent variable, Success, is dichotomous.[21] U.S. influence attempts are considered either successful (Success = 1) or not Successful (Success = 0). Logit analyses provide estimates of the probability that the United States will be able to influence its allies and their firms successfully, (Success = 1).

Equations 9 and 10 present the proposed model of the affects of dependence, hegemony and government intervention on success.[22] Maximum likelihood estimates of the parameters in the model are presented in Tables 3.3 and 3.4, below. Expanded models using varying indicators of dependence and hegemony are included in the appendix to this chapter.

Initial analyses indicate a strong relationship between dependent and independent variables as predicted by the hypotheses outlines above. Correlation matrices presented in the appendix indicate a large, positive relationship between all indicators of dependence (Market1, Supply1, ConM, ConX, Px, Pm, ConM * Px, ConX * Pm) and the successful implementation of U.S. policy (Success). They also indicate a large negative relationship between these indicators and the likelihood that host governments will intervene against the United States on behalf of their firms (Govint). The correlations between the independent variables is less that r = .48. This indicates that multicollinearity among the independent variables is not a problem in the models presented below.[23]

Both estimates of Successful Implementation support the hypothesis that dependence on access American markets increases the probability that the U.S. government will be able to implement its export control policy successfully. See

Tables 3.3a and 3.3b. The relationship between dependence on American markets and the success is positive in both cases. This indicates that as dependence on access to American markets increases, the probability of a successful influence attempt increases as well.

The two models show slightly different effect for firm dependence on American suppliers. The model which relies on actors perceptions to indicate dependence (Table 3.3b) predicts that increased dependence on American suppliers will have a slightly smaller, but still positive effect on the probability of a successful influence attempt. The model which relies on aggregate trade data to indicate dependence (Table 3.3a) indicates no significant effect between dependence on American suppliers and the likelihood of a successful influence attempt. This finding supports the subsidiary hypothesis that firms value access to markets more than access to external suppliers. As demonstrated by the cases discussed in the following chapters, firms will often seek to develop restricted goods internally when alternate external suppliers are not available.

As predicted, the intervention of foreign governments on behalf of their firms has a strong negative effect on U.S. influence. Findings from both models indicate that host government intervention on behalf of their firms decreases the likelihood of success. Tables 3.4a and 3.4b indicate that the likelihood of host government intervention is negatively effected by dependence on American suppliers and access to American markets. This supports the primary hypotheses that as national dependence on the United States increases, host government intervention becomes

less likely. The models also support the subsidiary hypothesis that, in contrast to firms, national governments tend to be less concerned about access to foreign markets for their firms than in securing the supply of resources that are necessary for their economic and military security. Tables 3.4a and 3.4b dependence on U.S. suppliers has a greater and more significant effect on the likelihood of host government intervention than dependence on market access.

The impact of American hegemony on the likelihood of success is mixed. The model which relies on actors perception of dependence (Table 3.3b) indicates that the military component of hegemony has no significant affect on success. The model using aggregated trade data (Table 3.3a) shows a significant relationship, but it indicates that increases in the relative size of U.S. military expenditure may be counter productive. The model indicates that increases in the relative size of U.S. military expenditure actually decrease the probability the U.S. will be able to influence firms operating abroad directly. The economic components of hegemony are mixed as well. One model indicates that relative productivity is positive, the other shows no significant relationship between relative productivity and success. However, both models indicate that the relative size of U.S. trade has a positive impact on the probability of success. This finding demonstrates the importance of U.S. producers and markets in the international trading system; as such, it supports both hypotheses linking dependence and economic hegemony to political influence.

The impact of American hegemony on the likelihood of host government intervention is more consistent. As predicted by theories linking economic and

military hegemony to political influence, increases in the relative size of U.S. military expenditures or the relative size of U.S. trade decreases the likelihood that host government would challenge the United States on behalf of their firms. Further, both models indicate that increases in relative productivity in the United States tends to increase the likelihood that host governments would intervene on behalf of their firms. This finding may appear to be counter intuitive, since theories of economic hegemony would predict that increases in economic productivity should lead to a general increase in hegemony. However, the finding is consistent with the common policy of protecting domestic firms that are not competitive against foreign competition.

Table 3.3a: Logit Analysis of Success using Aggregated Data

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	8.687	p>.10	0.557
Dependence on US Markets ConM * Px	5.400	p>.10	1.173
Dependence on US Suppliers ConX * Pm	0.0199	p>.10	0.00681
Hegemony Economic Component SIZE GNPPCP Military Component MILEXP	 70.196 2.760 -29.872	 p<.10 p>.10 p<.10	 1.621 1.109 -1.338
Government Intervention	-3.847	p<.05	-2.265
Chi Squared	15.472	p = .996	df =

Table 3.3b: Logit Analysis of Success using Actors' Perception

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	-15.634	p>.10	-0.574
Dependence on US Markets Market1	1.599	p<.10	1.339
Dependence on US Suppliers Supply1	0.920	p<.10	1.036
Hegemony Economic Component SIZE GNPPCP Military Component MILEXP	 82.272 -1.019 8.744	 p<.10 p>.10 p>.10	 1.417 -0.359 0.285
Government Intervention	-2.611	p<.05	-1.799
Chi Squared	54.561	p = .019	df=35

Table 3.4a: Logit Analysis of Host Government Intervention

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	14.913	p<.05	2.158
Dependence on US Markets ConM * Px	-2.813	p>.10	-1.137
Dependence on US Suppliers ConX * Pm	-2.195	p<.10	-1.370
Hegemony Economic Component SIZE GNPPCP Military Component MILEXP	 -24.148 2.411 -12.204	 p<.10 p<.05 p<.10	 -1.267 1.992 -1.531
Chi Squared	34.655	p = .437	df=34

Table 3.4b: Logit Analysis of Host Government Intervention

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	23.588	p<.01	2.352
Dependence on US Markets Market1	-0.982	p<.05	-1.667
Dependence on US Suppliers Supply1	-1.771	p<.05	-3.221
Hegemony Economic Component SIZE GNPPCP Military Component MILEXP	 -36.479 2.024 -19.573	 p<.10 p<.05 p<.05	 -1.354 1.960 -1.929
Chi Squared	31.680	p = .674	df=36

D. Evaluation of the Models

The models are evaluated in terms of their statistical significance and predictive capacity. Three of the four models are statistically significant. This indicates that the findings of these models may be applied to the population at large. The initial model, presented in Table 3.3a, is not statistically significant; however, since the data used in the analyses is comprised of the universe of available cases, the model may still be used as a general indicator of the likelihood the United States will be able to implement its export control policy abroad successfully. The weakness of these models is bolstered by the combination of these analyses with the more detailed comparative case studies in the next two chapters. Combining these two different methodological approaches reinforce the findings and counteract the limitations of either one when used individually.

To test the predictive value of these estimates, the predicted probabilities of success are compared to the actual outcome. In all cases, the correlation between the predicted probability and the actual outcome is high. The correlation between the probability of success estimated in the model using aggregated trade data, Table 3.3a, and the outcome is $r = .6414$ ($p<.01$). The correlation between the probability of success estimated using actors perception of dependence, Table 3.3b, and the outcome is $r = .6351$ ($p<.01$). These findings indicate the models provide good predictions of the actual outcome of U.S. influence attempts. The predictions made by two models are themselves highly correlated, $r = .5641$ ($p<.01$). This

indicates that use of aggregate trade data provides a good indicator of firm perceptions of dependence. This is particularly use, as it is often difficult to obtain the data necessary to determine actors' perceptions of dependence directly.

To test the predictive value of the models of host government intervention, the predicted probabilities of success are compared to the actual outcome. In all cases, the relationship is strong. The correlation between the probability of host government intervention estimated by the model using aggregated trade data, Table 3.4a, and the outcome is $r = .2202$ ($p>.05$). The correlation between the probability of host government intervention estimated using actors perception of dependence, Table 3.4b, and the outcome is $r = .4739$ ($p<.01$). These findings indicate the models provide good predictions of the likelihood of host government intervention. The predictions made by two models are themselves moderately correlated, $r = .5208$ ($p<.01$). This indicates that use of aggregate trade data provides a reasonable indicator of state perceptions of dependence.

The models developed in this chapter provide reliable predictions of the likelihood that U.S. influence attempts over states and firms operating abroad will be successful. The statistical analyses demonstrate that dependence on American suppliers and access to American consumer markets in certain industries has enabled the United States to implement its export control policy abroad, and can be used by all states as a source of political influence.

IV. Conclusion

Statistical analyses of U.S. attempts to implement its export control policy abroad against the interests of its allies support the argument that dependence can be used as a source of political power. The United States is more likely to implement its policies successfully in situations where the states or firms involved were dependent on American suppliers or access to American markets. Traditional indicators of economic hegemony are important as well, however, the success of virtually simultaneous American efforts varied widely despite a constant level of economic hegemony. Economic hegemony may imply increased dependence on the hegemon. It is highly correlated with the proportion of trade actors have with United States. Arguments linking economic hegemony and political power are, however, limited because they do not take the availability of alternate suppliers and markets into account. Arguments linking dependence and political power accounts for both the dominance of American trade and the availability of alternate suppliers and markets. As a result, the arguments support propositions based on theories of economic hegemony as well as interpret behavior these theories cannot explain.

The effect of the military component of hegemony on American influence has been less important than the economic component in facilitating U.S. influence since 1949, and may even be counter-productive. Increasing relative military expenditure had little effect on the majority of cases, and actually decreased the likelihood of success in several instances. This supports arguments made elsewhere that military power is not necessarily fungible and may prove to be counter productive.[24]

Firm and state perceptions of dependence matched closely to the measurements of dependence based on trade patterns in particular industries, indicating that the aggregate indicators of dependence offer a good approximation of dependence as perceived by the actors themselves. This is particularly useful since data on actors' perceptions is often limited and difficult to assess.

Dependence on access to American markets and American suppliers are good indicators of political influence over both states and firms. However, national governments and corporate decision makers respond to different forms of dependence. The statistical analyses support the subsidiary hypothesis that firms tend to value access to markets more than access to the supply of particular resources. Cases discussed in the appendix to this chapter and in subsequent chapters indicate that, when technically feasible, firms will often invest in the research and development necessary to develop internal sources of supply if external suppliers are cut off. As discussed in Chapter 6, this has important implications for the danger of exploiting foreign dependence on American suppliers as a source of political influence. The statistical analyses and subsequent cases also confirm that, in contrast to their firms, national governments tend to value the supply of resources over access to foreign markets.

Other competing hypotheses and variables like systemic polarity and the perception of an external threat to the alliance were not specifically tested in this chapter. However, the success of virtually simultaneous American efforts varied widely. Within a time span of as little as one year, the ability of the United States

to influence firms within one allied country have varied. Within such a short time frame, it can be assumed that hegemony, systemic polarity and the perception of threat to the alliance remained relatively constant. Further, the cases in the appendix and subsequent chapters demonstrate that perception of an external threat may lead to an agreement on the need for a response, but it does not provide for agreement on the appropriate means to do so. In the export control arena, the perception of threat to the alliance led initially to an agreement on the need for export controls on certain strategic items, however, the number of items to be controlled and the means to control them have been a matter of dispute within the Western alliance since 1949. Unilateral United States' taken because of this continuing lack of agreement and conflict of interest provides the basis for all the cases discussed here.

These analyses served as a preliminary test of competing hypotheses as well as a spring board for the comparative case studies examined in Chapters 4 and 5. The predicted relationship between dependence and political power was found in cases ranging from 1949 through 1987. These findings justify the detailed analyses of several cases in order to determine the causal links between dependence and political power suggested by the statistical models. The comparative analyses of specific cases of success and failure illuminate the political process that links dependence with political power. The statistical analyses, in turn, demonstrate that the actions taken in the 1980's during the Pipeline Crisis and Operation Exodus are representative of U.S. influence attempts in the export control arena. The affect of

firm and state dependence on the ability of the United States to implement its export control policy abroad in the 1980's is the subject of the next two chapter.

Citations

1. David Baldwin, *Economic Statecraft* (Princeton: Princeton University Press, 1985), pp. 96-101. See also: Stephen Kobrin, "Enforcing Export Embargoes Through Multinational Corporations: Why Doesn't it Work Anymore?" *Business in the Contemporary World* (Winter 1989), pp. 33-34.

2. See for example: Hufbauer, Gary C. and Schott, Jeffrey J. *Economic Sanctions Reconsidered* (Washington, D.C.: Institute for International Economics, 1990).

3. Johan Galtung, "On the Effects of International Economic Sanctions, with Examples from the Case of Rhodesia," *World Politics* 19 (April 1967), p. 411. Cited in Bruce Jentleson, *Pipeline Politics* (Ithaca: Cornell University Press, 1986), pp 28-29.

4. See: Albert Hirschman, *National Power and the Structure of Foreign Trade* (Berkeley: University of California Press, 1980). A. Rapoport, T. P. Hopmann, Nash, Walton and McKersie have all applied similar reasoning to the game theoretic analysis of asymmetrical preferences or information. See for example: A. Rapoport, *Two Person Game Theory* (Ann Arbor: University of Michigan Press, 1969).

5. See: Robert Keohane and Joseph Nye, *Power and Interdependence*, 2nd edition (Glenview, IL: Scott Foresman, 1989). The immediate loss of the stoppage of trade is much greater than the ultimate loss after resources have been reallocated. While modern trade theory insists that this is not necessarily true, Keohane and Nye's analysis must take into account the fact that harassed decision makers generally have short-run views and interests. Given a certain ultimate loss, the influence which one country exercises upon another through foreign trade is therefore likely to be larger the greater the immediate loss which it can inflict by the stoppage of trade.

6. For examples of additional research using trade concentrations, see: Michael Michaely, *Theory of Commercial Policy* (Chicago: University of Chicago Press, 1977).

7. A. Hirschman, *National Power*, pp. xviii-xix, 87-97, 157-162; Edward Mansfield, "The Concentration of Capabilities of International Trade," 1991.

8. The Hirschman-Herfindahl index has the disadvantage that it is effected by the number of actors involved in the survey. The lower bound of the index decreases as N increases. Other concentration indices may be used to standardize this index, however, since the number of actors remains constant throughout this analysis, the Hirschman-Herfindahl index can be used as a means of comparing concentration across cases.

9. See: James Lee Ray and J. David Singer, "Measuring the Concentration of Power in the International System," *Sociological Methods and Research* 1 (May 1973), pp. 403-437; and R. Taagepera and James Lee Ray, "A Generalizable Index of Concentration," *Sociological Methods and Research* 5 (1977), pp. 367-384.

10. For a discussion of similar insights, see: James Lee Ray and J. David Singer, "Measuring the Concentration of Power in the International System," *Sociological Methods and Research* 1 (May 1973), pp. 403-437

11. Concentration indices have been used more widely in strategic studies than in international political economy. For examples of there use, see: James Lee Ray and J. David Singer, "Measuring the Concentration of Power in the International System," *Sociological Methods and Research* 1 (May 1973), pp. 403-437; Bruce Russett, ed. *Peace, War and Numbers* (Beverly Hills: Sage Publications, 1972); Bruce Bueno de Mesquita, "Risk, Power Distribution and the Likelihood of War," *International Studies Quarterly* 25 (December 1981), pp. 541-68; and Edward Mansfield, "The Concentration of Capabilities and the Onset of War," *Journal of Conflict Resolution*, Forthcoming.

12. For a discussion of similar insights, see: Albert Hirschman, *National Power*, and James Lee Ray and J. David Singer, "Measuring the Concentration of Power in the International System," pp. 403-437

13. Albert Hirschman, *National Power*, pp. 160-161.

14. David A. Lake, "Structures and American Foreign Economic Policy, 1887-1934," *World Politics* 35 (1983). See also: Stephen Krasner, "State Power and the Structure of the International Trading System," *World Politics* 28 (1976); and Robert Gilpin, *The Political Economy of International Relations* (Princeton: Princeton University Press, 1987) and *War and Change in World Politics* (New York: Cambridge University Press, 1981).

15. David Lake, "Structures and American Foreign Economic Policy, 1887-1934," p. 543.

16. See: David Lake, "Structures and American Foreign Economic Policy, 1887-1934."

17. GDP per capita may be used in place of GNP per capita. GNP per capita was chosen because it includes earnings from U.S. multinational firms which are the primary focus of this project.

18. See: Robert Gilpin, *War and Change in World Politics*, and *The Political Economy of International Relations*; George Modelski and William Thompson, *Sea Power and Global Politics, 1494-1983* (Seattle: University of Washington Press, 1987); Charles Doran and Wes Parsons, "War and the Cycle of Relative Power," *American Political Science Review* 74 (December 1980), pp. 946-965; Alan Ned Sabrosky, ed. *Polarity and War* (Boulder: Westview, 1985); A.F.K. Organski and Jack Kugler, *The War Ledger* (Chicago: University of Chicago Press, 1980).

19. The statistical analyses were preformed using the relative size of U.S. armed forces in the place of relative military expenditure and the difference in the results was not statistically significant.

20. This caveat has been noted by several scholars researching similar issues, see: Stephen J. Kobrin, "Enforcing Export Embargoes Through Multinational Corporations: Why Doesn't it Work Anymore?" *Business in the Contemporary World* (Winter 1989), p. 34.

21. While Logit curves are not designed to maximize the "goodness of fit," they provide reliable coefficients and tend to have a higher explanatory and predictive power than OLS models when being applied to dichotomous dependent variables. Least Squares Estimations, like OLS, assume a linear relationship between the independent and dependent variables. Under this assumption, parameters for the equation are estimated so that the squared sum of the errors between the predictions made by the model and the data are minimized. Maximum likelihood estimations, like Logit, on the other hand, assume a non-linear relationship among the variables. They estimate parameters that imply the highest likelihood or probability of achieving the pattern found in the data.

For a discussion of Logit and Probit models, see: John H. Aldrich and Forest D. Nelson, *Linear Probability, Logit and Probit Models* (Beverly Hills: Sage Publications, 1984).

22. It is possible that Success at time t-1 could effect the likelihood of Success at time t. However, the time between cases varies substantially and many of the cases in the analysis take place simultaneously. As a result, incorporating a lagged dependent variable into the equation would not provide a reliable indicator of the effect of success in one case on the outcome of the next. Furthermore, the

influence attempts involve actions taken in different industrial sectors. It assumed to be unlikely that decision makers operating in one industry would necessarily be aware of, or alter there behavior as a result of, actions taken in an unrelated industry at an unspecified time in the past. For example, it is unlikely that U.S. enforcement efforts in the automobile industry in the case of Ford Motor Company of Canada in 1959 affected the decisions of IBM subsidiaries and the French Government in 1962.

23. Auxiliary regression analyses may be performed to confirm that multicollinearity among the independent variables is not a problem in this analysis.

24. See for example: David Baldwin, *Economic Statecraft* (Princeton: Princeton University Press, 1985).

Chapter 4

Alliance Conflict and the Trans-Siberian Pipeline Embargo, 1980-1984

I. Introduction

This chapter and the next supplement the statistical analyses in the previous chapter with a detailed comparative study of American attempts to influence firms and states in the Western alliance. The comparative analysis of successes and failures facilitates the identification of the causal connections between the independent and dependent variables.[1] If the generalizations of the statistical analyses in the previous chapter are correct in predicting when the United States will be able to implement its export control policy successfully, then the individual cases should document the role of firm and state dependence on access to American markets and American suppliers. When states or firms are dependent on the United States, one would expect the implementation of American policy to be successful; when they are not, it should not be. The cases are not intended to be comprehensive historical explanations of actions taken during the pipeline crisis. Each case is analyzed with the purpose of assessing the relevance of particular explanatory variables on the successful implementation of United States export control policy abroad.

The ability of the United States to control actors across international borders is analyzed during two periods: the Pipeline crisis from 1980 to 1984 and the non-crisis surrounding Operation Exodus from 1982 through 1987. These cases were chosen for both their political and theoretical relevance. Politically, blocking construction of the trans-Siberian pipeline and restricting the movement of high

technology goods and information through Operation Exodus were both centerpieces of the Reagan Administration's policy of economic Cold-Warfare against the East bloc. Yet, efforts to block construction of the trans-Siberian pipeline are notable as a virtually complete and destructive political failure; whereas Operation Exodus is quietly acknowledged as a success with very little political cost.

The conflict underlying these cases is not primarily about economic sanctions or international security, rather these events serve as catalysts which bring to light a basic conflict of interests regarding the goals of and means to pursue East-West trade. In each case, one actor was trying to get others to do something they did not wish to do. The outcome of these influence attempts varies substantially. Variation in the dependent variable, the successful implementation of U.S. policy abroad, is highly correlated with the independent variables of dependence as suggested by the proposed hypotheses. At the same time, the cases take place virtually simultaneously in the same international environment. Traditional explanatory variables including the distribution of capabilities and the level of external threat remain relatively constant. Comparing the failed pipeline policy with its successful high technology brother highlights the sources, extent and limitations of U.S. influence in the Western alliance.

This chapter analyzes American and European actions throughout an alliance crisis surrounding the construction of the trans-Siberian pipeline from 1980 through 1984. The chapter argues that the actions and reactions of all states and firms

throughout the pipeline crisis can be explained in terms of their dependence on either resources or access to foreign markets. This case is often cited as an example of a complete failure of United States influence within the Western alliance. The analysis below will concur that, in the end, the United States failed to coerce its allies and firms operating within their territories to implement its policies. To make such a judgement, however, one must analyze the events systematically in terms of the goals the United States sought to accomplish, who it sought to influence and what it wanted the targeted allies to do. A closer analysis of this crisis, fully considering these factors reveals that American influence was not completely absent. Firms that were highly dependent on access to American markets to export their goods, and to a lesser extent, dependent on the supply of technology from U.S. firms, altered their behavior as a direct result of U.S. actions. Similarly, states that were dependent on the United States for the supply of vital resources from others, and to a lesser extent, access to the American market for their exports, complied with U.S. initiatives.

When states or firms were highly dependent on the United States, the U.S. was able to get them to do things they would not otherwise have done. When their relative dependence on the U.S. diminished, American influence diminished and, as a result, the United States was not able to implement its export control policy successfully.

A. Chapter Outline

This chapter is divided into three parts. The introduction concludes with a synopsis of the pipeline crisis in historical context. The second section analyzes the failed American attempts to persuade or induce allied cooperation the embargo. The third section analyzes American attempts to coerce its allies into submission. In each section, the targets, goals and means of American influence attempts are identified. Predictions of the American government's ability to implement its policy successfully are made based on hypotheses of firm and state dependence. These predictions are then evaluated in terms of the actual decisions made and actions taken by various firms and allied governments during the crisis.

B. The Pipeline Crisis in Historical Context

The pipeline crisis evolved through several stages. The first stage involved European and American efforts to construct a series of pipelines linking the vast natural gas supplies of the Tiumen region in northwest Siberia to Western consumers. These efforts began in 1968 and culminated in the 1981 trans-Siberian pipeline project.[2] The trans-Siberian project connected the Urengoi gas fields to the countries of Western Europe through 4,465 kilometers of existing and proposed pipes. While European efforts to tap Soviet gas supplies were evolving, U.S. and European interests and involvement in East-West trade diverged. An early American attempt to copy European successes lost political support and failed. This failure reflected the beginning of a general shift in American policy from

participation and benign neglect in East-West trade during the early 1970's, to economic warfare in the early 1980's.

The second stage of the Pipeline crisis began on December 29, 1981 with an American led embargo on oil and gas equipment enacted in response to the imposition of martial law in Poland. U.S. export restrictions applied only to companies operating within its territory, but they had an indirect effect on the activities of firms operating abroad by cutting off access to American suppliers. Allied governments joined the United States in condemning the imposition of martial law, but the United States was unable to elicit European cooperation in limiting East-West trade, embargoing energy and related technology, or restricting credits to the East.

The inability of the United States to evoke the cooperation it desired led to the third phase of the crisis, beginning on June 22, 1982. During this phase, U.S. goals shifted from influencing Soviet behavior through a coordinated allied embargo, to changing the behavior of the allies themselves. The United States targeted the second round of sanctions against its allies. The new "pipeline sanctions" were applied retroactively to foreign firms and subsidiaries of American corporations operating within and outside of U.S. territory. Allied government and firm reactions to U.S. threats and actions during this phase of the crisis represent a contest of power which challenged the sovereign rights of European states to control actors within their borders and to decide on the appropriate means of responding to international events. American attempts to influence allied corporate

and government actions during this phase of this crisis are the focus of this case study.

Following a bitter confrontation within the alliance, U.S. sanctions against its allies and firms operating abroad were lifted in exchange for a multilateral agreement to increase monitoring and the control of high technology items. This compromise sets the foundation for the second comparative case discussed in Chapter 5. Natural gas began to flow through the pipeline on route from the Soviet Union on New Years day, 1984. This date has been chosen as the termination point of this case.

II. American Sanctions Against Poland and the Soviet Union

After a year and a half of severe economic hardship and rising political turmoil which helped the free labor union Solidarity to gain popular support at home and abroad, leaders in Poland's military took control of the government. On December 12, 1981, leaders of Poland's military establishment arrested hundreds of union activists, suspended operations of the growing free labor union Solidarity, and declared martial law throughout the country. Under the direction of the Army Council of National Salvation, General Woijech Jaruzelski declared a state of war and established a new government.[3] The government issued a martial law decree severely restricting civil rights, suspending Solidarity and forbidding public gatherings and demonstrations.

The United States responded to the crisis by imposing a series of economic

sanctions against both Poland and the Soviet Union.[4] Almost immediately, the Reagan Administration suspended economic assistance to Poland and presented the Polish Foreign Ministry with a diplomatic note protesting martial law and warning against further oppression.[5] The day after the imposition of martial law, Secretary of State Alexander Haig expressed the "serious concern" of the United States about Soviet involvement in Poland and warned the Soviet Union not to intervene. The United States called for the release of political prisoners members and for the government to allow the Solidarity leader, Lech Walesa to speak publicly. When the Polish government failed to respond, a series of economic sanctions were implemented against the Polish government.

On December 29, 1981, President Reagan imposed a new set of sanctions and indicted the Soviet Union with the "heavy and direct responsibility for the repression of Poland."[6] The new sanctions involved two components. First, existing controls on oil and gas in relation to the Soviet Union were broadened to include goods and technology related to the transportation, exploration and production of petroleum and natural gas.[7] As a result, all related goods and technology now required a validated export license. Second, all exports to the Soviet Union which required a validated license were halted. Under section 6 of the Export Administration Act, all outstanding licenses and authorizations became subject to review, suspension or revocation by the Commerce Department.[8]

A. Primary Goals of First Set of Sanctions

The sanctions were targeted against the Soviet Union. They were intended to signal American and allied anger over Soviet involvement in Poland and to make continued Soviet involvement very costly. The sanctions were to impose political and economic costs on the Soviets by not allowing them export natural gas to Europe through a newly proposed trans-Siberian pipeline.

B. Targets

The instrumental and symbolic value of the pipeline sanctions rested on the ability of the United States to secure the participation of allied governments and firms in the embargo. If the Soviet Union acquired more advanced Western gas transport equipment and technology, then the American sanctions would do very little to deter pipeline construction. Equally important, the provision of restricted goods and technology by an American ally would indicate the lack of a unified allied interpretation to the Polish crisis. Lack of a unified response by the alliance would diminish the symbolic value of the pipeline sanctions by questioning the American interpretation of Soviet actions and by challenging the legitimacy of the sanctions as an appropriate response to the military crackdown in Poland. For its policy to be effective, the United States had to secure the participation of both its allies and firms which produced the embargoed goods and technology. As the crisis evolved, securing allied cooperation became an increasingly important objective of the policy. With the imposition of the second set of sanctions in June

of 1982, the Western allies superseded the Soviet Union and Poland as the targets of U.S. policy.

C. Means of Enforcement

The United States had three primary means of securing the participation of allied governments and firms in its embargo. First, it could attempt to persuade the others that the embargo was an appropriate and necessary response to Soviet involvement in Poland. Second, the United States could use inducements or positive sanctions to entice others to participate. Third, it could threaten impose costs or penalties against those that failed to accept U.S. policy.

This section will provide a synopsis of the failed American attempts to persuade and entice allied governments and firms to participate in the pipeline embargo. The inability of the United States to persuade or entice its allies to participate in the initial embargo led to an attempt by the United States government to impose and enforce its policies unilaterally. It will be argued that the ability of the American government to extract participation in its embargo from states and from firms operating abroad was largely a function of the dependence of these actors on American suppliers and access to American markets.

D. The Failure of Diplomatic Persuasion and Positive Sanctions

Great Britain, France, Italy and West Germany were concluding initial contract negotiations with the Soviet Union when the Reagan administration

formally presented the American position on the Soviet pipeline. At the Ottawa Summit in July of 1981, President Reagan tried to convince the Europeans not sign any additional gas importation agreements. These agreements, he argued, were harmful to Western security. At a minimum they would strengthen the Soviet military industrial complex by furnishing hard-currency. Worse yet, they gave the Soviet Union a new strategic weapon by providing the means to strangle Western Europe's energy supply. Hard-liners in the U.S. government saw European acceptance of Soviet energy sources as greatly increasing European dependence on the Soviet Union which the Soviets, in turn, could use as a vehicle for political and economic coercion. Their view was reflected in the following statement:

> If I were a Soviet leader, I would have rubbed my hands with delight when the Europeans signed the pipeline contracts. Can you imagine getting a primary adversary in the position of depending on you knowing that the tap can be turned off at any time? That's the kind of leverage strategists usually only dream about.[9]

Furthermore, the President argued, the inability of the Soviet Union to build the large compressors and sufficient quantities of large diameter pipe needed to develop and exploit its natural gas reserves efficiently provided the allies with a chance to exploit Soviet dependence for Western benefit. To hard-liners, the Soviet energy sector itself appeared particularly vulnerable to external economic pressure and made a good potential target for economic warfare.[10]

The European Rebuttal

The argument that the Europeans were becoming too dependent on Soviet gas and had become vulnerable to the potential Soviet threat to cut off that supply begs two questions, the interpretation of which varies greatly depending on which branch of the U.S. Executive or which side of the Atlantic answers them. First, what are the potential consequences for European economic and military security in the event that the Soviet Union abruptly cut off the supply of natural gas? Second, what is the likelihood that Soviets would/will do so?

In contrast to U.S. concerns of dependence on Soviet energy, the Europeans argued that their long term dependence on Soviet gas would remain small. Most importantly, while cutting off natural gas supplies from the Soviet Union would be costly for Europe, numerous alternate suppliers were available. Unlike oil, which is supplied from a very small number of states concentrated in a specific geographic region, the international supply of natural gas is highly distributed.[11] There are many widely dispersed and available alternate suppliers of natural gas. The top three producers are the Soviet Union, the United States and the Netherlands. Others include: Algeria, Australia, Canada, Great Britain, Iran, Malaysia, Mexico, Nigeria, Norway, and Qatar.[12] The continued abundance of natural gas, and geographic and political dispersion of natural gas exporters make the threat of any OPEC-like supplier cartel unlikely.

In the event of hostilities, even the short term strategic effect would be minimal. Due to a dual-firing (oil and gas) capability and the possession of

stockpiles of energy supplies, Western defense capacity would not be greatly reduced. Even in the event of a protracted conflict, the major brunt of the energy crisis would be born by residential and commercial sectors of the economy that depended most on natural gas for heating and cooking. These sectors would only be effected in the interim before alternate sources of natural gas could be secured.

On the second point, the Europeans did not believe that the Soviet Union would exploit their dependence by cutting off the flow of gas. The Soviets had been a stable and reliable supplier of energy. The Soviets had decreased their export of natural gas to Europe during the winters of 1976-1977 and 1978-1979; but, the reductions were justified by Soviet and East European demand for gas during particularly severe cold, and the reductions were within the limits agreed to by the West. The Soviets did cut off oil to Yugoslavia in 1948, Israel in 1956, Albania in 1961, and China in 1962, but it did so in response to actions taken by these states and has never instigated a conflict by cutting off energy supplies. Equally important, the Soviet Union was dependent on the continued influx of Western technology and spare parts to keep its energy sector running efficiently. Cutting off natural gas supplies would be very costly for the short use and for the long term development of its energy sector. The continued Soviet dependence on Western resources and technology, combined with the availability of alternate suppliers for European energy needs, makes it unlikely that the Soviets would exploit it gas weapon.

Positive Sanctions

In November, one month before the crackdown in Poland, the President Reagan tried a different tactic and attempted to entice its allies by offering to provide an alternate source of energy. The offer was two fold. First, the United States agreed to provide coal as an alternative to Soviet gas. Second, the U.S. suggested that Norway offered a reasonable and politically far more secure source of natural gas.

The package was not particularly appealing to the Europeans. From a practical standpoint, it was not clear that the United States could deliver the vast amounts of coal that it promised. Furthermore, public awareness of the problems of acid rain, the high costs of anti-pollution devices, and pressures from European coal miners made American coal a poor alternative for natural gas. The second suggestion was not much better. Norwegian gas was more expensive than Soviet gas and Norwegian production of natural gas and Norwegian-European trade had declined from 1980 to 1982. Finally, the American proposal failed to offer compensation for the loss of exports, production and employment in pipeline and gas related industries at a time when European economies were in the midst of a recession.

The validity of both the hard-line and soft-line approaches to East-West trade have been debated at length between the allies and within the U.S. government itself. The merit of either perspective is not a primary concern; instead, it is important to understand the extent to which European and American

interests and perceptions of their dependence on others varied. Each step along the way, the United States tried to get the Europeans to do something they would not otherwise have done. In the first phase of this crisis, the United States had been unsuccessful in gaining European support for its policies. American attempts to entice the allies through promises of alternate sources of energy were ineffective. Furthermore, conflicting beliefs of the benefits of East-West trade and the appropriateness of sanctions remained largely unchanged. The failure of the United States to convince or entice its allies to accept its views, and the continuing divergence of these differences came to a head following the imposition of martial law in Poland on December 12, 1981.

European Reaction to Soviet Actions in Poland

The European allies joined the United States in condemning the Soviet actions in Poland. At an emergency meeting of NATO in January of 1982, the allies presented a joint statement that "Soviet actions towards Poland make it necessary to examine the course of economic and commercial relations . . . longer-term East-West economic relations, particularly energy."[13] The NATO members agreed to impose a number of selected economic sanctions against Poland and the Soviet Union. The formal condemnation of the Polish crackdown was united, but the NATO sanctions were non-binding, stating merely that "each of the allies will act in accordance with its own situation and laws."[14]

The common perception of an external disturbance or threat to international

peace and stability did not provide the Western alliance with a common solution on how to react to it. French President Mitterrand declared that the "loss of liberty" in Poland "should be denounced clearly, vigorously, and consistently.[15] Similarly, Chancellor Schmidt expressed support for Solidarity, declaring that he was "on the side of the worker in Warsaw and in Siberia and Gdansk."[16] The British government imposed political and economic sanctions against Poland, restricted the movements of Soviet officials in Great Britain and reduced the degree of cooperative agreements between the U.K. and the Soviet Union.[17] Finally, Ministers of the European Community warned the Soviet Union against further intervention and agreed to reduce their collective imports from the Soviet Union by roughly 1.35% in 1982.[18] Despite all of these related efforts, none of the sanctions agreed on at the NATO meeting were related to the pipeline as the U.S. had wanted. The allies questioned sacrificing the guaranteed benefits of the pipeline for the limited benefits of embargoing its construction. They argued that the overall political and economic impact of embargoing the pipeline in addition to their other protests was questionable and that, even without embargoing the pipeline, their actions would send a "clear political signal to the Soviet Union."[19]

The limits of allied cooperation with the United States' efforts to stop the trans-Siberian pipeline construction became apparent almost immediately. Less than a month after the Polish coup, Gaz de France signed a long-term gas import contract with Soyouz Gaz Export of the Soviet Union. The signing of the agreement was caused by three factors: West Germany, a large French client and

competitor, had recently signed a comparable gas import contract; a last minute Soviet concession on price; and the national interest in diversifying French energy supplies after two oil shocks combined with the desire to save jobs in the French rust belt.[20] The importance of the last point is reflected in a declaration of Prime Minister Mauroy in front of the National Assembly, stating, "Let us not, on top of the suffering of the Polish people, add the suffering of the French people who would be deprived of heating this winter."[21]

The justifications behind French and German actions are important. The Mitterrand government had taken a far stronger, pro-U.S.-anti-Soviet position on issues of arms control and military security than his predecessors. Similarly, Chancellor Kohl had supported U.S. initiatives on short range nuclear missiles and European defense policy. Their support for U.S. initiatives involving East-West security issues indicate that security concerns did not provide the primary motivation behind French or German reactions to the pipeline embargo. This finding supports the general finding in the previous chapter that since World War II security concerns have often been a source of dispute and controversy within the alliance. Contrary to conventional wisdom, security concerns have not always been a unifying force and they have not provided sufficient motivation for coordination of an allied response to East-West issues. The link between the pipeline and Soviet actions in Poland was considered weak at best. From the European perspective, the pipeline represented a chance for economic gain and was not perceived as a threat to Western security.

In the midst of the growing controversy over the pipeline, Secretary of State Haig sent Under Secretary of Sate for Security Assistance, James Buckley, abroad to negotiate a trade off with the Europeans. The Buckley Commission presented an aggressive "anti-pipeline," ("anti-trade" from a European perspective), argument. The United States wanted the Europeans to bring existing credit agreements related to the pipeline in line with OECD credit lines that had been renegotiated in February of 1982. As reflected in a statement by Alexander Haig, Buckley invoked the threat of European dependence on American technology as a means of influencing European negotiators. Haig reported that:

> I made it plain to the European foreign ministers that if we did not at least have progress on a cooperative policy to limited future . . . credits to the Soviet Union, the United States would find it difficult not to apply sanctions that would prevent the use of American technology [including licenses and patents] to for the pipeline.[22]

U.S. negotiators succeeded in reclassifying the Soviet Union, effectively raising the interest rates it was forced to pay for OECD credit.[23] This was, however, only a partial victory. European members argued that the reclassification of the Soviet Union was not retroactive. As a result, none of the pipeline contracts -- all of which had been signed before the OECD policy changes -- were effected.

In May, prior to the upcoming Versailles summit, Alexander Haig again attempted to convince the Europeans to restrict credits to the East. Just prior to the Versailles Summit, external economic events played into the hands of American negotiators. The economic policies of the Socialist-Communist coalition in Paris

were falling apart and the French franc was getting weaker relative to the deutsche mark. Given this predicament, the Quai d'Orsay suggested that France and other European states would agree to a quid pro quo. They agreed to limit credits to the Soviet Union, if the United States would agree to bolster the franc and "control imbalances in currency values" -- provided it agreed not to interfere in the construction of the pipeline.[24] Despite opposition from hard-liners in the U.S. government, notably Treasury Secretary Donald Regan and Defense Secretary Casper Weinburger, Secretary of State Haig proposed a compromise to the European foreign ministers the night before the meeting. The agreement stated that the franc would be bolstered on a case-by-case basis in return for future restraint on credits to the Soviet Union. This agreement, if sustained at the conference, would in turn trigger a discussion favorable to the Europeans on the pipeline issue.[25] While no formal limits were placed on credits or subsidies to the East, the participants agreed to "pursue a prudent and diversified economic approach to the U.S.S.R. and Eastern Europe, consistent with our political and security interests."[26] In turn, while the pipeline was not mentioned explicitly in the formal communiqué, Haig argued that all participants understood "that the United States would not apply retroactive, extraterritorial pipeline sanctions."[27]

The fragile stability of this resolution was shattered the day after it was settled by a statement to the press by Treasury Secretary Regan claiming that the United States would not intervene in foreign exchange markets in support of the franc. In a sharp response, the President Mitterrand claimed the Summit "deal" had

been compromised and that France "would not support economic warfare against the Soviet Union and was not bound by the summit declaration to cut the amount of credit extended to Moscow.[28] The German Finance minister, Manfred Lahnstein, echoed French sentiment arguing that Germany "will continue to work with Eastern European countries and the Soviet Union as usual."[29]

Given the failure of U.S. efforts to persuade its allies to participate in sanctions against the trans-Siberian pipeline, the United States tried to coerce others into submission.

III. American Sanctions Against the Allies

At the urging of National Security Advisor Clark and Defense Secretary Weinberger, President Reagan reacted strongly against the European renunciation of the Versailles summit. On June 22, 1982, the U.S. government amended its previous foreign policy controls to prohibit exports and re-exports of oil and gas equipment to the Soviet Union by U.S. owned or controlled foreign companies, wherever organized or doing business. Restrictions were also placed on equipment produced anywhere containing technical data that originated in the United States. Unlike the earlier sanctions, this policy was intended to be retroactive. All past and existing contracts -- including the rotor sets already shipped to Europe by General Electric -- were subject to the regulations. This prohibition applied to all contracts, even though there was no such regulation at the time the licensed materials were exported. The amended regulations made American export policy more

extraterritorial in range and greatly increased its scope by extending its reach retroactively to contracts already in force.

A. Primary Goals of Second Set of Sanctions

The second set of sanctions was implemented for a number of purposes. The regulations were officially issued under section 6 of the Export Administration Act with the stated objective "to advance reconciliation in Poland."[30] Perhaps more directly, the sanctions served the goal of preventing the Soviet Union from obtaining -- directly or indirectly -- any American equipment or technology that could assist the building of the trans-Siberian pipeline. It is interesting to note that the December 29 regulations embargoed exports related to the pipeline as part of a larger package including other non-related items. The current sanctions, in contrast, targeted pipeline materials specifically and were labeled "pipeline controls" by Americans and Europeans alike.

While the President justified U.S. actions in the name of the Polish people, decision makers in Washington and Europe understood the actions to be in response to European intransigence relating to the pipeline. As Alexander Haig argues "The Polish crisis provided a convenient pretext for dealing with the pipeline issue, which had long nettled their [Defense and the NSC's] strategic sensitivities."[31] In Antony Blinken's words, "the pipeline became both a target of American policy and a means to assure European compliance with Washington's restrictive East-West strategy."[32] Echoing this sentiment, the State Department defended the sanctions,

stating that they sent "an important message to our allies. . . about the seriousness of purpose."[33]

The Defense Department summarized the central objective of the sanctions as a step in a "long-term alliance strategy on East-West economic relations that has the coherence and depth of our military strategy."[34] If the allies could be persuaded to go along, the Soviet Union would loose the hard currency earning potential from the pipeline, its economy would weaken, Europe would be less threatened from a potential cut off from Soviet energy, and the Western alliance would show the Soviets a strong and unified front. All three objectives were part of the Reagan Administration's foreign policy strategy.

B. Targets

All three policy goals depended on America's ability to secure European compliance with the embargo. European participation and compliance had become the primary focus of the embargo. European governments and firms replaced the Soviet Union and military leadership in Poland as the primary targets of the American sanctions and related influence attempt.

C. Means of Enforcement

The second set of sanctions were targeted against firms that could provide any products or technology which could be used in the construction of the trans-Siberian pipeline. The sanctions carried penalties of indictment under U.S. law

including imprisonment for executives and fines of up to $100,000 per offense. These penalties threatened companies operating within American territory more than those operating abroad. Without the cooperation of local governments, domestic law of one state generally carries no legal force in another state's territory. Aside from the question of sovereignty and precedence of domestic over foreign law, a foreign country has no legitimate means of enforcing its policies within another. Lack of a viable means of enforcement across international boundaries is the primary source of weakness behind international law, even when the legitimacy of that law has been accepted by the international community. The United States has successfully fined several individuals and firms that have violated its export control policy abroad, but this success is contingent on extradition agreements which can be politically sensitive, costly and time consuming.

The United States government has at its disposal, however, a far more enforceable and fearsome penalty for non-compliance. The backbone of American threats against firms operating abroad involve the possibility of placing these non-cooperative firms on the "Grey" or "Black" lists maintained by the Department of Commerce. As discussed in Chapter 2, it is illegal for an American company to participate in commerce or trade with any firm which appears on these lists. The lists effectively terminate access to all American suppliers and the American market. As a result, threats of placing firms on the Grey or Black lists provide the American government with a very potent means of exploiting foreign dependence on American suppliers or access to American markets.

IV. Sources of U.S. Influence and Predictions of U.S. Success, 1980-84

A. Sources of U.S. Influence

The second set of sanctions threatened to cut off trade between any individual or firm that violated the American embargo with the United States and its firms. The strength behind the threat is a function of dependence. Dependence is interpreted here in terms of the costs of foregoing a particular relationship. The more costly it is for an actor to forego a particular relationship, the more dependent it is on the maintenance of that relationship. The costs associated with terminating a trading relationship with the United States are a function of two things: the relative proportion of trade an actor conducts with the United States, and the availability of alternate trading partners. As discussed above, the Hirschman-Herfindahl index of trade concentration is used as an indicator of the availability of alternate suppliers in specific industries.

Dependence as a function of relative dominance of U.S. exports or imports and the concentration of world exports or imports is summarized in Table 4.1.

Table 4.1: Dependence as a Function of Concentration and the Proportion of Trade with the U.S.

Concentration of World Exports/Imports	Proportion of U.S. Exports/Imports	
	Low	High
Low	Low dependence	High sensitivity but low vulnerability to dependence on US
High	High vulnerability to dependence on others	High vulnerability to dependence on US

Firm and state dependence can be further broken down into dependence on access to markets and access to the supply of certain goods. From the statistical analysis, it appears that national governments are more likely to acquiesce to American control when the supply of certain goods is threatened, especially when these goods or technologies are related to a state's national security. In contrast, firms will often attempt to develop alternate sources of supply when access to traditional suppliers is restricted. If alternate external suppliers are not available, firms are often willing to develop them internally if technically feasible. Alternate markets are, however, far more difficult to develop that alternate sources of supply. While national governments appear to be less concerned about access to foreign markets for their firms than the supply of goods they cannot obtain elsewhere, firms are

more protective of market access than supply.

The links between successful American influence and firm dependence is summarized in Table 4.2.

Table 4.2: Successful Implementation as a Function of Dependence

Dependence on Supply	Dependence on Market Access	
	Low	**High**
Low	Firm defiance, Host Government intervention	Firm compliance, Host Government indeterminate
High	Firm indeterminate, Host Government acquiescence	Firm compliance, Host Government acquiescence

This model can be used to predict the outcome of U.S. efforts to implement its export control policy abroad during the Pipeline Embargo from 1982-1984.

B. Predictions of American Success, 1982-1984

Beginning in 1982, the Reagan administration sought to control the activities of firms involved in the construction of the trans-Siberian pipeline by enforcing its export control policy at home and abroad. Using the model outlined above, predictions of American influence over allied governments and firms operating in their territories are made at an industry level of analysis. This is followed by an

analysis of individual American influence attempts in order to demonstrate the causal links between dependence and political influence.

Industry Level of Analysis

The pipeline embargo affected several major industries related to the production of wide-diameter pipe, gas pumps, compressors and related gas transport technology. The actions of four firms are analyzed: Mannesmann, a German firm; Alsthom-Atlantique and Dresser-France, French firms; and John Brown Engineering, a British firm. Mannesmann produces wide-diameter pipe, the others, Alsthom-Atlantique, Dresser and John Brown produce compressors and related equipment. World trade data is gathered from both the United Nations and the Organization for Economic Cooperation and Development broken down by Standard International Trade Classifications (SITC). SITC #678 (iron and steel tubes, pipes, etc.) is an aggregate indicator of wide-diameter pipe trade, and SITC #743 (pumps, nes) is an aggregate indicator of compressors, turbines and related equipment trade.

Aggregate Predictions of U.S. Influence

As presented in Chapter 3, Table 4.3 lists the proportion of trade with the United States and the Hirschman-Herfindahl concentration index of world trade for each industry. Based on this information, Table 4.4 presents aggregate prediction of U.S. influence over these firms.

Table 3: Proportion of Trade with the U.S. and International Trade Concentration

Case	Year	Proportion of National Industry Trade with the U.S.		Concentration of World Trade	
		Exports (market)	Imports (supply)	Imports (market)	Exports (supply)
Wide Diameter Pipe Industry					
FRG (Mannesmann)	1982	17.23%	2.738%	33.5	32.8
Compressor Industry					
France (Alsthom)	1982	3.364%	18.61%	36.0	27.4
France (Dresser)	1982	3.364%	18.61%	36.0	27.4
UK (John Brown)	1982	7.349%	26.82%	36.0	27.4

Sources: United Nations, *1982 Year Book of International Trade Statistics*, vol. II. (New York: United National Publishing, 1984). Concentration indices calculated from OECD, *Foreign Trade by Commodity*, Series C, 1982.

The statistical analyses in Chapter 3 provide a scale which can be used to judge these data. A proportion of trade less than 15% is considered low, and concentration of imports greater than HH = .349, and concentration of exports greater than HH = .310 is considered are considered high. The figures indicate that German exports a fairly large proportion of its steel pipe production to the United States, however, the world markets for wide diameter pipe are moderately

concentrated, indicating that alternate markets for German exports are available. Also, the German wide-diameter pipe industry is not dependent on imports form American suppliers.

In 1982, the Federal Republic of Germany exported 17% of its exports of iron and steel tubes, pipes, etc. to the American market. In the same year, it imported only 3% of related supplies from the United States. It is interesting to note that Germany was responsible for 37% of world exports and 5% of world imports in 1982. World concentration of exports and imports of iron and steel tubes, pipes, etc. were moderate, HH =.328 and HH =.335 respectively. The implication of these statistics is that the Federal Republic of Germany was not dependent on American exports or imports of iron and steel tubes, pipes, etc. Furthermore, while world supply and demand for these items was moderately concentrated, non-American suppliers and markets were available. Based on this information, Mannesmann would fit in the upper left hand corner of Table 4.2. One would predict that threatening to cut off access to American suppliers and markets would not increase the probability that the United States would be able to influence Mannesmann or the German government. Mannesmann's continued efforts and success in gaining additional pipeline contracts throughout this period supports this hypothesis.[35]

In the compressor industry, neither France nor Great Britain export a large a large amount of equipment to the United States. Each country does, however, receive a large proportion of their compressors and related materials from American

suppliers. World suppliers of this equipment are, however, only moderately concentrated, indicating that non-American alternate suppliers of compressor equipment are likely to be available. In 1982, only 3% of French exports of pumps and compressors went to the United States. At the same time, 19% of French imports of related materials came from the United States. In comparison, 7% of British exports went to the United States, and 27% of related imports came from the American sources. The percentage of French and British imports from the United States are relatively high, however, world concentrations of exports and imports are low, HH =.360 and HH =.274 respectively, indicating that alternate sources of supply of pumps and compressors are available. As a result, these three cases would also fit in the upper left hand corner of Table 4.2.

The preliminary analysis indicates that the United States will not increase its chances of success by threatening to cut Mannesmann off from American suppliers or markets. In contrast to Germany, both France and Great Britain relied on American imports; however, concentration of global imports and exports were low, indicating that alternate suppliers should be available. These results indicate that unless the United States can limit French and British access to alternate suppliers of compressors and related materials, imposing the sanctions would not increase the likelihood of securing participation in its embargo. The predictions are summarized in Table 4.4.

Table 4.3: Firm and State Dependence on the United States, 1980-1984

Dependence on Supply	Dependence on Market Access	
	Low	High
Low	Mannesmann (FRG) Dresser-France (FR) John Brown (UK) Alsthom-Atlantique (FR)	-
High	-	-

These statistics do not take East-West trade or the trading patters of individual firms into account. As will be argued in the next section, if the Eastern bloc was considered in the analysis, the concentration of world markets for both wide diameter pipe and compressors would be greater, but the proportion accounted for by the American market would be smaller. These factors and others are considered below. What these firms actually did and why is the subject of the next section.

V. Case Analyses: U.S. Influence Attempts by Industry

This section analyzes American efforts to control the activities of firms in industries related to the production of wide-diameter pipe, gas pumps, compressors and related gas transport technology. Industry-specific overview are followed by detailed accounts of U.S. actions and those of the actors it sought to influence

during the pipeline conflict.

The hypotheses presented in Chapter Two emphasize the link between dependence and political influence. Foreign dependence on the United States has two components: the proportion of trade a country or firm has with the United States, and the availability of alternate non-American suppliers or markets. Industry specific overviews of each industry supplement the analysis provided in Chapter II by highlighting unique characteristics and trade patterns in each industry. In particular, the role and concerns of individual firms in each industry is discussed.

Following the industry specific overview, specific cases of American efforts to implement or enforce its export control regulations abroad are examined. Each case is analyzed in terms of the targets and goals of the influence attempt, firm and state dependence on American markets or American suppliers, and the outcome. This analysis traces the links between firm and state dependence and American influence. The outcome of each case is then compared with the predictions made in the previous section.

A. Steel Pipe and Compressor Industry Overviews

The United States is the world largest market for steel pipe trade, accounting for 28.54% of world imports in 1982. At the same time, its exports account for a relatively small percentage of international trade in steel pipes. The reverse is true in the pump and compressor industry. In 1982, while the United States provided the largest world market for pumps and compressors, it accounted for only 11.3%

of world imports. This indicates that there are many markets for pumps and compressors around the globe. The United States is also the world largest producer and exporter of pumps and compressors. Its suppliers account for a large proportion of international trade in compressors throughout the 1980's. See Table 4.5.

Table 4.5: U.S. Exports and Imports as a Percentage of World Trade by Industry

Steel Pipe Trade, SITC 678

Year	1981	1982	1983	1984
Exports	6.66%	6.78%	6.30%	4.91%
Imports	31.54%	28.54%	15.98%	27.15%

Compressor Trade, SITC 743

Year	1981	1982	1983	1984
Exports	25.76%	22.77%	20.54%	18.62%
Imports	14.73%	11.31%	13.42%	18.89%

Source: United Nations, *1981-1984 International Statistics Yearbook, vol. II*, (New York: United Nations Publishing, 1983-1986).

These statistics indicate that the United States should be able to exert more influence threatening to cut off access to the American market than threatening to cut off American suppliers for the steel pipe industry. And, it should be able to exercise more influence cutting of the supply of pumps and compressors from American producers than threatening to close that market to foreign firms.

Table 4.6 provides a broader view of foreign trade with the United States in

both the steel pipe and compressor industries. The ten largest suppliers and markets are represented. The value of exports to/imports from the United States are presented in thousands of U.S. dollars. For comparative purposes, the proportion of each countries trade that is accounted for by exchange with American actors is also presented.

The trade statistics indicate that in 1982, the U.S. market in steel pipe trade accounted for a large proportion of, among others, West German and British trade. French exporters, in contrast, were not dependent on access to the American steel pipe market. The volume of these exports to the United States should be compared to potential exports to the Soviet market related to the trans-Siberian pipeline. Table 4.7 indicates that independent German contracts related to the pipeline amounted to $840 million, independent British contracts were valued at $135 million, and independent French contracts were valued at $615 million. In addition, a consortium led by Mannesmann of Germany and Creusot Loire of France subcontracted agreements valued at over one billion dollars. The independent contracts alone were larger than each country's individual exports to the United States. As a result, cutting of access to the American steel pipe market would cost these firms and the countries within which they operate far less than losing their pipeline contracts. In the compressor industry, only Japan and Belgium-Luxembourg exported a large proportion of their products to American markets. Threatening to cut off access to the American compressor market would have little effect.

Table 4.6a Leading Countries' Exports to the U.S. Market
(current $ thousands, ranked by 1982 total exports or imports)

Steel Pipe, SITC 678

Country	Exports to the U.S. (% of Total Country Exports)		
	1981	1982	1983
Japan	2,429,739 (33.6%)	2,410,336 (35.5%)	462,091 (13.7)
FRG	675,138 (22.1%)	556,139 (17.2%)	82,902 (3.7%)
Italy	398,174 (21.2%)	370,854 (20.7%)	116,828 (9.2%)
Korea	387,593 (75.2%)	291,527 (59.2%)	298,318 (75.3%)
France	131,092 (8.5%)	184,550 (11.9%)	56,205 (5.6%)
UK	88,241 (16.2%)	121,087 (16.7%)	27,878 (5.7%)
Spain	116,278 (45.7%)	61,634 (20.5%)	28,156 (12.9%)
Sweden	35,931 (9.6%)	43,363 (12.7%)	23,104 (7.9%)
Netherlands	11,510 (2.5%)	14,936 (4.2%)	9,474 (3.5%)
USA	-	-	-

Compressors, SITC 743

Country	Exports to the U.S. (% of Total Country Exports)		
	1981	1982	1983
Japan	185,327 (16.3%)	186,977 (20.2%)	218,194 (22.2%)
FRG	99,487 (6.8%)	111,548 (7.3%)	95,951 (6.7%)
UK	-	57,259 (7.3%)	48,919 (7.0%)
Italy	35,503 (5.2%)	37,304 (6.0%)	58,125 (8.7%)
France	22,434 (3.3%)	20,489 (3.3%)	19,719 (2.9%)
Belg-Lux	30,058 (20.0%)	16,288 (11.0%)	12,800 (9.1%)
Sweden	18,346 (6.3%)	13,764 (5.9%)	20,805 (9.6%)
Switzerland	10,161 (3.1%)	9,404 (2.9%)	19,394 (7.0%)
Netherlands	8,336 (3.5%)	6,914 (3.0%)	4,191 (2.1%)
U.S.A.	-	-	-

Source: United Nations, *1981-1983 International Trade Statistics Yearbook, vol. II* (New York: United Nations Publishing, 1983-1985).

American exports in steel pipe accounted for only a small proportion of European imports. At the same time, however, eight of the top ten world markets for compressors, including France, Great Britain and West Germany, get a large proportion of their imports from American suppliers. Without the supply of these

components, exports to the East would not be possible. Cutting of access to American compressor suppliers may, therefore, give the United States government a means influencing the activities of firms operating abroad.

Table 4.6b: Leading Countries' Imports from U.S. Suppliers
(current $ thousands)

Steel Pipe, SITC 678

Country	Imports from the U.S. (% of Total Country Imports)		
	1981	1982	1983
Canada	258,770 (49.7%)	211,393 (51.1%)	181,772 (62.4%)
Saudi Arabia	186,006 (17.3%)	252,804 (19.6%)	125,765 (17.0%)
Indonesia	58,261 (18.3%)	104,781 (19.6%)	79,832 (23.1%)
Singapore	34,877 (7.9%)	44,391 (8.9%)	22,801 (15.8%)
UK	30,398 (7.1%)	30,179 (6.6%)	7,595 (3.5%)
UAE	33,373 (9.6%)	21,860 (8.5%)	8,625 (3.7%)
France	22,091 (4.5%)	17,604 (3.5%)	14,321 (3.8%)
FRG	13,126 (2.1%)	16,405 (2.7%)	9,732 (1.8%)
Netherlands	13,875 (2.2%)	14,953 (2.7%)	14,218 (3.8%)
USA	-	-	-

Compressors, SITC 743

Country	Imports from the U.S. (% of Total Country Imports)		
	1981	1982	1983
Canada	283,689 (83.8%)	261,907 (83.7%)	223,052 (77.8%)
Japan	136,526 (67.4%)	134,328 (66.5%)	135,875 (66.1%)
Saudi Arabia	108,193 (44.4%)	122,672 (41.8%)	179,899 (44.9%)
UK	100,032 (25.7%)	106,644 (26.8%)	107,578 (27.2%)
France	90,965 (17.2%)	96,945 (18.6%)	92,500 (19.8%)
FRG	93,409 (17.7%)	99,666 (18.3%)	86,743 (16.2%)
Italy	32,669 (11.7%)	39,573 (15.6%)	31,366 (12.7%)
Sweden	37,611 (16.4%)	35,694 (16.1%)	25,790 (11.3%)
Netherlands	29,419 (10.2%)	29,154 (11.3%)	23,949 (9.4%)
South Africa	-	25,473 (9.5%)	21,614 (18.2%)
U.S.A.	-	-	-

Source: United Nations, *1981-1983 International Trade Statistics Yearbook, vol. II* (New York: United Nations Publishing, 1983-1985).

Table 4.7: Value of Major Pipeline Related Contracts with the USSR, 1982 ($ million)

Firm (Country)	Equipment	Value (est.)
Consortium led by Mannesmann Anlagenbau (FRG) and Creusot-Loire (FR); subcontractors incl. AEG-Kanis (FRG) and John Brown (UK)	Pipe, compressors and equipment	$1,000.
Mannesmann & Thyssen (FRG)	Wide diameter pipe	$690.
Lieden (FRG)	323 truck-mounted cranes	$150.
John Brown (sole contractor)	Turbine parts & equipment	$60.
Ruston Gas Turbines (UK)	45 turbine generating sets	$30.
Plenty (UK)	Fuel gas conditioning facilities	$30.
Redifusion (UK)	Computer information system	$15.
Thomson CSF (FR)	Computerized pipeline control equipment	$350.
Creusot-Loire (FR)	19 refrigeration stations	$225.
Alsthom-Atlantique (FR)	40 spare turbines	$40.
Nuovo Pignone (Italy)	Turbine parts and equipment	$1,100.
Italsider (Italy)	Wide diameter pipe	$250.
TOTAL		**$3,250. m**

Source: Bruce Jentleson, *Pipeline Politics*, p. 184-185.

The second component of dependence is access to alternate suppliers. Even if the United States accounts for a high proportion of an actors trade, it may be able to minimize its dependence on the United States by seeking out alternate suppliers or markets for its goods. The concentration indices presented in Table 4.3 indicate that, in 1982, world markets for steel pipe are fairly widely dispersed, HH = 33.5,

where as the markets for the compressor industry are concentrated in a relatively small number of countries, HH = 36.0. The indices for world suppliers indicate that both suppliers of steel pipe and compressors are fairly widely dispersed, HH = 27.4. The concentration index for suppliers in the international compressor industry may be slightly higher if the output of individual firms, rather than national exports were used to evaluate the availability of alternate suppliers. General Electric, for example, is the world largest supplier of industrial turbines and compressors and many of the companies involved the pipeline relied on access to General Electric parts. As the individual cases discussed below demonstrate, the dominant position of General Electric and firm dependence on its products did give the United States government leverage over firm activities. As predicted by these statistics, however, alternate suppliers were available in both the steel pipe and compressor industries.

In sum, access to the American market accounted for a large proportion of trade in the steel pipe industry. However, the value of exports to the United States were less than the value of exports related to the trans-Siberian pipeline in France, Great Britain and Germany. American exports in the steel pipe industry play a relatively small role in European trade. As a result, threatening to cut off access to the American market or American suppliers in the steel pipe industry should have little effect on the ability of the United States government to influence actors operating abroad. In the compressor industry, U.S. markets are not important to European exporters. Imports from American suppliers, however, accounted for a large proportion of European trade. While the concentration index indicated that

alternate suppliers of compressors are available, the dominant role of General Electric may give the United States some leverage over firms operating abroad.

Specific U.S. actions and the reactions of individual firms and states in the subject of the next section.

B. U.S. Influence over Firms: the First Round of Sanctions

Goals, Targets and Means of Enforcement

The goals of the first round of sanctions were intended to impose political and economic costs on the Soviet Union in response to its involvement in the Poland crisis. These initial sanctions did not directly apply to companies operating outside of the United States. They did, however, have a strong indirect effect on these firms. At this stage, the export controls covered only "foreign origin products which incorporated U.S. technology subjected to controls when exported from the United States."[36] While Secretary of State Haig and others have argued that the sanctions were not intended to be retroactive, the Commerce Department interpreted the sanctions to be retroactive in effect.[37] This meant that General Electric, Caterpillar, Dresser and Cooper Industries were forced to cancel existing contracts relating to the construction of the pipeline. Consequently, the sanctions effectively cut off foreign access to American exports essential for pipeline construction including pipe-layers manufactured by Caterpillar and components for pipeline compressors from General Electric.

Dependence and the Success of U.S. Influence

General Electric built the rotors, nozzles and sator blades necessary for the construction of the turbines used to pump natural gas throughout the pipeline. Companies including AEG-Kanis, Alsthom-Atlantique, John Brown and Nuovo Pignone all relied on equipment provided by General Electric for future sales of products containing GE parts, valued at over $175 million.[38] By the time the initial sanctions were imposed, GE had already shipped 23 rotor sets to Europe. This provided enough material for European firms to produce 23 of the 41 compressor stations required along the pipeline. Lacking additional supplies from GE, the pipeline would be limited to about 70% of capacity with no backup or replacement equipment. In order to build additional compressors, firms that relied on American made materials and components had to find alternate sources of supply.

The costs of designing alternatives to American components can be considerable, and numerous firms have found it impractical to do so, not withstanding the burden of United States controls. The traditional technical dominance of American firms, like GE, in Western markets provides the United States government with potential leverage over foreign firms and governments. The sustained use of that leverage, however, tends to erode the very foundation upon which it is based. Continued reliance on unilateral controls will lead more firms to search for non-American sources of supply. The threat to American economic interests is significant. The credibility and utility of American coercive power is

likely to diminish as the technological and economic capabilities of its allies continue to improve.

As indicated by the relatively low concentration of compressor exports, HH = .361, alternate sources of American components and technology could attained through external sources or through internal development and production. One option involved the French firm Alsthom-Atlantique. Initially, Alsthom-Atlantique appeared to be an ideal alternate supplier of the equipment embargoed by General Electric. Alsthom-Atlantique was the only manufacturing associate of General Electric that possessed a license to make the rotor kits the pipeline needed. Further, it had already agreed to produce 40 spare rotor kits for the Soviet Union by 1984.

Alsthom-Atlantique

Alsthom-Atlantique could replace the equipment embargoed by GE. Supplying the rotors would require it to build a new production plant or re-tool an existing one. This required a large amount of capital, but, once the initial investment was made, being the sole producer of the rotor kits for the pipeline would be highly profitable. A more important consideration was, however, the potential long term costs of alienating GE. Alsthom-Atlantique depended on continued access to General Electric's equipment and technology to remain financially viable. The parent company of Alsthom-Atlantique, Compagnie Générale d'Electricité, was also one of the largest French investors in the United

States. It too feared retaliation if its subsidiary did not toe the Washington line. Retaliation would cut off access to the American market which accounted for a large proportion of Compagnie Générale d'Electricité's current and prospective business.

Alsthom-Atlantique's dependence on General Electric gave the Reagan administration leverage over corporate actions. The GE-Alsthom contract contained a clause specifically allowing the United States government to penalize the company severely if it delivered the oil and gas equipment without recommendation from General Electric. The contract included the following clause:

> To facilitate the furnishing of data under this agreement, Alsthom hereby gives its assurance in regard to any data of GE origin that unless prior authorization is obtained form the U.S. Office of Export Administration, Alsthom will not knowingly . . . export to any country [in] group "Y" any direct produce of such technical data if such direct produce is identified by the code letter "A." Alsthom further undertakes to keep itself fully informed of the regulations, including amendments and changes thereto, and agrees to comply therewith.[39]

Here Group "Y" indicates a category of nations including the Soviet Union and letter "A" refers to the status President assigned to the trans-Siberian pipeline and related equipment and technology when he extended the sanctions. If Alsthom-Atlantique, and others under similar circumstances, chose to violate U.S. policy, they would breach their American contracts and violate American law. In addition to the standard criminal fines and imprisonment, such actions would place them on the "Gray" or "Black" List, make it illegal for any American company to conduct

any business transactions with them.

Citing "the obvious political risks" and the importance of their relationship with GE, Alsthom-Atlantique declined to accept the role of alternate supplier.[40] Alsthom-Atlantique's decision not to produce additional rotor kits was based on its dependence on a stable future relationship with General Electric.

This outcome was not predicted by the aggregate analysis of industry trade for SITC 743, pumps and compressors. The problem is one of aggregation, the trade statistics by industry do not account for the value a firm, like Alsthom-Atlantique, may place on future relations with a specific company, like GE. Once Alsthom-Atlantique's dependence on GE is taken into consideration, the firm can be relocated in the lower left hand corner of Table 4.2. As predicted by the hypotheses above, when a firm is dependent on an American supplier and no alternate source of resources or technology is available, it will not challenge U.S. restrictions.

American threats against Alsthom-Atlantique served an additional purpose. By controlling Alsthom-Atlantique, the U.S. government eliminated the most cost-effective alternate supplier of compressor equipment.[41] A second potential alternate supplier was available, but as is true with many alternate sources of supply, its products were inferior to the original. If a product superior to the original exists, it would most likely have been selected in the first place. Rolls Royce of Great Britain produced rotors that could be used in the pipeline compression stations. Its rotors were, however, not well matched to the pipeline

compressors. As a result, the transition to Rolls Royce rotors would have required that the turbines be redesigned and several current contractors would have to be replaced. Aside from Alsthom-Atlantique, all additional alternate suppliers would require project alterations that would complicate construction, increase costs of the project and consequently delay construction. By exploiting Alsthom-Atlantique's dependence on access to American technology and access to the American market, the U.S. government was able to eliminate the most cost-effective alternate supplier of the embargoed goods.

In order to avoid unacceptable financial and political costs, several European companies dependent on GE accepted a "wait and see" approach to the sanctions assuming that they would be lifted before the compressor stations would be needed. This response is consistent with the predicted reaction of firms which are dependent on American suppliers, but not on access to the American markets. These firms can be placed in the lower left hand corner of Tables 4.2 and 4.3.

Some firms could not adopt a "wait-and-see" strategy. In the middle of the embargo controversy, AEG-Kanis, as subsidiary of AEG-Telefunken, went bankrupt. It became both Germany's largest corporate bankruptcy since World War II and a symbol for later corporate defiance of U.S. actions.[42]

C. U.S. Influence over Firms: the Second Round of Sanctions

Goals, Targets and Means of Enforcement

The goal of the second round of sanctions shifted from punishing the Soviet Union, to specifically blocking the construction of the trans-Siberian pipeline. Allied firms and their governments replaced the Soviets as the chief targets of policy. Imposed on June 22, 1982, the second round of sanctions placed multinational firms at the center of the pipeline crisis. They were caught in an awkward position between European and American governments vying for influence over their activities. On top of these political restraints, firms received little compensatory relief and were subject to the traditional economic constraints of a global economy in recession. The actions taken by the firms in these cases are largely a function of their evaluation of their relative dependence on access to foreign markets and dependence on imported material and technology within the constraints placed on them by the competing governments.

Dependence and the Success of U.S. Influence

The multinational enterprise does not enjoy the role of carrier of the controls. If it does not ingratiate itself to the host government, its affiliate may lose business. As this case demonstrates, however, not to comply risks indictment in the United States for violation of its export control laws. Firms caught in this catch-22 are faced with a choice between the costs of not continuing business as usual versus the threatened costs imposed by the United States. In terms of East-West trade, the

choice is between, on the one hand, terminating existing export contracts and jeopardizing new ones in Eastern markets, or being cut off from existing supply agreements with American producers and jeopardizing future access to American consumers on the other. Alternate sources of supply are often far easier to find than alternate markets, but both options can be costly.

Faced with these constraints, European and American firms responded more hesitantly to the second wave of sanctions than their host governments. These firms had valuable contracts with the Soviet Union, but they also valued a continuing relationship with both American firms and the American market. As in the case of Alsthom-Atlantique, the dependence of European companies on access to American goods and the American market gave the Reagan administration a potentially potent source of political influence over firm activities.

The cost of challenging the U.S. embargo and severing links with U.S. suppliers and the American market must be balanced against the costs of canceling existing orders and jeopardizing business relationships with current and future clients. Unlike Alsthom-Atlantique, other firms placed a higher value on existing business relationships with the East than either their market or supply relationships with the United States. When the embargo was first imposed, it was estimated that U.S. companies would loose $300 to $600 million in export earnings. This sizable loss is small compared with the projected loss for foreign subsidiaries and licensees of American firms and/or goods and technologies of $1.6 billion.[43] In addition to outright losses in sales and the unwanted stigma of being poor suppliers, unique

contract stipulations between the Soviet Union and Western firms imposed additional costs on breaking the agreements. John Brown Engineering is an example of a firm that depended far more heavily on access to the Soviet market than either the U.S. market or American technology and, as predicted, reacted very differently than Alsthom-Atlantique.

John Brown Engineering

John Brown Engineering produces exclusively industrial turbines. Like Alsthom Atlantique, it was affiliated with General Electric. By becoming associated with GE in the mid-1960's, the company gained technical expertise and access to a large international turbine market. Since its first sale to the Soviet Union in 1975 through 1983, the East bloc accounted for 30% of John Brown Engineering's turbine sales.[44] Along with five other European firms, John Brown won contracts with the Soviet trade organization V/O Machinoimport for materials related to the trans-Siberian pipeline. Mannesmann, Creusot Loire and Nuovo Pignone were to provide 41 compressor stations; Nuovo Pignone, AEG-Kanis, and John Brown Engineering were to provide 125 turbines. On October 6, 1981, the company signed a £61 million contract for gas turbines with the Soviet Union, each of which contained rotors produced by General Electric.[45] The agreement also included a contract for service and spare parts for the 21 turbines valued at £42 million. The £103 million pipeline alone contract accounted for 66% of corporate

business in 1981.

The first U.S. embargo, in December 1981, made it illegal for General Electric to export its rotors and related technology. General Electric abided by this restriction throughout the crisis, effectively cutting off John Brown Engineering's supply of the rotors needed to produce its compressors. When the embargo was implemented, John Brown had six of the twenty-one rotors it needed to complete the order. But, even if these turbines were built, the export control regulations forbade the reexport of turbines containing GE parts, including those produced by John Brown, AEG-Kanis and Nuovo Pignone.

John Brown Engineering was faced with balancing the costs and benefits of abiding by the embargo and canceling its contracts, fulfilling its contracts and risking losing access to the American market, and its primary source of rotors and rotor technology, or fulfilling as much of the contract as it could with the parts it currently possessed. Its first option was to complete the contract. Fulfilling the contract would gain the negotiated £103 million and retain the Soviet Union as a current and future customer. However, this raised a problem, to complete the contracts John Brown needed to find a new source of rotors. Three choices existed: find a new supplier of rotors, produce the rotors internally, or develop new turbines that used available materials. Alsthom Atlantique was capable of producing the needed rotors and was the most obvious alternate supplier. Using Alsthom Atlantique's rotors was feasible, but was only a second-best solution. Alsthom Atlantique could not make all the rotors John Brown Engineering needed,

nor could the rotors it produced be delivered quickly enough to fulfill the pipeline contracts on time. If John Brown failure to fulfill the contracts on time, it would forfeit 5% of the total contract as penalty. This decision making process took place simultaneously with those of Alsthom Atlantique, Alsthom's decision not to act as an alternate supplier eliminated the most likely and cost-effective alternate supplier of the rotors. The second and third choices of producing the rotors itself or redesigning the turbines to use alternate or existing rotors were possible, but both choices required a large investment in re-tooling production equipment without any guarantee of the future sales necessary to achieve economies of scale needed to profit from the investment. Furthermore, this would also take time, resulting in a penalty for late delivery. Despite the costs involved, fulfilling the contract would allow John Brown Engineering to gain most of the economic profit it had originally anticipated.

In lieu of trying to complete the entire contract and trying to find an alternate supply of necessary materials, John Brown Engineering could build and ship as many of the turbines as it could produce with existing parts. No new investment would be necessary and at least part of the contract would be fulfilled. Alternatively, it could terminate the entire contract and uphold the American embargo.

If John Brown chose either of these options, it would lose a substantial amount of profit and sales. Partial completion of the contract would result in a loss of more than £45 million; canceling the entire contract would mean a loss of £104

million. In addition, the contracts between the Soviet Union and Western firms included substantial penalties for failing to fulfill a contract. Unlike standard international business contracts, those related to the pipeline did not contain a "*force majeure*" clause. This clause absolves the supplier from delivery in the event of unforeseen or unavoidable circumstances. The removal of this clause from the contracts obligated the firms that abided by the American embargo to pay a substantial penalty for failing to deliver the goods.

The costs of abiding by the embargo could potentially have been ameliorated somewhat by the Export Credit Guarantee Department which traditionally insures British companies against non-payment by foreign customers. In the best of all possible worlds, this would cover 85% of the lost contract. It would not cover any of the associated penalties and could not make up for the loss of future business stemming from a company that breaks contracts. This relief, however, was not guaranteed.

While the second set of sanctions did not directly affect John Brown Engineering, since its supply had already been cut off, it provoked to British government. John Brown Engineering was a leading exporter in Great Britain and a leading employer in Scotland. Termination of the agreement would mean financial disaster to the company, but it would also mean a loss of numerous jobs in depressed sector in a depressed region of the country and a loss of export earnings during a recession. Loss of the contract was bad for John Brown Engineering and loss of the contract was bad for Great Britain. In response to the

second wave of U.S. sanctions, the British government instructed British companies not to comply with U.S. export control regulations. The British government did not declare that the companies involved were required to fulfill their contracts, but had John Brown Engineering declared its support for the embargo at that point, it is not likely that it would have received any compensation from the Export Credit Guarantee Department.

On September 9, 1982, the day the British government made its announcement, John Brown Engineering shipped six of its turbines to the Soviet Union. Because of the high costs of terminating the agreement, John Brown Engineering chose to continue production of the turbines as long as possible, without making the sizable investment of producing the rotors internally. Options for finding alternate sources of the rotors it needed remained open.

The actions of John Brown Engineering support the hypothesis that firms react based on their assessment of the costs and benefits of particular relationships. John Brown Engineering relied on rotors and rotor technology from General Electric. However, the costs of finding or developing alternate sources of supply of these rotors and technology were far less than the value of the contract in question. The threat of closing off U.S. technology was, therefore, not sufficient to gain the firms' cooperation. Similarly, access to the American market was not highly valued in comparison to the Soviet market. North and South America accounted for 27.4% of sales in 1982 for the John Brown Group of Companies, PLC of which John Brown Engineering is a major partner. John Brown Engineering itself had no

sales in the U.S.; by comparison, 66% of its sales were to the Soviet Union. The company chose the most profitable and only financially viable alternative.

Prior to shipping its turbines, John Brown Engineering also sought to clarify the legal and political issues involved in order to clarify the U.S policy, determine the legal extent and limits of the policy, and, once this was determined, gain legal council on how to address the embargo in the most effective manner. Once a denial order was issued against it, the company requested a formal hearing before the Commerce Department. It argued that the regulations were retroactive and therefore could not legally affect contracts that were concluded three months before the first embargo was enacted.

Dresser-France

Dresser-France also challenged U.S. actions on legal grounds. In response to the sanctions Dresser-France, a wholly owned subsidiary of Dresser Industries of the United States, stopped production of its compressors. The company, however, continued delivery of several compressors already manufactured. Delivery was in fulfillment of an agreement made between Dresser-France, a second French company that was government owned, and a Soviet trading company. The compressors in question were built with American technology that had been obtained prior to the first wave of U.S. sanctions against the Soviet Union. The U.S. Commerce Department responded to the shipment by threatening to penalize Dresser if the deliveries were completed. In response, the French government

threatened to penalize Dresser if the contract was not fulfilled.

Faced with a Catch-22, Dresser and Dresser-France filed suit against the regulations for declaratory and disjunctive relief. Dresser petitioned the Commerce Department to abandon the denial order and remove Dresser and its subsidiaries from the Black list. U.S. actions were challenged on the basis that the denial of export privileges without trial violated due process and that the denials were unlawful because of their extraterritorial and retroactive effects.[46]

A detailed discussion of the litigation by the firms that challenged the pipeline sanctions at the administrative level and in the U.S. District Court in Washington is not necessary at this point.[47] It is important, however, to appreciated the high costs of such litigation and the small likelihood of success. The companies involved had to risk the possibility of civil, criminal and administrative sanctions in order to get a judicial hearing on the merits of their cases. Such a review would have tested the President's legal authority to take the actions he had chosen to pursue and was extremely difficult for the companies involved to attain. For example, Dresser argued that the Government's actions were inconsistent with international law and went beyond the legal limits of its authority as specified by the Export Administration Act. However, even though its European contracts had already been nullified by order of the Commerce Department, Dresser Industries never succeeded in getting a hearing on these issues in court.

Like John Brown Engineering, Dresser-France was dependent on access to

American suppliers but was not dependent on access to the American market. It fits in the lower left hand corner of Table 4.2. As predicted, Dresser-France's policy was mixed. While it did stop production of compressors, it did not stop delivery of compressors it had already completed. Furthermore, rather bow to American threats like Alsthom-Atlantique, it attempted to clarify its position and change American policy.

D. U.S. Influence over States throughout the Pipeline Crisis

While the threat of technology denial has enhanced the United States bargaining position in CoCom and in bilateral negotiations regarding enforcement of its policies by allied countries, the application of controls to actors operating within allied countries had political and diplomatic costs. To allied governments, such controls represented a U.S. preference for unilateralism. They implied a lack of willingness to respect European concerns and a tendency to neglect multilateral fora for negotiating such policies. French diplomates raised this point explicitly following the 1982 Pipeline incident, claiming that U.S. export controls "reveal an unacceptable lack of confidence in the way we implement and enforce the CoCom embargo."[48]

The Europeans reacted very strongly to the second round of U.S. sanctions against the pipeline. The sanctions undermined European efforts to acquire what they perceived to be a safe and efficient alternate source of energy for Europe and threatened the thousands of jobs pipeline construction could offer during a

recession. It is interesting to note that while these economic and strategic concerns were important factors, political decision makers invoked something less tangible, but even more significant: nationalism and the sovereign autonomy of the European states. As a leading commentator noted in the West German weekly, *Der Spiegal*, "the Americans were treating us as if we were not sovereign states. We could not sit still and let them run our lives for us."[49]

The European allies vehemently challenged the American initiative. The British, French, German and Italian governments and the European Community all protested against the extensions of U.S. jurisdiction as being contrary to international law.[50] The United States failed to anticipate the extent of the European reaction. Most surprising were the strong reactions of French President François Mitterrand and British Prime Minister Margaret Thatcher, both of whom had conceptions of East-West relations similar to President Reagan.

The Mitterrand government had proven to be a committed Atlanticist and a staunch and reliable ally in dealings with the East, yet French Foreign Minister Claude Cheysson claimed the sanctions represented a "progressive divorce" between the U.S. and France.[51] A spokesman for the Ministry argued that "A major mistake has been to underestimate national price in France, to think that we would be so easily willing to abide by what the Americans impose on us."[52] Margaret Thatcher argued that the real question was "whether one very powerful nation can prevent existing contracts from being fulfilled."[53] And, questioning the presumption and violation of sovereignty, the European community protested U.S.

actions, calling them "unacceptable interference" in its sovereign affairs.[54]

The significance of the severity of these reactions becomes apparent when they fail to reappear in response to American efforts to control the movements of computers and other high-technology goods discussed in the next chapter. It is particularly interesting note that allied leaders were unified in their indictment of American policy as a violation of their sovereign integrity. Violation of sovereignty, rather than economic hardship, was cited in national and European Community parliaments as the primary justification behind strong European condemnation of American efforts to control actors and resources within European borders. As will be discussed in the next chapter, American violations of "sovereign integrity" are far more severe throughout Operation Exodus than the Pipeline crisis, yet no protests are made. The primary difference between the two events is the level of dependence between these countries and the United States. In the Pipeline crisis, the European governments did not perceive themselves to be dependent on American goods or technology. While replacing the restricted items would be costly, it could be done internally. In contrast, as will be come apparent in the next chapter, European governments believed that they were dependent on the continued supply of American computer and other high technology goods for their national economic and military security that could not be replaced. Comparison of the two cases demonstrates that government as well as firm action can be explained in terms of dependence on American goods or access to American markets.

To greatly complicate alliance relations, just one month after the second wave of sanctions took effect, Ronald Reagan announced that the United States and the Soviet Union had signed a new deal for 23 million metric tons of grain. It was the height of hypocrisy that the U.S. should ask the Europeans to forego the economic advantages of the pipeline while claiming that the "Soviet market is the biggest in the world, and we want to recapture it . . . Our national economy needs it."[55]

Again, rather than focussing public attention on strategic or domestic economic issues, Prime Minister Margaret Thatcher extolled the sovereign integrity of Great Britain condemning the extraterritorial and retroactive nature of Washington's demands. She declared:

> It is wrong for one very powerful nation. . . [to try to prevent the fulfillment of] existing contracts that do not, in any event, fall under its jurisdiction.[56]

Britain's trade secretary, Lord Cockfield, invoked the Protection of Trading Interest Act, ordering four of the largest British companies with pipeline contracts -- three of which were subsidiaries of U.S. corporations -- to disregard the U.S. embargo.[57]

In an even stronger measure, the French Minister of Industry, Jean-Pierre Chevenement, signed an administrative decree ordering Dresser-France to deliver its compressor equipment. In response, the French Government reinstated an ordinance from January 8, 1959 which provides for '*la fourniture des prestations de biens et de services nécessaires pour assurer les besoins du pays dans les cas prévus par la loi*'.[58] While this statute specifically referred to the control of

goods and services during wartime, it was applied for *'la raison d'Etat,'* by M. Chevenement, and served as the basis for his authority to direct French companies to fulfill their contracts. The West German and Italian governments both states their intentions to defy the U.S. sanctions, but neither government forbade its firms from abiding by U.S. policy or ordered them to fulfill their agreements.

The first shipments of pipeline equipment left European ports on route to the Soviet Union on August 26, 1982. In direct violation of U.S. policy, three 57-ton compressors left France at Le Havre on route to the Soviet Union.[59] The compressors had been built by Creusot-Loire and Dresser France. Four days later, a second shipment was sent from Glasgow, Scotland carrying six turbines built by John Brown Engineering with General Electric parts.[60] Two of 57 turbines being manufactured in Italy also using GE rotors were shipped by Nuovo Pignone, a state-owned Italian company, on September 4.[61] And, on October 1, 1982, AEG-Kanis shipped two gas turbines built with U.S. origin parts and technology to the Soviet Union.[62]

In response, the United States carried out its threat. Under Secretary of Commerce Lionel Olmer invoked section 11 under the Export Administration Act and section 388.19 of the Export Administration regulations, placing these companies on a temporary denial list, forbidding access to all American goods, services, and technology and subjecting them to a fine of $100,000. Sanctions were placed against Nuovo Pignone on September 4, John Brown Engineering on September 9, AEG-Kanis on October 5, and by the end of October, Mannesmann

had joined 12 European companies as black listed violators of the embargo.[63] Of these companies, Dresser-France was a wholly owned subsidiary of a U.S. corporation. The others were allegedly subject to sanctions because they were licensees of technology from U.S. corporations. AEG-Kanis and Mannesmann Anlagenbau were incorporated in West Germany and were neither owned nor controlled by U.S. companies. Mannesmann was sanctioned due to the Department of Commerce belief that it had entered into contracts for the delivery of gas turbine engines to the Soviet Union even through no such engines had actually been exported.

The temporary denial orders did the following:[64]

1. revoked all outstanding validated export licenses concerning U.S. origin commodities or technical data for or relating to oil and gas exploration, production, transmission or refinement in which the respondent or any related party agrees or participates;

2. prohibited the respondent as well as its successors, officers, etc. , from participating directly or indirectly in any way in any transaction involving U.S. origin commodities or technical data for or relating to oil and gas exploration, etc.;

3. extended the denial of export privileges, not only to the respondent, but also to its agents and employees and to any successor company; and

4. prohibited any person or company without prior authorization from the department from in any way participating in any export, reexport, transshipment, diversion, etc. or and or gas related commodity or technical data exported form the U.S. on behalf or in association with any of the respondent companies.

At the request of Secretary of State George Schultz and Commerce Secretary Malcolm Baldridge, the counter-sanctions were narrower in range than initially intended and were restricted to equipment, services and technology directly related to oil and gas.[65] These minor adjustment did not moderate European anger or protest. Rather, as argued in an *New York Times* editorial on September 1, "incompetent American diplomacy ha[d] turned the disagreement into a battle over sovereignty that mocks the unity of the Atlantic alliance."[66]

Dependence and the Success of U.S. Influence

Allied reactions to the crisis, like the reactions of firms, can be explained in terms of dependent relationships. The Europeans did not believe that the pipeline would increase their vulnerability to the Soviet Union. Rather, the pipeline served to mitigate the costs of an unwanted dependence on a limited number of suppliers of energy from OPEC. At the same time, the pipeline provided a market for specialized exports that offered increased national revenue and promised employment in depressed regions and sectors of the European economies.

While Soviet trade still accounts for only 1.14 percent of American trade, and just for 4.14 percent of overall EEC trade.[67] Germany and France have the largest West European trade with the Soviet Union, yet it only accounted for 6.20 percent and 4.20 of their trade and 2.90 and 1.58 percent of their GNP, respectively. Although East-West trade accounted for a relatively small proportion of overall trade or GNP, it is very important for the economic vitality of several key

industries. This was true both in basic products, like steel, that are suffering from a depressed market and high technology, both seen as crucial for Europe's economic vitality. According to the Office of Technology Assessment in Washington, 92,000 West German jobs depended on trade with the Soviet Union. While this represented only .4 percent of the West German work-force, these gobs were highly concentrated in individual sectors, and an additional 220,000 jobs depended on related commerce with the east.[68] Similarly, in Great Britain, 12 companies with contracts valued at $385 million were effected. With an unemployment rate of 13.5%, the British government expressed concern about the potential job losses for the cancellation of any of these contracts.[69] With elections approaching in each country, any action against the pipeline could have serious political consequences.

The United States did not offer a suitable alternative source of energy and did not provide an alternate market for the embargoed goods. As a result, threatening to cut off access to its markets had little effect on European decision making. Similarly, while European firms relied on the supply of certain components provided by American companies, alternates were available outside of the United States. Limited access to American rotors was not considered of vital importance to the European governments. As a result, the threat of cutting off access to American products and technology did not alter European policy.

The British, French and German governments remained defenders of the pipeline throughout the crisis. Despite U.S. enforcement actions some firms, including Dresser France, continued to ship equipment and technology related to the

pipeline to the Soviet Union.[70] This supports the proposition of the community power literature that the need to carry out a threat demonstrates the lack rather than presence of power.

E. End of the Pipeline

After five months of litigation, much public debate, and resistance by the allies, President Reagan directed that the December 1981 and June 1982 controls be rescinded effective November 13, 1982.[71] The specific reasons for lifting the sanctions at that time are not clear. The U.S. Government stated officially that the decision resulted from the fact that the U.S. and Western Europe had reached "substantial agreement" on a policy regarding East-West trade. The White House initially presented the agreement as a trade-off. It agreed to lift the sanctions in exchange for European acceptance of a more restrictive trade policy towards the Soviet Union, especially with respect to credits.

On 15 November, however, President Mitterrand challenged the U.S. interpretation of the agreement, stating that "France is not a party to what is *perhaps* not even an agreement."[72] Subsequently, the White House and State Department admitted that the pipeline sanctions were not mentioned during the recent trade negotiations, and that the lifting of the sanctions was a unilateral act by the President -- an awkward withdrawal from a misconceived and divisive policy.

The volume of East-West trade did decline in the 1980's, but while the

decline in U.S.-Soviet trade was political in nature, the decline in European-Soviet trade during the same period was primarily the result of economic factors. A recession in the West led to an overall decrease in world trade by 2% in 1982, and the growing East-European debt to Western banks -- combined with the failure of the Soviet Union to guarantee East European loans -- made European investors wary.[73]

Despite all its efforts, the United States was unable to solicit sufficient European cooperation to terminate the construction of the trans-Siberian pipeline. With only minor delays, and great Soviet fanfare, natural gas began to flow through the trans-Siberian pipeline on New Years Day, 1984.

VI. Conclusion

Dependence on access to American markets and the products and technology produced by its firms provides the United States' government with a means of influencing actors across international borders. This case demonstrates that firms which were dependent on access to the American market or the supply of American components or technology during the trans-Siberian pipeline crisis chose to abide by U.S. regulations, where as those that were not dependent on the U.S. or were more dependent on others chose not to accept U.S. initiatives.

The primary means of enforcement used by the United States to enforce its policies involved restricting access to its firms and its markets. When dependence

on these firms and markets was low, the penalties imposed by the United States for violating the embargo had little effect.

This case also confirms subsidiary findings from the statistical analyses in the previous chapter that firms value access to markets more highly than supply of resources. Firms are often able to find or develop alternate sources of supply when access to needed items is restricted; but, they often cannot find or create alternate markets for their goods. In the pipeline case, most of the restricted components could be reproduced outside of the United States. Further, the Soviet Union offered a market for goods that the United States did not provide. Consequently, restricting access to American suppliers and the American consumer market had a minimal affect on these firms.

Corporations must act within the legal limits prescribed by the countries where they operate. As a result, initial corporate decisions to acquiesce to American pressure can be overturned by national legislation in these countries. Host government intervention against the United States is an intervening variable, mediating the effect of dependence on firm actions. Host government reactions to U.S. policy during the pipeline crisis can, however, also be explained in terms of dependent relationships.

In the pipeline case, the allies believed that they were dependent on energy imports and were particularly vulnerable to oil external suppliers. Diversification of energy sources to include Soviet natural gas was a means of minimizing this dependence. Pipeline construction guaranteed access to the Soviet gas fields.

Furthermore, the pipeline stimulated depressed sectors of the economy by providing employment and export earnings. The United States did not offer a comparable energy alternative and could not compensate the countries involved for the loss of economic vitality form the embargo. Furthermore, since from the European perspective, the pipeline increased rather than decreased security, their economic and security dependence on the United States were low. As a result, the United States was not able to get the allies to do something they did not want to do. American influence throughout the pipeline crisis was not completely absent, but did it not succeed in implementing its export control policy abroad.

Table 4.8: Firm and State Dependence on the United States, 1980-1984

Dependence on Supply	Dependence on Market Access	
	Low	High
Low	Mannesmann (FRG) Dresser-France (FR) John Brown (UK)	-
High	Alsthome-Atlantique (FR)	-

Citations

1. This decision to combine comparative case studies with statistical analyses was developed independently, but the author is grateful to Helen Milner for suggesting a fine example of the same method used to analyze deterrence theory. Paul K. Huth, *Extended Deterrence and the Prevention of War* (New Haven: Yale University Press, 1988).

2. For a summary of the pipeline project, see: Ed A. Hewett, "The Pipeline Connection: Issues for the Alliance," *The Brookings Review* (Fall 1981), pp. 15-20; and Bruce Jentleson, *Pipeline Politics* (Ithaca: Cornell University Press, 1986).

3. Homer E. Moyer and Linda A. Mabry, *Export Controls as Instruments of Foreign Policy: The History, Legal Issues, and Policy Lessons of Three Recent Cases* (Washington, D.C.: University of America Press, 1983).

4. *New York Times*, 22 December 1981.

5. *New York Times*, 16 December 1981.

6. Soviet Involvement in Poland, Statement on U.S. Measures Taken Against the Soviet Union, December 29, 1981, 17 *Weekly Comp. Pres. Doc. 1429* (January 4, 1982). See also: Moyer and Mabry, p. 67.

7. 47 Federal Regulation 141 (1982). The pre-existing regulations required a validated export licenses for exports relating to oil and gas exploration and production equipment and technology. See also: Moyer and Mabry, p. 67.

8. Moyer and Mabry, p. 68.

9. Antony Blinken, *Ally versus Ally: America, Europe and the Siberian Pipeline Crisis* (New York: Praeger, 1987), p. 49.

10. This series of arguments parallel Albert Hirschman's analysis of Nazi Germany's offer of inexpensive energy and industrial resources to Austria prior to World War II as a means of increasing Austrian dependence on Germany. Having increased Austrian dependence on Germany, Hitler was able to increase his political

hold on Austria by threatening to cut off its access to basic materials needed for its economy and people. To the hard-liners in the U.S. government, European dependence on the Soviet Union paralleled Austrian dependence on Germany. At the same time, without Western assistance a huge Soviet resource would remain largely underdeveloped and unproductive. The dependence of the Soviet energy sector on Western technology and assistance was a political resource that, like Germany, the West could potentially exploit to its advantage.

11. Of the European states, Great Britain, the Netherlands and Norway produce enough gas domestically for their own consumption. In contrast, Germany, France, Italy and Austria import between 55% and 70% of their natural gas, about half of which is imported from non-OECD states. See: Antony Blinken, p. 20.

12. Antony Blinken, p. 21.

13. *New York Times*, 12 January 1982, p. A2, and "Text of Declaration on Poland by Foreign Ministers of Nato," *New York Times*, p. A8. See also: Bruce Jentleson, *Pipeline Politics* (Ithaca: Cornell University Press, 1986), p. 192.

14. Bruce Jentleson, p. 192.

15. *Newsweek*, 28 December 1981, p. 19.

16. *New York Times*, 3 January 1982, p. A14, and 16 December 1981, p. A16. See also: Moyer and Mabry, p. 79.

17. Moyer and Mabry, p. 80.

18. Moyer and Mabry, p. 80.

19. European community Members Agree to Cut Imports from the Soviet Unions," *U.S. Export Weekly*, (BNA) no. 397, p. 597, May 2, 1982. See also: Moyer and Mabry, p. 80.

20. Denis Lacorne, "Giscard's and Mitterrand's East-West Policies," p. 129.

21. Pierre Hassner, "The View from Paris," Lincoln Gordon, ed. *Eroding Empire* (Washington, D.C.: The Brookings Institution, 1987), pp. 228-9.

22. Alexander Haig, *Caveat: Realism, Reagan and Foreign Policy* (New York: MacMillan, 1984), p. 305 cited in Blinken, p. 101.

23. The OECD negotiations had re-categorized the Soviet Union as a "rich" as opposed to a "middle income" country. As a result, it was to be granted an interest rate between 11 and 12.4% rather than the middle income rates of 7.8 to 11%.

24. It is interesting to note that the Europeans and notably the French are asking the United States to perform a function often attributed to a "hegemon." In essence, it is asking the U.S. not to give up its hegemonic role. Antony Blinken, p. 105.

25. Alexander Haig, cited in Antony Blinken, p. 102.

26. *Financial Times*, 25 June 1982, cited in Bruce Jentleson, pp. 193-194.

27. Alexander Haig, cited in Antony Blinken, p. 102.

28. *Financial Times*, 25 June 1982; *New York Times*, 15 June 1982. See also: Antony Blinken, p. 102.

29. *Financial Times*, 25 June 1982; *New York Times*, 15 June 1982, see also: Antony Blinken, p. 102.

30. 47 Federal Regulation 27, 250.

31. Alexander Haig, cited in Antony Blinken, p. 103.

32. Antony Blinken, p. 104.

33. "East-West Economic Issues: Questions and Answers," May 26, 1983, State Department Background Paper for Williamsburg Summit, section IV, question 1. Also see: Bruce Jentleson, p. 194.

34. Bruce Jentleson, p. 194.

35. Kevin Done, "Mannesmann wins extra pipeline order worth £53m," *Financial Times*, 2 April 1982.

36. Denis Lacorne, "Giscard's and Mitterrand's East-West Policies," p. 130, and Alexander M. Haig, Jr., *Caveat* (New York: MacMillan Press, 1984), p. 305.

37. The reasons behind this interpretation have been explained largely in terms of political infighting between the Commerce Department and the Defense Department. This argument claims that the Commerce Department did not want to appear "soft" on economic sanctions, and therefore took a hard-line approach to the initial sanctions. See: Antony Blinken, p. 97.

38. Stefanie Ann Lenway and Beverly Crawford, "When Business Becomes Politics," *Research in Corporate Social Performance and Policy* 8 (1986), p. 44.

39. *Wall Street Journal*, 23 July 1982, see also: Antony Blinken, p. 113.

40. Antony Blinken, p. 97.

41. For a discussion of European efforts to develop alternate sources of supply, see: Alex Krause, "Europeans Seek to Circumvent Pipeline Ban: Replacing Rotors Embargoed by Reagan is Key Element," *International Herald Tribune*, July 26, 1982.

42. *New York Times*, 20 August 1982, p. D4 and 27 August 1982, p. D1.

43. Joseph E. Pattison, "Extraterritorial Enforcement of the Export Administration Act," in Michael R. Czinkota ed., *Export Controls: Building Reasonable Commercial Ties with Political Adversaries* (New York: Praeger, 1984), p. 90.

44. Stanley D. Nollen, "The Case of John Brown Engineering and the Soviet Gas Pipeline," in Michael R. Czinkota, editor, *Export Controls: Building Reasonable Commercial Ties with Political Adversaries* (New York: Praeger, 1984), p. 113.

45. John Brown Engineering Ltd., "Press Release," October 13, 1981. See also: Stanley Nollen, p. 117.

46. Motion for Temporary Restraining Order at 20-24, Dresser Industries v. Baldridge, No, 82-2385 (D.D.C. filed August 23, 1982). Also see: Moyer and Mabry, pp. 72-73.

47. For more a discussion on the legal proceedings, see: Arthur Appleton, "Dresser Industries: The Failure of Foreign Policy Trade Controls Under the Export Administration Act," *Maryland Journal of International Law* 8 (1984), pp. 122-143.

48. Mastanduno, "CoCom and American Export Control Policy," p. 207; *Financial Times* 16 August 1984, p. 1; and A.V. Lowe, "Public International Law and the Conflict of Laws: European Response to the U.S. Export Administration Regulations," *International Comparative Law Quarterly* 33 (1984), pp. 515-530. This perspective was not new. Indeed, it is reminiscent of earlier discontent resulting from the imposition of the Battle Act in 1951 shortly after the beginning of multilateral meetings in CoCom to coordinate exports among the allies. In 1951, for example, the British press argued that the Battle Act was "incompatible with the free and equal partnership between the United States and its allies." Similar sentiment is reflected in the comment that: "The Battle Bill implies either that America's allies are disloyal or that they are incapable of deciding for themselves what is the balance of gain and loss in their exchanges with the communist countries -- in short that they are either fools or rascals." Gunnar Adler-Karlsson, *Western Economic Warfare, 1947-1967* (Stockholm: Almquist and Wiksell, 1968), p. 3.

49. Antony Blinken, p. 105.

50. "European Protests Reagan Sanctions on Pipeline Sales," *New York Times*, 13 August 1982. Test of the European message is reprinted in the same article. See also: International Legal Materials, 21, 1982 at 891. For a comparison to European reactions to American efforts to embargo pipeline equipment in 1962, see: "U.S. Efforts to Block Soviet Gas Pipeline Recalls Failed Embargo of 20 Years Ago," *Wall Street Journal*, 14 July 1982.

51. Bruce Jentleson, p. 194.

52. Felix Kessler, "France Disavows Allied Accord on Trade Cited by Reagan in Lifting Pipeline Ban," *Wall Street Journal*, 15 November 1982.

53. *Economist*, 26 June 1982, pp. 52-53; *International Herald Tribune*, 2 July 1982; *Newsweek*, 2 August 1982, p. 27; *New York Times*, 2 July 1982, p. A1, A4.

54. *New York Times*, 13 August 1982, p. A21.

55. *New York Times*, July 31, 1982.

56. *Financial Times*, 30 June 1982, see also: Antony Blinken, p. 105.

57. These companies included: John Brown Engineering, Ltd., Smith International (North Sea), Ltd., Baker Oil Tools (United Kingdom), Ltd., and AAF Ltd.

58. The French Government could not rely on its 1980 blocking statute because is was only applicable as a "discovery blocking statute." JO 17 July 1980 at 1,799, and JO 13 July 1938 at 8,330; JO 8 January 1959 at 548. Also cited in C. Olmstead, ed. *Extraterritorial Application of Laws and Responses Thereto* (Oxford: ESC Publishing Limited, 1984), p. 64.

59. *New York Times*, 27 August 1982, D1, col. 3.

60. *New York Times*, 1 September 1982, D2.

61. *Washington Post*, 5 September 1982, A1, 8 September 1982, A4.

62. *New York Times*, 2 October 1982.

63. Office of Technology Assessment, *Technology and East-West Trade: An Update* (Washington, D.C. U.S. Government Printing Office, 1983), p. 31. See also: Antony Blinken, p. 107; and Bruce Jentleson, pp. 195-196.

64. Olmstead, p. 51.

65. Bruce Jentleson, p. 196.

66. *New York Times*, 1 September 1982, p. A22; cited in Bruce Jentleson, p. 196.

67. See Stephen Woolcock, *Western Policies and East-West Trade* (London: Royal Institute of International Affairs, 1982) and Gary Bertsch, *East-West Strategic Trade* (Paris: Atlantic Institute, 1983), p. 26, and Blinken, pp. 91-92.

68. Office of Technology Assessment, *Technology and East-West Trade* (Washington D.C.: U.S. Government Printing Office, 1979), p. 63. See also: Antony Blinken, p. 92.

69. "Britain Orders Firms To Ignore U.S. Curbs," *International Herald Tribune* 3 August 1982.

70. See Moyer and Mabry, p. 72.

71. Twin bills were introduced in the House and Senate on July 22 and August 13, respectively, to repeal the December 30, 1981 and June 22, 1982 regulations against the Soviet Union. The House bill was narrowly defeated -- 206 to 203 -- on September 29, and the Senate had not yet acted on its bill before the President Rescinded the regulations on November 13, 1982.

72. Olmstead, p. 52. See also: Felix Kessler, "France Disavows Allied Accord on Trade Cited by Reagan in Lifting Pipeline Ban," *Wall Street Journal*, 15 November 1982.

73. The Soviet debt to the West was about $10.2 billion in 1982, the Eastern Block owed over four times as much, approximately $48 billion.

Chapter 5

Operation Exodus and the IBM Letter, 1981-1987

I. Introduction

This chapter analyzes the ability of the United States' government to control the movement of high technology goods and information abroad from 1981 through 1988. It focuses on allied national and corporate actions taken in response to enhanced enforcement efforts by the United States Customs Agency under a program entitled Operation Exodus. The chapter argues that the success of American influence attempts during this period can be explained in terms of firm and state dependence on American suppliers and access to the American consumer market.

Restricting the flow of high technology to the East through Operation Exodus was a centerpiece of the Reagan Administration's policy of economic Cold-Warfare against the Eastern bloc, as was the Pipeline embargo discussed in the previous chapter. The basic conflict of interests among the allies regarding the goals of and means to pursue East-West trade remained largely unchanged. Yet, in contrast to the failed American attempts to block construction of the trans-Siberian pipeline, the United States' government largely succeeded in implementing this component of its export control policy at home and abroad.

Through Operation Exodus, as in the previous case, the United States' government was trying to get others to do something they did not want to do. This case takes place at virtually the same time and in the same international environment as the Pipeline embargo. Traditional explanatory variables of state

influence such as American hegemony in the Western alliance, systemic polarity and the perception of an external threat to the alliance remain relatively constant, yet, the outcomes of the two cases vary substantially. These differences correlate strongly to changes in the hypothesized variables of firm and state dependence.

If the generalizations of the statistical analyses in Chapter 3 are correct in predicting when the United States will be able to implement its export control policy successfully, then the individual cases should document the role of firm and state dependence on access to American markets and American suppliers. When states or firms are dependent on the United States, one would expect the implementation of American policy to be successful; when they are not, it should not be. This chapter argues that the actions and reactions of all states and firms throughout this period can be explained in terms of their dependence on either resources or access to foreign markets.

In contrast to the Pipeline embargo, this case may be cited as an example of successful American influence within the Western alliance. As in the previous chapter, however, before making such a judgement one must analyze the events systematically in terms of the goals the United States sought to accomplish, who it sought to influence and what actions it wanted the targeted allies to take. A closer analysis of this period, fully considering these factors reveals that American influence was not absolute. Firms which were highly dependent on access to American markets to export their goods, or were dependent on the supply of technology from U.S. firms, altered their behavior as a direct result of U.S. actions.

Similarly, states which were dependent on the United States for the supply of vital resources and, to a lesser extent, access to the American market for their exports, complied with U.S. initiatives. When states or firms were highly dependent on the United States, the U.S. was able to get them to do things they would not otherwise have done. Currently, the dominance of the American consumer market and American industry in high technology goods has increased foreign dependence on the United States. As a result, the United States has been able to implement its export control policy in this sector successfully.

These cases are not intended to be comprehensive historical explanations of actions taken during Operation Exodus. Each case is analyzed with the purpose of assessing the relevance of particular explanatory variables on the successful implementation of United States export control policy abroad. Comparing the success of American implementation efforts during Operation Exodus with the failed effort during the pipeline embargo highlights the sources, extent and limitations of U.S. influence in the Western alliance.

A. Chapter Outline

This chapter is divided into four sections. First, the introduction provides a synopsis of Operation Exodus in historical context. It presents the goals of U.S. policy, identifies its primary targets and discusses the means of implementing the policy. The second section analyzes the sources of American influence. It defines dependence and presents hypotheses linking dependence and American influence.

Using these hypotheses, predictions are made of the American government's ability to implement its policy successfully. Section three evaluates these predictions in terms of the actual decisions made and actions taken by various firms and allied governments during the crisis. The final section outlines some of the costs and limitations of using dependence as a source of political power by highlighting the reciprocal nature of dependence. It argues that dependence may be used by all members of the alliance as a source of political influence.

B. Operation Exodus and U.S. Export Control Policy

Historical Context

From 1981 through 1988, the Reagan Administration pursued a defensive military build-up against the Soviet Union. A key component of this policy involved the development and military application of advanced American technology. To guarantee continued American superiority in advanced technologies, the United States' government tightened its control over the movements of strategically "sensitive" products at home and abroad. Through changes in domestic legislation, multilateral negotiations, and unilateral policing and enforcement on a global scale, the United States successfully extended its control over the activities of individuals and firms operating throughout the globe.

The Reagan Administration sought to expand the monitoring and enforcement of existing export controls, particularly those regarding high technology goods and information. With the support of the Defense Department, Operation Exodus was

established under the Customs Service of the Treasury Department in 1981. The new program provided increased financial and human resources for the export control division of the Customs Service. It began with a budget of $30 million and a complement of 400 new Customs agents assigned in foreign offices located in trading centers like London, Paris, Bonn, Rome, Tokyo, Hong Kong and Singapore.[1]

Primary Goals of American Export Control Policy

The primary objective of U.S. export control policy is to prevent strategically sensitive technology and products from being diverted to specific restricted countries. In the early 1980's, U.S. export control efforts increasingly focused on the movements of high-technology goods and information. New intelligence reports indicating an expansive and growing Soviet effort to obtain Western technology provided a strong motivation and justification for Operation Exodus.[2] The declared goal of Operation Exodus was interdict the flow of technology to the East by cracking down on illegal shipments of technology. Operation Exodus concentrated its efforts on exports of microelectronic systems and computers, telecommunications equipment, lasers, weapons guidance equipment, and the products and knowledge that made the production of these goods possible. In the words of Joseph Fitchett, "The program was designed to make Customs agents as vigilant at stopping high-tech smuggling as they traditionally have been at halting

drug imports."[3]

Targets

The success of U.S. export control policy requires the cooperation of the multinational firms, including their foreign subsidiaries, and of the host countries within which these firms operate. If the Soviet Union or other targeted states were to acquire access to comparable goods or technology from non-American sources, then the American restrictions would do little to slow the economic and military development of its adversaries. Securing the cooperation of all potential alternate suppliers is, therefore, crucial for the policy to be successful. As a result, a primary objective of any such policy is to secure international corporate and national government participation. The targets of Operation Exodus include any actor that can provide the Soviet Union or other targeted states with goods or technology restricted by U.S. export control regulations. The cases discussed in this chapter are involved states and firms involved in the computer, electronics and telecommunication industries.

Means of Enforcement

The United States has three primary means of securing the participation of allied governments and firms in its embargo. First, it can attempt to persuade the others that its high technology controls are an appropriate and necessary response to the Soviet military build-up and espionage efforts. Throughout the 1980's, using

bilateral and multilateral fora, the American government tried to obtain voluntarily compliance and support from its allies and the international business community. It sought to increase the monitoring and enforcement practices of the Coordinating Committee on East-West Trade (CoCom), and, after extended negotiations, CoCom members did agree to revise and expand the number of high technology goods they restricted.[4] Second, the United States seeks to prevent violations by both the CoCom controls and its own export control laws through early detection and by closely reviewing license applications.

Third, the United States government can use positive and negative sanctions to induce or coerce participation in its control policy. When diplomatic persuasion and early detection efforts fail to secure participation in the embargo, the United States government can use positive and negative sanctions to secure compliance. Promises of a government contract or access to sophisticated technology, such as S.D.I., can be effective positive incentives for participation in American policy initiatives. Alternatively, threats may be used to enforce compliance. The United States has sought to deter violators by demonstrating its willingness to aggressively use criminal and Administrative sanctions available under the Trading with the Enemy Act of 1917 and the Export Control Act of 1949, and subsequent revisions.[5]

The backbone of American threats against firms operating abroad involves the possibility of placing these non-cooperative firms on the Economic Defense List (also known as the Gray List) and "Atlas" (also known as the Black List).[6] The

lists effectively terminate access to all American suppliers and the American market. These lists provide a means of influencing firms at home and abroad without formally extending United States regulations beyond its borders. The denial lists are maintained by the Department of Commerce and apply only to the export of goods from the United States, and, therefore, do not "legally" extend abroad, though they do have an extraterritorial effect. It is illegal for an American company to conduct business with any firm which appears on these lists. As a result, threats of placing firms on the Gray or Black List provide the American government with a very potent means of exploiting foreign dependence on American suppliers or access to American markets.

II. Sources of U.S. Influence and Predictions of Success, 1981-1988

A. Sources of U.S. Influence

Threatening to cut off access, or promising additional access, to the American consumer market and American suppliers can be a potent means of achieving political ends. The effectiveness of this threat, or promise, is a function of the value the targeted actor places on American suppliers or the American market. If the actor is dependent on either one, then the sanction is more likely to be successful. Dependence was defined in Chapter 3 in terms of the costs of foregoing a particular relationship. The more costly it is for an actor to forego a particular relationship, the more dependent it is on the maintenance of that relationship. As discussed above, the costs associated with terminating a trading

relationship with the United States are a function of two factors: the relative proportion of trade an actor conducts with the United States, and the availability of alternate trading partners.

Dependence as a function of relative dominance of American exports or imports and the concentration of world exports or imports is summarized in Table 5.1.

Table 5.1: Dependence as a Function of Trade and Concentration

Concentration of World Exports/Imports	Proportion of U.S. Exports/Imports	
	Low	**High**
Low	Low dependence	High sensitivity but low vulnerability to dependence on US
High	High vulnerability to dependence on others	High vulnerability to dependence on US

Firm and state dependence can be further broken down into dependence on access to markets and on the supply of certain goods. From the statistical analyses in Chapter 3, it appears that national governments are more likely to acquiesce to American control when the supply of certain goods is threatened, especially when these goods or technologies are related to a state's national security. In contrast, firms will often attempt to develop alternate sources of supply when access to

traditional suppliers is restricted. As demonstrated by the actions of John Brown Engineering during the pipeline crisis, discussed in the last chapter, firms are often willing to develop them internally when alternate external suppliers are not available. This policy minimizes dependence, but it may require a large financial and technological capability. Alternate markets are, however, even more difficult to develop than finding alternate sources of supply. While national governments appear to be less concerned about access to foreign markets for their firms than the supply of goods they cannot obtain elsewhere, firms are more protective of market access than supply.

Firm and state reactions to U.S. initiatives against their interests are summarized as a function of dependence on market access and dependence on supply in Table 5.2.

Table 5.2: Successful Influence as a Function of Dependence

Dependence on Supply	Dependence on Market Access	
	Low	**High**
Low	Firm defiance, host government intervention	Firm compliance, host government indeterminate
High	Firm indeterminate, host government acquiescence	Firm compliance, host government acquiescence

This model can be used to predict the outcome of U.S. efforts to implement its

export control policy abroad during Operation Exodus from 1981-1987.

B. Predictions of American Success, 1981-1987

Beginning in 1981, the Reagan administration sought to increase its monitoring and enforcement of American controls over the international movement and diffusion of high technology goods and information. Operation Exodus is a key component of this effort. Operation Exodus focuses its enforcement efforts on illegal shipments of microelectronic systems, computers, telecommunications equipment, lasers, weapons guidance equipment, and the products and knowledge that made the production of these goods possible. Using the model outlined above, predictions of the American influence over allied governments and firms operating in their territories are first made at the industry level of analysis. This is followed by an analysis of individual American influence attempts in order to demonstrate the causal links between dependence and political influence.

Industry Level of Analysis

This section predicts the reactions of firms operating in the computer and telecommunication industries to this policy. These firms are subdivided by industry to facilitate comparative analysis. Each of these industries is, however, strongly integrated with the others, making precise classification of these firms into specific industrial sectors is difficult. For example, the "telecommunications industry" is still used pervasively as a convenient label, yet telecommunications equipment is

composed of a myriad of sophisticated computer and electronic components.[7] Changes in technology and national regulatory policy have dramatically diffused has previously been considered a distinct industry. Despite the difficulty of differentiating among these industries, the telecommunication and computer industries will be analyzed as distinct groups. As there is not standard classification for "high-technology" industries, Standard International Trade Classifications (SITC) are used to classify each firm in a particular industry.

International Computers Limited (ICL), Plasma, and Systime PLC of the UK, Datasaab of Sweden, and Toshiba of Japan are all involved in the computer industry. Thomson Group of France and L.M. Ericsson of Sweden are telecommunication industries. World trade data are gathered from both the United Nations and the Organization for Economic Cooperation and Development broken down by Standard International Trade Classifications. SITC #752 (automatic data processing equipment) is an aggregate indicator of the computer industry, and SITC #764 (telecommunications equipment, parts, and accessories) is an aggregate indicator of the telecommunications industry.

Aggregate Predictions of U.S. Influence

Table 5.3 lists the proportion of trade with the United States and the Hirschman-Herfindahl concentration index of world trade in the industry. Based on this information, Table 5.4 provides the predictions of American influence over these firms.

Table 5.3: Proportion of Trade with the U.S. and International Trade Concentration

Case	Year	Proportion of National Industry Trade with the US		Concentration of World Industry Trade	
		Exports (market)	Imports (supply)	Imports (market)	Exports (supply)
Computer Industry					
UK (ICL, Systime)	1982	8.412%	40.83%	45.31	30.94
Sweden (Datasaab)	1984	9.261%	38.25%	44.94	32.86
UK (Plasma)	1985	11.83%	36.09%	42.80	32.16
Japan (Toshiba)	1987	57.50%	87.25%	41.71	32.45
Telecommunications Industry					
France (Thomson)	1983	7.685%	7.889%	57.07	38.82
Sweden (LM Ericsson)	1984	17.24%	8.829%	60.89	47.03
Electronics Industry					
Sweden (ASEA)	1985	18.65%	17.70%	31.04	36.30
Norway (Kongsberg)	1987	5.727%	8.274%	35.22	30.04

Sources: OECD, *Foreign Trade by Commodity, Series C*, 1982-1985, 1987.

The statistical analyses in Chapter 3 provide a scale which can be used to judge these data. A proportion of trade less than 15% is considered low, and concentration of imports greater than HH = 34.9, and concentration of exports greater than HH = 31.0 are considered are considered high. The figures indicate that telecommunications and computer markets are highly concentrated, whereas the suppliers in all three industries are moderately concentrated throughout the OECD countries. Given the proportion of industry trade with the United States and the concentration of trade by industry, successful U.S. influence as a function of

dependence on markets and dependence on supply is summarized in the following table.

Table 5.4: Predictions of Dependence, 1980-1987

Dependence on Supply	Dependence on Market Access	
	Low	**High**
Low	Thomson Group (FR) Kongsberg (NW)	LM Ericsson (SW)
High	ICL (UK) Systime (UK) Datasaab (SW) Plasma (UK)	Toshiba (JA) ASEA (SW)

Using this table in conjunction with Table 5.2, above, preliminary predictions can be made concerning the likelihood of U.S. success in securing the compliance of firms and the acquiescence of their host country governments. One would predict that threatening to cut off access to American suppliers or the American market would not increase the likelihood of cooperation in the Thomson Group or the Kongsberg cases. On the other hand, using these threats would greatly increase the probability of securing the cooperation of both Toshiba, Asea and their host governments. In the case of L.M. Ericsson, firm compliance is predicted, but host-government cooperation is not guaranteed. And, in the cases of Datasaab, ICL, Plasma, and Systime, firm reactions are indeterminate, but host country compliance

with U.S. initiatives is considered likely.

III. Case Analyses: U.S. Influence Attempts by Industry

This section analyzes American efforts to control the activities of states and firms operating abroad in the computer and telecommunications industries. The ability to do so requires cooperation of both the firms themselves and the host country government where the firms operate. Industry-specific overviews are followed by detailed accounts of the United States actions and those of the actors it sought to influence.

The primary hypotheses to be examined emphasize the link between dependence and political influence. The statistical analyses in Chapter 3 demonstrated that aggregate indicators of dependence, based on proportion of trade and trade concentration, corresponded closely with perceptions of dependence on the part of corporate and national decision-makers. Industry specific overviews of each industry supplement these findings by highlighting unique characteristics and trade patterns in each industry. In particular, the distribution and role of dominant firms in each industry is discussed.

Following the industry specific overview, individual cases of American efforts to implement or enforce its export control regulations abroad are examined. Each case is analyzed in terms of the targets and goals of the influence attempt, firm and state dependence on American markets or American suppliers, and the outcome.

The outcome of each case is then compared with the predictions made in the previous section.

The success of U.S. export control policy requires the cooperation of all actors that provide an alternate source of supply of the controlled goods. Even if the United States can secure the cooperation of all CoCom member countries and their firms, the success of its policy can be undermined if non-CoCom sources act as alternate suppliers. It is crucial that the United States secure the cooperation of these "Third Countries" even though they have not formally agreed to abide by the CoCom regulations and are not under any international obligation to do so. The cases discussed below involve both CoCom member and Third Country states and firms. This dissertation argues that the United States' ability to control the activities of actors across international borders is more a function of dependence than treaty commitments and that the level of dependence on American markets and American suppliers provides a basis for American power regardless shifts in hegemony or the distribution of resources around the globe.

A. The Computer Industry

Industry Overview

The United States dominates trade in the computer industry. It remains the world's largest exporter (supplier) of computer equipment. Since 1984, it has also been the world's largest importer (market) for these goods. U.S. exports and imports of computer products as a percentage of world trade in the computer

industry are summarized in Table 5.5. In 1983, Japan over took Germany as the world second largest export of computer products, accounting for 18.6% of world computer exports in 1984.

Table 5.5: U.S. Exports and Imports as a Percentage of World Computer Trade, SITC 752

Year	1982	1983	1984	1985	1986	1987
Imports	13.8%	10.6%	14.6%	15.0%	16.5%	16.4%
Exports	36.4%	31.9%	29.9%	28.4%	23.7%	22.8%

Source: United Nations, *1982-1985 International Statistics Yearbook, vol. II*, (New York: United Nations Publishing, 1984-1987).

U.S. dominance, or hegemony, in the computer industry throughout the 1980's cannot explain variations in the ability of the U.S. government to influence its allies and their firms. Dependence, and the resulting political leverage, is not just a function of relative dominance in a particular industry. Rather, dependence is a function of the proportion of trade each actor has with the United States and the availability of alternate suppliers and markets for these goods. Tables 5.6 and 5.7 provide a broader view of foreign trade with the United States in the computer industry. The ten largest suppliers and eleven largest markets (excluding the United States) are represented. The value of exports to/imports from the United States are presented in millions of U.S. dollars. For comparative purposes, the proportion of each country's computer trade that is accounted for by exchange with American actors is also presented.

The trade statistics indicate that, as of 1985, only a small number of the world's leading suppliers of computer equipment, (including Japan, Canada and Singapore), relied heavily on access to the American consumer market. In contrast, all of the top 10 world importers of computer products (excluding the United States) relied on the United States for 30% or more of their supplies. The dominant role of American suppliers in the computer industry is confirmed in Table 5.7 by the fact that of the ten largest exporters of computer products, only the United States and Japan maintain positive trade balances and were net exporters of computer goods from 1981 through 1985.

These trade data lead one to predict that threatening to cut off access to American suppliers during this period would be a more potent tool than threatening to cut off access to the American consumer market.

Table 5.6

Leading Countries' Exports to the U.S. Market in the Computer Industry, SITC 752
(current $ millions)

Country — Exports to U.S. (% of Total Country Computer Exports)
(top 10 world exporters of computer equipment in 1985, excluding the U.S.)

	1982	1983	1984	1985
Japan	631,935 (46.4%)	1,626,776 (57.1%)	2,755,169 (60.3%)	2,532,660 (54.8%)
Canada	674,160 (76.4%)	812,002 (77.8%)	1,059,460 (78.5%)	1,084,430 (79.7%)
F.R.G.	78,313 (5.2%)	121,594 (6.5%)	115,323 (5.8%)	185,262 (7.1%)
U.K.	57,425 (4.3%)	91,360 (6.3%)	165,785 (9.1%)	216,021 (12.1%)
Singapore	51,677 (69.8%)	252,340 (83.7%)	447,639 (70.1%)	542,578 (65.3%)
France	39,885 (4.3%)	43,536 (4.0%)	75,477 (7.2%)	70,324 (6.5%)
Ireland	27,836 (4.4%)	30,151 (3.5%)	17,814 (1.6%)	23,801 (1.7%)
Italy	23,751 (3.2%)	34,716 (4.6%)	166,816 (20.0%)	355,778 (29.2%)
Sweden	10,424 (3.1%)	14,730 (2.9%)	25,424 (5.6%)	41,958 (7.4%)
Netherlands	6,284 (1.7%)	8,866 (1.6%)	9,154 (1.2%)	15,273 (1.9%)

Leading Countries' Imports from U.S. Suppliers in the Computer Industry, SITC 752
(current $ millions)

Country — Imports from U.S. (% of Total Country Computer Imports)
(top 11 world importers of computer equipment in 1985, excluding the U.S.)

	1982	1983	1984	1985
Canada	1,449,990 (93.6%)	1,547,523 (90.5%)	2,215,769 (91.9%)	1,850,454 (89.0%)
U.K.	1,047,078 (48.4%)	1,138,856 (42.9%)	1,284,585 (41.4%)	1,155,435 (34.0%)
France	802,670 (48.4%)	809,160 (45.8%)	1,005,026 (48.0%)	974,096 (41.0%)
F.R.G.	687,778 (40.0%)	704,439 (34.2%)	818,500 (32.9%)	858,230 (28.9%)
Japan	453,336 (76.4%)	548,465 (80.3%)	742,984 (80.2%)	799,328 (78.1%)
Australia	251,247 (57.5%)	266,885 (52.4%)	382,026 (52.9%)	401,379 (44.5%)
Netherlands	253,917 (35.1%)	345,108 (38.9%)	366,485 (33.2%)	365,237 (29.1%)
Italy	249,709 (29.6%)	239,195 (26.3%)	317,781 (24.9%)	354,830 (44.5%)
Sweden	178,674 (44.5%)	211,903 (35.9%)	240,929 (41.7%)	249,506 (38.1%)
Switzerland	134,240 (32.6%)	140,255 (30.3%)	169,672 (29.4%)	211,757 (29.9%)
Spain	120,969 (32.2%)	132,608 (29.5%)	78,898 (14.8%)	155,990 (23.7%)

Source: United Nations, *1983-1985 International Trade Statistics Yearbook, vol. II* (New York: United Nations Publishing, 1985-1987).

Table 5.7: Trade Balance of Top 10 Computer Exporting Countries, SITC #752
($ million, ranked by total exports, 1985)

	1982	1983	1984	1985
United States	+4,264,545	+3,841,780	+3,599,565	+3,275,209
Japan	+688,084	+2,164,404	+3,640,460	+3,600,933
Canada	-665,586	-664,174	-1,062,593	-717,002
F.R.G.	-210,339	-202,471	-495,782	-398,398
U.K.	-826,110	-1,213,113	-1,281,389	-1,616,551
Singapore	na	na	na	na
France	-734,121	-609,257	-1,047,354	-1,305,137
Ireland	+428,162	na	na	na
Italy	-111,012	-162,454	-440,599	-360,862
Sweden	-326,636	-77,303	-119,780	-89,894
Netherlands	-33,438	-345,626	-347,904	-437,563

Source: United Nations, *1983-1985 International Trade Statistics Yearbook, vol. II* (New York: United Nations Publishing, 1985-1987).

The second component of dependence is the availability of alternate suppliers. If an alternate supplier of computer products is available, then threatening to cut off access to American suppliers will have little effect. The Hirschman-Herfindahl (HH) index of concentration provides an initial approximation of the availability of alternate suppliers. Using the findings from Chapter 3 as a guide, the HH concentrations for the computer industry presented in Table 5.3, above, are high, ranging from HH = 40 to HH = 46 for world markets and HH = 30 to HH = 33 for suppliers. This indicates that there are a relatively concentrated number of markets and a limited number of suppliers dominate trade in the computer industry. The dominant positions of the United States and Japan in the world export of computer goods account for the high value of the concentration indices.

If the output of individual firms, rather than the value of national exports, were used to calculate concentration indices their values would be even higher. The dominance of American firms in the computer industry and the ability of the United States to restrict their activities through domestic legislation gives the United States government a means of influencing foreign actors that rely on trade with these companies. With revenue nearly ten times larger than its nearest competitor, International Business Machines (IBM) dominates the world computer industry. IBM is one of the world's largest and most profitable commercial companies.[8] In 1982-3 IBM maintained 65% of the share of the U.S. mainframe consumer market. In Europe, during 1984, IBM's revenues exceeded the combined turnover of its twelve closest European competitors.[9]

In the mid-1980's, IBM began to expand its operations by engaging in collaborative projects with firms involved in related technology. In Europe, IBM has taken advantage of increased liberalization of national telecommunications companies like British Telecom, and has begun negotiations for collaborative ventures in several European public telecommunications companies.

Table 5.8: Leading World Computer Equipment Producers
(current $ billion)

1981		1985	
By Firm Revenue	Revenue	Firm	
IBM (US)	$24.48	IBM (US)	$50.06
DEC (US)	3.59	DEC (US)	7.03
NCR (US)	3.07	Sperry (US)	4.76
CDC (US)	2.89	Burroughs (US)	4.69
Sperry (US)	2.78	Fujitsu (Japan)	4.31
Burroughs (US)	2.67	NCR Corp. (US)	3.89
Fujitsu (Japan)	2.03	NEC (Japan)	3.76
Honeywell (US)	1.77	Control Data (US)	3.68
Hewlett-Packard (US)	1.73	Hewlett-Packard (US)	3.68
NEC (Japan)	1.51	Siemens (FRG)	3.27
ICL (UK)	1.44		
CII-HB (France)	1.34		
Hitachi (Japan)	1.31	STC ICL (UK)*	1.33
Olivetti (Italy)	1.09	British Telecom (UK)	0.46
Xerox (US)	0.97	Racal (UK)	0.38
Siemens (FRG)	0.84	Feranti (UK)	0.28

* The last four companies listed in 1985 are included to included to indicate the relative size of the British computer industry and are not among the top ten computer producers.

Sources: U.S. Department of Commerce, High Technology Industries: Profiles and Outlooks, The Computer Industry, (Washington, D.C.: U.S. GPO, April 1983), p. 19-20; *Datamation*, June 1986; and Tim Kelly, *The British Computer Industry*, (London: Croom Helm, 1987), p. 222.

In sum, imports from American suppliers account for a large proportion of computer trade throughout Europe and Japan. At least until 1985, largely due to the dominant market share of IBM, foreign exports to the United States market remained relatively unimportant in comparison to value of American exports to them. Both world imports and exports of computer products, however, remain highly concentrated. The concentration of supply, in particular, is even greater if the production of individual firms, like IBM, are taken into account. As a result,

many countries and firms remain dependent on access to American suppliers of computer equipment.

U.S. Influence over Firms in the Computer Industry

Goals, Targets and Means of Enforcement

Through Operation Exodus, the Reagan Administration expanded its control and enforcement activities regarding the movement of microelectronic systems, computers and telecommunications equipment abroad. The first case to be analyzed, involving International Computers Ltd., is an example of American efforts to control the shipment of products that contained American components by non-U.S. firms to restricted countries, like the Soviet Union or Libya. U.S. efforts to control Systime PLC and Brian Butcher are based on the same premise. These cases demonstrate the ability of the United States government to impose costly sanctions on international actors when they do not comply with U.S. objectives. In 1984, American efforts expanded beyond the control of goods in route to restricted countries. In the cases involving the "IBM Letter," American influence expanded to include the control over movements of computers and related technology within Great Britain and other countries.

Despite parliamentary protests and corporate requests for national assistance, host governments largely failed to challenge the United States in support of firms operating within their borders. These national reactions, or non-reactions, to American efforts to control actors within their borders stands in stark contrast their

simultaneous rebuttal of American efforts to implement a similar policy in industries related to the construction of the trans-Siberian pipeline, discussed in the last chapter. As the cases demonstrate, the varying reactions of firms and states in both set of cases can be explained in terms of dependence on American suppliers or access to American markets.

Dependence and the Success of U.S. Influence Attempts

International Computers, Ltd.

In May of 1982 the United States Commerce Department fined International Computers, Ltd. (ICL, later STC ICL) of Great Britain $15,000 for selling a large computer to South Africa. The original transaction took place in 1978 and was carried out with export licenses from the United Kingdom.[10] The Commerce Department claimed, however, that because the computer contained two memory discs built by an American company, CDC Corporation, the sale should not have been completed without appropriate U.S. export control licenses. In addition to the license, the Commerce Department required a full release of all of ICL's major exports from the United Kingdom including the destination, name of the recipient and likely use of the product.

To enforce compliance with its regulations, the Commerce Department threatened to cut off technical supplies to ICL from the United States. It also threatened to seize an ICL production factory located in Utica, New York. ICL requested assistance from the British government and asked that the Department of

Trade and Industry (DTI) intervene on its behalf. The case of ICL was brought to the attention of Sir Michael Havers, Attorney General of the U.K., in a letter from Paddy Ashdown, MP. The letter sums up the problems faced by British companies confronted with the American restrictions and requests that the British government respond in some way. A section of the letter follows:[11]

> In the event of breach of the regulations by the non US national in their own country the US Department of Commerce has imposed heavy fines and additional conditions.
>
> As the enclosed extract of the 1982 Report of the Export Administration shows clearly, fines have been levied on non US companies, including a fine of $15,000 on the UK company ICL. Currently, a Leeds based Company called Systime Limited faces fines of $400,000, despite its compliance with UK export control regulations. Attached to the fines are conditions, which, in ICL's case, include a requirement to obtain the consent of the Office of Export Administration for import sales transactions involving the relevant computer system.
>
> If the fine is not paid and the conditions not met, orders are made, and names are entered on the US Export Denials list.

Through DTI, the British government responded by providing guarantees to banks for a bail-out package for ICL, but it did not challenge the extraterritorial extension of U.S. regulations on ICL's behalf.

The British government justified its failure to challenge U.S. actions by arguing that DTI's first objective was to save the company.[12] The actions against ICL took place at a time when the company was in a financial crisis. After achieving at 23.6% growth rate from 1973 through 1980, ICL fell into a slump and suffered a £49.8 million loss in 1981.[13] In order to save its only major indigenous computer producer, the DTI was willing to arrange a financing package and accept

corporate restructuring that led to a loss of over 10,000 British jobs in the industry. It, however, would not challenge the application of U.S. regulations within its borders. DTI believed that ICL was dependent on the supply of American technology and components and would not survive if that supply was terminated. If provoked, the United States Department of Commerce would likely black list ICL, cutting off its access to American companies and goods. This outcome would violate DTI's primary objective of saving the company and was, therefore, rejected.

A second motivation was a perception of national, as well as corporate, dependence on IBM for the supply of computer components as a base of British economic and military security. With an output more than two and one half times as large as STC ICL, IBM (UK) is the largest manufacturer of computer products in the U.K. The dominance of American firms like IBM and DEC has given the United States a means of controlling the activities of firms operating within Great Britain. See Table 5.9. Ken Baker, Minister of Information Technology for the Thatcher government, summarized the government's fear of losing access to American computer technology if the American initiatives were challenged. He expressed this concern arguing, "If we are dependent on the Americans or the Japanese, they [the computers] may not be here tomorrow."[14] In stark contrast to its vehement attack on American efforts to control the activities of British firms involved in the trans-Siberian pipeline affair, the British government failed repeatedly to take action against the United States government or its firm.

Table 5.9: Ten Leading Computer Manufacturers in the UK, 1984

Company	Turnover (£ million)	Employment
IBM UK (US)	2,349.0	17,506
STC ICL (UK)	942.6	21,056
Racal Electronics (UK)	309.0	na
DEC (US)	302.9	2,967
Hewlett-Packard (US)	293.1	2,783
Burroughs Machines (US)	232.3	3,880
Control Data (US) (incl. Systime, acq. 1985)	227.3	2,972
Commodore (BAH)	158.4	338
Ferranti Computer Systems (UK)	152.2	4,800
NCR Ltd. (US)	141.8	3,313

Sources: Company Annual Reports, Tim Kelly, *The British Computer Industry*, (London: Croom Helm, 1987), p. 214.

In this case, both ICL STC and the British government were dependent on access to American products, and neither was dependent on access to the American market. ICL's willingness to fulfill its original contracts despite U.S. restrictions, and the British governments reluctance to challenge the United States on its behalf, support the hypothesis that firms are more likely to be swayed by dependence on market access than dependence on foreign suppliers, whereas national governments are more concerned about access to guaranteed sources of supply than markets. The results fit the predictions of a case located in the lower left hand corner of Table 5.2, above.

In the ICL case, the United States government sought to control the re-export of goods it feared were destined for enemy countries. In December of 1983, the

United States greatly expanded the scope of its control efforts. The full extent of U.S. initiatives to control the activities of firms operating in Europe became apparent with a series of memos from the United States firms to their foreign customers, including the "IBM Letter."

The IBM Letter

Cases involving U.S. efforts to extend its control over the movement of resources within allied countries using the "IBM letter" demonstrate the large degree of influence gained from foreign dependence on American suppliers. In December of 1983, IBM (UK) sent a "letter" to 30 leasing companies reminding them that they must obtain permission from the United States Commerce Department before selling or reselling any of their products and technology. The second sentence of the letter specified the extent to which the American government sought to enforce its export control policy. It stated:[15]

> As you are aware, transactions within the United Kingdom involving "Advanced Systems" are also subject to the obtaining of US export license approval. Such transactions include not only the initial installation of a new machine with a user, but also any subsequent dealing or transfers in such machines. [emphasis in the original]

Controlling "Advanced Systems" included not only getting an appropriate American license whenever and wherever the products were moved, it also required that the final destination and use of the products be reported. Revisions to the U.S. export

control regulations proposed in 1984 require all companies to identify the final customers and uses of all products containing American components on a quarterly basis. This includes both the re-export of previously purchased equipment and the movement of this equipment within the country that currently possesses it.

In May of 1984, Texas Instruments informed its British customers of their obligations to obtain prior authorization from the Commerce Department prior to re-exporting the equipment. The letter states:[16]

> . . . We seek an assurance from you, our customer of T.I. Programmable Controller devices and systems, that your company will not, without prior authorization, export technical data to any destination or country which is prohibited under the laws of the U.S.A.

In August of 1986, Control Data Limited informed its European customers that they had to complete a similar letter of assurance. According to Control Data, "Failure to do this might result in non acceptance of your future orders."[17]

Firm actions and inactions in response the increased enforcement activities of the U.S. government are, as predicted, largely a function of their dependence on American suppliers. Firm perceptions of the threat of being denied access to American suppliers and the American market are summarized in internal memos from three European high-technology firms:

> . . . non-compliance with the regulations on U.S. re-export control . . . would . . . prove disastrous to the company! . . . Unless we are willing to risk being denied access to all U.S. equipment in the future and heavy fines begin imposed on our U.S. representation, we have no alternative than to comply, as onerous a task as it is! . . . the most

> important point to stress is that these regulations are unfortunately unavoidable and MUST BE COMPLIED WITH IN ALL CIRCUMSTANCES BY ALL PERSONNEL! [emphasis in the original][18]

> I must impress upon you the importance of this issue. A UK company has already lost its Export License for US technology products, because it did not comply with the requirements imposed on it. If ICL should fail an inspection in any of its operations then it could suffer the same fate.[19]

> The company has been obliged to protect is imports/exports from the U.S.A. by complying with U.S. Export License regulations. A procedure has been written into the Contractual Commitment Form which is mandatory for ALL orders. Failure in applying the procedures can result in the Company losing all American technology, £b losses in sales and criminal prosecutions. [emphasis in the original][20]

While dependent on access to American suppliers, other firms, like Systime PLC, did not anticipate the full cost circumventing U.S. export control policy. The cases of Systime PLC and Brian Butcher, demonstrate the extent of U.S. enforcement capabilities and its willingness to use them. The costs imposed on these two firms severed as an example for others contemplating circumventing the American regulations.

Systime PLC

The case of Systime PLC provides an example of the costs that can be imposed by the United States government against non-cooperative companies operating abroad. As a penalty for allegedly shipping up to 400 DEC computer systems to the Eastern Bloc via Switzerland without an American export license,

Systime was black listed by the Department of Commerce and fined $600,000.[21] Systime PLC sold computer equipment, a large proportion of which involved the resale of DEC computers obtain from American vendors. In 1983, it had a turnover of over £40 million and employed 1,200 people. By 1985, in the aftermath of U.S. sanctions, the company was virtually destroyed. Corporate investors withdrew their financial support and all but 200 people had been laid off. Later that year, Control Data Corporation of the United States, which had purchased a 42% stake in Systime in 1983, acquired the remaining portion of the company.[22]

As a merchant of American-made products, Systime was obligated by U.S. export control regulations to obtain a license from the U.S. Commerce Department, in addition to a license from the British Department of trade and Industry, before it could sell any of its machines. Systime chose not to obtain the second, American, license due to the time constraints involved and its fear of losing business. The company assumed that the financial penalty of violating American sanctions would be less than the cost of loosing foreign clients.

If, for example, Systime agrees to sell a computer to a German company, it must apply to the Commerce Department for an individual distribution license. This procedure takes an average of one year to be completed.[23] During that time, DEC or another American company with a general distribution license to Germany, can export the same products directly to the German client from the United States. As a result, the German client can get the same computer from the American company much more quickly and Systime loses any advantage it had by seeking

out the client in the first place. In order to circumvent the double license bind, Systime exported four million dollars of DEC equipment and computers to India, Libya, Malaysia, Pakistan, Singapore, Switzerland, Syria and Zimbabwe using only British export licenses.[24]

In 1982, John Gow, founder of Systime, made a voluntary disclosure to the U.S. Commerce department and accepted the financial penalty for not obtaining an appropriate American export license. At that time, however, attorneys from DEC UK accused Systime of shipping up to 400 DEC computers to the Eastern Bloc via Switzerland.[25] As a result, a grand jury investigation into Systime's affairs was begun in the United States.

Systime appealed to both the Department of Trade and Industry and to Parliament, but did not receive assistance. Rather than challenging the American actions within British territory, the British government tried explicitly to demonstrate that it was fully committed to preventing high technology exports that might be detrimental to American interests. With information provided by the U.S. Customs agency, British Customs raided Systime in July of 1984. The information provided by British Customs, DEC investigators and the initial voluntary disclosure by Systime provided the Department of Commerce with the justification needed to fine and black list the company.

Systime was cited with 46 violations of the Export Administration Act, fined and blacklisted.[26] By 1985, prior to being taken over by CDC, Systime was effectively cut off from its American suppliers and put out of business.

Brian Butcher

The case of Brian Butcher is representative of what can happen to an individual or a company that is placed on the black lists at the Department of Commerce even if the company is only indirectly dependent on American suppliers. As in the ICL case, officials from the Department of Trade and Industry agreed that the American Embassy had broken British law by interfering in the business transactions of a British company; yet, citing a fear of upsetting Anglo-U.S. relations, they decided not to aid the British firm that had been affected.

Brian Butcher, a computer software broker for a British electronics equipment company in Basingstoke, was indicted by the Department of Commerce for selling an integrated circuit tester to a Polish television station in 1979. The television station was part of a $72 million American development project supported by the World Bank.[27] The project lost American support with the imposition of Martial Law in Poland, and, in 1981, Butcher was arrested in the United States for violating an American export embargo against the Polish regime. He subsequently jumped bail and returned to Great Britain. The United States government attempted and failed to extradite him. Although a British court tried him for the same crime of exporting the equipment to Poland and fined him £2,500 in 1985, the United States government imposed the additional penalty of placing Butcher and his company on the Department of Commerce black List.

As a result of being placed on the list, Butcher lost his client base at CEMI

Ltd. of Basingstoke. During a judicial review of his case in London, Butcher complained:[28]

> Within a few weeks of details of the list being published in 1984, I had lost 75 per cent of my customer base for buying and selling because I could not deal with US companies in Europe.

During the judicial review of the Butcher trial in London, companies including Ferranti, GEC, and Hewlett Packard (UK), claimed that they were interested in future contracts with the American companies and the United States, including participation in the Strategic Defence Initiative (SDI). As a result, they did not want to offend U.S. authorities and would not do business with black listed firms. Similarly, after being notified by the U.S. Department of Commerce that Butcher had been placed on the black list, Bell Telephone of Belgium withdrew a £400,000 contract with his company.[29]

The final defeat for Butcher and his company came with the termination of his contracts with Japanese firms operating the in the U.K. Largely as a result of the Toshiba case (discussed below), the Japanese firms wanted to avoid any possible allegations of not cooperating with American efforts to restrict technology to the East bloc. Butcher sums up the effect:[30]

> Within the last six months, companies such as Toshiba, Fujitsu and Canon, with whom I still did business, have pulled the plug. As far as I am concerned the US has won. I'm a business man. They've got me kicked to death now. There is nothing left in the kitty.

As in the ICL case, DTI agreed that U.S. interference in this case represents an unwarranted encroachment on U.K. sovereignty, however, it claimed that its purpose is not to intervene in individual cases. Despite continued statements made in Parliament that the American blacklisting of British companies was illegal, DTI has refused to get involved. Spokesmen from the DTI supported the argument that taking up the case would be futile and, because Butcher was on the Denial Lists, intervention could potentially damage British interests by antagonizing the United States.[31]

In sum, the ability of the United States to influence the activities of firms operating abroad in the computer industry is largely a function of firm dependence on American suppliers and, to a lesser extent, access to the American consumer market. These cases demonstrated that the United States' government was able to use firm dependence to extend its influence beyond controlling the re-export of computers and related products to controlling the movement of these resources within a particular country. Throughout the 1980's, in contrast to actions taken in the compressor and steel pipe industries, European governments failed to challenge the United States on behalf of their firms in the computer industry. National action and inaction in response to U.S. efforts is the topic of the next section.

U.S. Influence over National Governments in the Computer Industry

Goals, Targets and Means of Enforcement

The United States has continually tried to secure allied cooperation in restricting the export of high technology goods. On the multilateral front, on July 15, 1984, members of CoCom agreed on the first revision of international embargo lists on high technology items since 1976. The revisions came after two and one half years of negotiations led by the United States. As a result, new export controls were placed on the sale of small computers and sophisticated telephone equipment. In addition, new restrictions were imposed on the export of industrial robots, printed circuits, electronic grade silicon, spacecraft equipment and other technology items considered useful to the Soviet defense effort.[32]

The implementation of the new agreement is dependent upon the actions taken by each member country. The United Kingdom was the first CoCom member country to publish a revised list of what technology its companies can and cannot export to the East Bloc and other restricted countries. The list reflected the 1984 CoCom agreement to expand controls on high powered computers, software and telecommunications equipment. At the same time, the British list relaxed restrictions on the movements of mini and personal computers and related technology. Despite its open cooperation with the CoCom accord, Paul Channon, UK Trade Minister, argued that the British government did not condone American efforts to control equipment and technology that were not on the lists. And, in

response to a question on the application of U.S. regulations in the UK, he stated, "we protest about it whenever it occurs."[33] In similar fashion, the Confederation of British Industry issued a statement saying that while it agreed with the goals sought by the strategic embargo, "we object to broad announcements extending United States' jurisdiction outside United States territory."[34]

Tensions between the United States and its European allies became apparent again just two weeks after CoCom agreed to impose broad new controls on advanced technology. The Europeans were particularly sensitive to U.S. efforts to impose an independent American set of controls that were more stringent than those agreed to in CoCom. A European spokesman argued that no one wanted to deny the United States or any other country its right to restrict trade to an adversary, "But we do think that ways should be found of doing this which will not inflict damage on its friends and not flout international law and the international trading rules."[35] Even if European officials agreed on the importance of some controls, they objected to what they considered unilateral American attempts to manipulate and control U.S. technology, even after it has left the United States. The allies expressed concern about the effect of more stringent controls on small firms within their countries that were dependent on access to the Eastern market. Most importantly, the allies did not want a repeat of the pipeline conflict in which the United States attempted to control the activities of firms involved in the construction of the trans-Siberian pipeline.

Echoing these fears in August of 1984, the West German economics Minister,

Martin Bengemann, warned Washington that Germany would "not tolerate" American attempts to impose additional controls on its companies. He argued that if challenged, West Germany would impose a law to prohibit domestic companies from complying with extraterritorial trade restrictions imposed by a foreign power.[36] This law would be modeled on the one imposed by Great Britain during the Pipeline crisis discussed in the last chapter. French officials verbally supported the German position, arguing that, "the United States is waging economic war with all the means at its disposal," and that American efforts to curb trade with the East would weaken West European technology in favor of its American competitors.[37] National presses published articles about the implications of the IBM letter on national sovereignty, and national politics promised to resolve the issue immediately.[38] Yet, despite strong diplomatic protests, and despite the attention given to violations of national sovereignty and resulting from unilateral American controls over firms operating abroad, little or no action against U.S. efforts has been taken on the part of the allied governments.

In response to the IBM Letter of December 1983, Norman Tebbit, British Trade Minister, cited American efforts to enforce its regulations abroad as the primary source of continued conflict within the alliance. He argued forcefully in defense of British sovereignty stating that "only UK laws will apply here."[39] He continued, "we can't impose our law within the U.S. and frankly they can't impose their law in Britain . . . we can't allow other governments to exert their law in our country."[40] In Los Angeles that Spring, Tebbit argued that, "None of your allies

accept the [Washington's] claim . . . to apply its laws to actions of citizens of sovereign States outside the United States."[41] However, a week later the United States issued a warning that all companies that refused to toe the line would be held accountable under U.S. law. And, when Tebbit returned from a U.S. trip made specifically to discuss the issue, he had backed down and warned the British people that "We have to tread carefully."[42]

Later that year, additional corporate activities in Great Britain were called into question, but received virtually no national response. For example, the Commerce Department told Digital UK, the third largest British manufacturer, that it was required to obtain end-user certificates for each of its exports after several VAX machines it had built ended up in the Soviet Union. In a response to the VAX incident, Richard Perle, Assistant Secretary of Defense, threatened that unless dramatic changes in European policies take place, "We are seriously considering ending licensing of really sensitive technology altogether to the alliance in Europe."[43] William Casey, Director of the CIA, charged 300 foreign companies with diverting technology to the Soviet Union. And, in an address to British computer executives in London, another U.S. government official threatened that, "We have got enough on you all to clap most of you in irons."[44]

While just a year before the allies had implemented national legislation to block American intrusions in their territories in the name of national "sovereignty," most national governments did not challenge the expansion of U.S. control efforts. The action and inaction of national governments can be explained as a function of

dependence on the United States.

National Dependence and the Success of U.S. Influence

Paddy Ashdown and other MP's have raised this issue in Parliament and debated it directly with the Prime Minister. As a result, Sir Michael Havers, Attorney General, has argued that the regulations "are an unwarranted encroachment on UK jurisdiction and are contrary to international law;" however, the government has done nothing more about it and does not plan to respond to U.S. actions at this time. When pressed on the issue in Parliament, Geoffrey Pattie, Minister for Information Technology and spokesman for the Thatcher regime, argued that:[45]

> We reject out of hand claims by the US government to have jurisdiction of US goods based on US technology while they are in the UK. . . . If we could compel the US to withdraw this claim, the problem would be eliminated easily, but we cannot.

When Members of Parliament argued that the government could apply the Protection of Trading Interests Act of 1980 as it had during the Siberian gas pipeline case. A government spokesman, responded, however, that the government could not do so because of British dependence on American suppliers. He stated that the government was not willing to use the act, "because the US threatened to blacklist companies which failed to meet their demands. In this way British industry was denied access to US technology not available elsewhere."[46]

As the trade statistics discussed above indicate, more than 70 per cent of the British computer industry is controlled directly or indirectly by American corporations, and therefore, according to American sources, under American jurisdiction.[47] American firms also provide the largest source of foreign investment in Great Britain accounting for $32.1 billion overall by the end of 1984. Between 1977 and 1979, 56.4 per cent of all foreign investment in Great Britain came from the United States, and between 1980 and 1982, American Companies accounted for 52%.[48] The majority of investment has taken the form of establishing American branch operations for sales and manufacturing. In the 1960's, the majority of firms involved manufacturing, particularly by Ford and General Motors, but in the 1980's, the majority of the investment has been by American high-technology firms including IBM, its subsidiary Rolm telecommunications, DEC, Hewlett Packard and Dupont.

Lack of government action is the result of a perception of British dependence on continued access to American suppliers. In the clearest statement to date concerning British protest over American export controls, the UK Attorney General, Sir Michael Havers, told Paddy Ashdown, MP, in a open letter that America's policy on high technology sales is a breach of sovereignty. He acknowledged that the Government had the ability to make it illegal to abide by American rules, much in the same way it had done so during the pipeline crisis. He further conceded that continued breaches of UK sovereignty were likely to lead to increased pressure for the British computer industry for more government action; however, he argued that

it was impossible to force the US "to stop making such claims, and seeking to enforce them."[49]

Summary of U.S. Influence in the Computer Industry

European dependence on American suppliers and access to the American consumer market in the computer industry has given the United States government the ability to exercise control over both firms operating abroad and their host country governments. As predicted by the hypotheses presented in Chapter 2, when actors are dependent on the United States, threatening to terminate the relationship can provide a source of political influence. Partial success of American influence attempts in the telecommunications industry further support this hypothesis.

B. The Telecommunications Industry

This section analyzes the structure of the international markets and suppliers of telecommunications equipment. This analysis will be used as a basis for further refined predictions of individual firm and state behavior. Specific actions of firms in this industry, including the Thomson Group of France and L.M. Ericsson of Sweden will be interpreted in terms of the model of dependence on American markets and American suppliers as outlined above.

Industry Overview

The telecommunications industry is composed of three components that make it distinct from the electronics and computer industries. These components include: switching equipment, which connects terminals and coordinates telecommunications networks; terminals, like telephones and facsimile machines, which transmit information across the networks; and transmission equipment, which provide the means of transmitting telecommunication signals.[50]

The hypotheses proposed above link firm and state dependence on access to the American consumer market and access to American suppliers. International trade in this sector is increasing dramatically. As it increases, dependence on the United States and the potential for U.S. influence increase as well.

Telecommunication industries in most countries have traditionally focused on supplying a domestic market and they have done so with a high degree of protection against foreign competition. Government controlled postal, telephone and telegraph organizations (PTT's) are both the dominant consumers and producers of telecommunications equipment in the world market. Most of these national organizations prefer to purchase their telecommunications equipment from domestic suppliers. Foreign competitors are generally excluded from the domestic market. Foreign sales in the domestic market may be curtailed directly through specific legislation or they may be inhibited indirectly through the stringent application of national standards, testing and certification practices.

The traditional domestic focus of the telecommunications industry makes the

potential of limiting access to the American market and American suppliers as a source of political influence seem unlikely. However, recent changes in the global telecommunications industry have greatly increased the U.S. government's ability to manipulate foreign dependence on supply and market access to its advantage. Two of the most consequential changes in the telecommunications industry for potential U.S. influence have been the increasing use of advanced computer and digital switching technology and the breakup of AT&T. The first change increased the role of American suppliers in international telecommunications trade; the second opened the world's largest market to foreign producers.

Dependence on the American market and suppliers is a product of two factors: the proportion trade an actor has with the United States, and the availability of alternate markets and suppliers for the goods in question. American exports and imports as a percentage of world supply and consumption are listed in Table 5.10. On the supply side, foreign imports from American telecommunications suppliers remained relatively constant in the 1980's. With the exception of Japan, U.S. suppliers account for a small percentage of telecommunication equipment imports in each country. The growing reliance of the telecommunications industry on computer technology has, however, increased foreign firm dependence on the supply of computers and related components. Foreign dependence on access to American computer technology, discussed above, offers a spill over effect that is reflected in foreign telecommunication producers' dependence on American suppliers. Controlling the American supply of these

products provides the U.S. government with a source of political influence.

On the demand side, access to the American market and American imports of telecommunications technology increased dramatically in the 1980's. In the early 1980's, AT&T was the largest American consumer of telecommunications equipment. It alone accounted for 58% of total U.S. spending on telecommunications equipment and, through its Bell System, it maintained 80% of the American telephone network.[51] Deregulation of the American telecommunications industry and the divestiture of AT&T in 1983-1984 opened the United States market to foreign competition. Between 1983 and 1984, U.S. imports of telecommunication equipment rose 38 percent to $7.6 billion.[52] Table 5.6 summarizes leading countries export to American consumers and imports from American suppliers. It also provides the percentage of trade with the United States relative to each country's overall telecommunications trade. Japan is the dominant beneficiary of this new market, but exports to American consumers as a proportion of telecommunications exports rose in Sweden, France, Great Britain and German as well. Threatening to cut off access to this new market can also be a source of political influence.

Table 5.10: U.S. Exports and Imports as a Percentage of World Trade, SITC 764.1

Year	1980	1981	1982	1983	1984	1985
Imports	17.4%	18.7%	19.6%	29.7%	40.3%	39.5%
Exports	16.4%	18.7%	20.6%	17.7%	17.1%	17.2%

Source: United Nations, *1985 International Statistics Yearbook, vol. II*, (New York: United Nations Publishing, 1987).

Table 5.11

Leading Countries' Exports to the U.S. Market in the Telecommunications Industry
(current $ millions)

Country	Exports to U.S. (% of Total Country Telecommunications Exports)			
	1982	1983	1984	1985
Japan	1,507,691 (34.3%)	2,022,343 (38.6%)	3,183,241 (47.9%)	3,342,059 (45.8%)
UK	79,124 (6.03%)	63,691 (5.06%)	93,058 (8.22%)	127,083 (10.2%)
F.R.G.	57,082 (2.76%)	55,643 (2.93%)	81,420 (4.45%)	86,589 (4.40%)
Sweden	39,844 (4.14%)	73,865 (7.9%)	112,062 (11.1%)	81,914 (6.71%)
France	22,384 (2.10%)	38,009 (3.12%)	50,067 (4.17%)	61,360 (4.39%)
Total U.S. Imports:	4,384,013	5,521,759	7,605,633	8,068,294

Leading Countries' Imports from U.S. Suppliers in the Telecommunications Industry
(current $ millions)

Country	Imports from U.S. (% of Total Country Telecommunications Imports)			
	1982	1983	1984	1985
Japan	271,449 (73.2%)	287,463 (72.2%)	297,878 (67.2%)	262,649 (59.0%)
UK	206,672 (21.6%)	259,813 (23.8%)	234,894 (21.7%)	294,404 (24.4%)
F.R.G.	184,900 (16.6%)	160,423 (14.6%)	143,888 (12.9%)	144,324 (11.7%)
France	98,095 (13.6%)	89,988 (14.17%)	79,946 (13.5%)	86,669 (14.2%)
Sweden	*	*	43,192 (14.7%)	44,574 (12.0%)
Total U.S. Exports:	3,375,215	3,456,289	3,634,380	3,869,712

Source: United Nations, *1983-1985 International Trade Statistics Yearbook, vol. II* (New York: United Nations Publishing, 1985-1987).

The European telecommunications market is very close in total size to the American market. However, due largely to varying degrees of trade liberalization and restriction within the European community, European countries have enjoyed a trade surplus in telecommunications equipment. This surplus indicates that domestic sources of supply produce more equipment than can be consumed by the domestic market. Consequently, it also indicates dependence of the European telecommunications industry on external markets. Deregulation of the American telecommunications market has opened the world's largest market to these producers.

Table 5.12: Trade Balance of Major Telecommunications Producers, SITC #764.1
($ thousands)

	1982	1983	1984	1985
West Germany	+510,097	+409,413	+379,500	+375,285
Sweden	+458,470	+422,809	+457,757	+474,535
France	+122,484	+226,744	+147,348	+176,695
Netherlands	+117,520	+61,200	+100,907	+22,663
Belgium/Luxembourg	+41,202	+20,955	+10,312	-23,646
Italy	+46,141	+16,857	+6,738	-8,194
United Kingdom	+27,024	-11,983	-43,035	-46,909
United States	+209,658	-427,099	-1,059,537	-1,193,320
Canada	+319,754	+368,660	+524,621	+486,384
Japan	+764,148	+904,891	+1,078,447	+1,321,527

Source: United Nations, *1985 International Statistics Yearbook, vol. II*, (New York: United Nations Publishing, 1987).

The second component of dependence is the availability of alternate markets

and suppliers. Exports and imports in the telecommunications industry is fairly highly concentrated. The Hirschman-Herfindahl concentration indices used to identify the distribution of international telecommunications suppliers ranged from HH = .387 in 1983 to HH = .302 in 1984. The distribution of international telecommunications markets were also highly concentrated, ranging from HH = .466 in 1983 to HH = .431 in 1984. These numbers indicate that the concentration of suppliers decreased from 1983 to 1984, indicating the availability of alternate suppliers of telecommunication equipment increased. At the same time, the concentration of markets increased, indicating that a larger proportion of the global market in 1984 was concentrated in a smaller area than in 1983. Both of these findings are supported by the opening of the deregulation of the American market. As a result, American producers expanded their exports overseas, and, foreign competitors gained access the world largest telecommunications consumer market.

As was true in the evaluation of the computer industry, if individual firms, rather than national industrial sectors, are used in the evaluation, the concentration of suppliers and markets would be much higher. This is primarily because in the majority of national telecommunications products are produced and consumed domestically. As the telecommunications industry becomes more reliant on sophisticated digital switching and transmission equipment, and as international telecommunications trade becomes more liberalized, several countries and firms will dominate the industry. See Table 5.13.

Table 5.13: Leading Telecommunications Equipment Producers
(current $ billion)

By Firm	1981
Western Electric (US)	$11.53
ITT (US)	5.50
Siemens (FRG)	4.40
Ericsson (SW)	2.48
GTE (US)	2.23
NEC (JA)	2.05
Northern Telecom (CA)	1.88
Motorola (US)	1.60
Thomson (FR)	1.45
GEC (UK)	1.45
Phillips (NETH)	1.30
CGE (FR)	1.00
Plessey (UK)	0.81

Sources: U.S. Department of Commerce, High Technologies Industries: Profiles and Outlooks, The Telecommunications Industry, (Washington, D.C.: U.S. GPO, April 1983), p. 18.MacKintosh; A.D. Little; Telephone Engineer and Management; Bureau of Industrial Economics.

The majority of telecommunications equipment production is concentrated in a limited number of states and firms. Two of these firms were targets of American actions under Operation Exodus. The differing reactions of Thomson of France and Ericsson of Sweden to U.S. efforts to control their activities are illustrative of the extent and limitations of U.S. influence resulting from firm and state dependence on access to American suppliers and the American consumer market.

U.S. Influence over Firms and States in the Telecommunication Industry

Goals, Targets and Means of Enforcement

U.S. goals, targets and means of enforcement in the telecommunication

industry are largely the same as in the computer industry. As in the computer industry, variations in the success of U.S. influence in the following two cases can be explained in terms of corporate and national dependence on American suppliers and the American consumer market.

Thomson Group

In December of 1983 the nationalized Thompson Group announced that it would continue deliveries of a sophisticated telephone exchange system to Leningrad. Despite intense protests from the United States in and outside of CoCom meetings throughout the year, the French government supported Thompson's decision to continue its deliveries. Thompson signed the original agreement in 1979. Shipments of the sophisticated MT20 digital telephone exchange equipment began in 1980 and were scheduled to continue through 1984. Thompson did not stop its sale. However, it did concede to American pressure to modify certain "sensitive" components of its telephone exchange system. The disagreement between the French and American governments over the Thompson case mirrored the continuing conflict within CoCom over what items should be consider "sensitive" and, therefore, be placed on restrictive embargo lists maintained by the organization. In the Thompson case, a compromise was reached that favored the firm. Thompson was able to modify its equipment, conceding to the American pressure by avoiding the use of American components. By doing so, it side-stepped

the American request, but the underlying problem remained unsettled. As a French CoCom negotiator stated, "We agree to disagree."[53]

In contrast to the failure of U.S. efforts to control Thomson, the United States government was able to inhibit the activities of the Swedish firm, L.M. Ericsson.

L.M. Ericsson

The Swedish telecommunications firm, L.M. Ericsson, suspended its efforts to sell an advanced telephone exchange system to Bulgaria in August of 1984. The majority of L.M. Ericsson's western economic rivals had withdrawn their contract bids in January as a result of an agreement within CoCom to tighten its controls on the export of high technology to the East Bloc.[54] Sweden is not a CoCom member and is not under agreement to abide by its decisions. However, in practice, the CoCom decision had a direct effect on the Swedish company's actions. CoCom influence is the result of L.M. Ericsson's dependence on the supply of American parts for its most sophisticated systems. L.M. Ericsson reported 25 billion crowns ($3 billion) of sales in 1983. The majority of these sales involved its principal and most sophisticated product, the AXE digital exchange system, which depended on American made components.[55] As Magnus Lemmel, vice president, stated without continued use of U.S. components and the permits to use them, "we will not be able to deliver our latest technology to Eastern Europe."[56]

Dependence and the Success of U.S. Influence

The divergent actions of the French and Swedish governments and their firms, Thomson and L.M. Ericsson, can be explained in terms of their dependence on American suppliers and the American market. The telecommunications industries in France and Sweden have different emphases on production and trade. The French telecommunications market is essentially closed. The French industry focuses on its domestic market. In contrast, the Swedish telecommunications market is small and relatively open. Its industries produce primarily for an export market. These different emphases have led to different degrees of national and corporate dependence which, in turn, explains the reactions of each player.

The French government has gone to great lengths to maintain a viable domestic base in the telecommunications, electronics and computer industries. Under the *Plan Composants* in 1977, the French government provided FFr 3 billion to upgrade the nation's high technology industries. As part of this project, the Thomson group and Matra were selected by the French government as national champions to receive preferential treatment. They were chosen to sustain substantial defence electronics, computer and communications production facilities for France. Government intervention in support of these industries peaked in 1981, when it formally nationalized C.G.E., Matra, Saint Gobain, Point a Mouson and Thomson Brant. Thomson focused its production on mass consumer applications, while Matra focused on specialized applications. In 1983, Thomson Group expanded, acquiring the defense and consumer electronics divisions of C.G.E. A

subsidiary of Thomson, Thomson-CSF produced defense electronics, avionics, radar and integrated circuits, while Thomson Brant focused on telecommunications and computers.

French government support for Thomson against the United States is part of its ongoing campaign to maintain a strong domestic high technology industry. The French government is not dependent on United States suppliers for its national economic and military security. French telecommunications trade with the United States is low and alternate suppliers, both domestic and international, are readily available. As a result, the French government challenged U.S. efforts to control Thomson and the contract was completed. As a compromise, the French government modified some of the equipment in the Leningrad telephone system, and increased its export control procedures.[57] The government, however, continued to fight American efforts within and outside of CoCom to expand controls over high technology goods.

Similarly, Thomson was not dependent on access to the American market. In 1988, Thomson expanded into the American defense market by acquiring Wilcox Electronics, a former subsidiary of Northrop. Prior to that time, however, Thomson's primary market was European and predominately French. Its dependence on American suppliers, as on the American market remained low. As predicted, American influence over its actions were limited.

In contrast to Thomson, L.M. Ericsson was dependent on both American suppliers and access to the American market. L.M. Ericsson is vulnerable to U.S.

threats because of its reliance on U.S. components for its telecommunications products. Its primary products, including the AXE digital exchange system it was to sell to Bulgaria, relied heavily on American produced computer and electronic components. Magnus Lemmel, Vice President for corporate marketing, argued that the AXE system was extremely popular and had been sold to 54 countries, including China and Yugoslavia. He argued that defying the United States in order to gain access to Eastern Europe, which accounted for less than one percent of the world telecommunications market, was not worth loosing the ability to service its current customers.[58]

In addition to relying on American suppliers, confrontation with the United States took place just as the American consumer market opened to foreign competition. Unlike the French, the Swedish telecommunications market is small and relatively open. Its industries are produce primarily for an export market. For example, approximately 80% of sales from Ericsson and the Dutch firm Phillips come from abroad.[59] In 1981, Sweden accounted for 16% of world exports in telecommunications equipment and, following Japan, it had the second largest trade surplus in telecommunications equipment, $711 million.

Of the other European countries, Germany is similar to France, and the Netherlands are similar to Sweden, with the United Kingdom falling in between. Several countries, like Austria and Ireland, have little or no domestic sources of telecommunications equipment and rely heavily on foreign suppliers. The potential for future access to the American market provided a strong incentive for corporate

officials not to antagonize the United States government. As a result, potential access to the American consumer market, combined with dependence on American components, gave the United States government leverage over L.M. Ericsson.

Summary of U.S. Influence in the Telecommunications Industry

Recent changes in the global telecommunications industry have increased the U.S. government's ability to manipulate foreign dependence on supply and market access to its advantage. The success of U.S. influence over L.M. Ericsson and the Swedish government and its inability to control Thomson and the French government confirm the hypotheses that dependence gives the U.S. government over both states and firms operating abroad. The contrast is particularly significant because, while France is a member of the Coordinating Committee on East-West trade, Sweden is not. The case demonstrates that general agreement on the need for export controls between two countries, like the U.S. and France, and joint membership in CoCom does not guarantee cooperation. At the same time, non-CoCom member countries provide a particular problem since even minimal agreement on Export controls may not be present.

C. Other High Technology Industries: Third Countries

The Third Country Problem

The success of American efforts to gain the cooperation of non-CoCom member countries, or "Third Countries," and their firms has been cited as an examples of American hegemony and the successful exercise of American influence around the globe. On the whole, the United States has been able to secure the cooperation of Third Countries and their firms; however, this success has not been absolute. This section demonstrates that American influence over CoCom and non-CoCom nations and firms is a function of dependence rather than American hegemony.

American efforts to address the third country problem were made public at in Vienna in the Spring of 1984. At a conference there, Mr. Olin Wethington, U.S. Deputy Trade Undersecretary, argued on behalf of the United States for a need for expanded multilateral cooperation, including non-CoCom states such as Austria, Switzerland, Sweden and India. He argued:[60]

> There is simply too much diffusion of technology. Semi-conductors, to take one example, are now made in some 40 countries throughout the world. . . The world is simply too dangerous . . . to avoid ensuring broad authority under U.S. law for the President in both foreign policy and the national security control area.

United States efforts extended to firms operating in Western states like Austria and Sweden, and non-Western state including India, Singapore and others in South East

Asia.

Goals, Targets and Means of Enforcement

Securing the cooperation of these Third Countries and their firms was necessary for the success of the Reagan Administration's policies. South East Asia in particular (notably Hong Kong, Indonesia, Singapore, Malaysia, the Philippines and South Korea), has become a center for high technology industries ranging from computer to aerospace components. Trade between the United States and the South East Asian Newly Industrialized Countries (NICs) has risen from $6.3 million in 1980 to more than $8.3 billion in 1983.[61] Failure to gain the cooperation of the NICs could provide the Soviet Union with a non-CoCom source of many high technology items that CoCom members restrict.

Equally important, securing the cooperation of Third Countries is necessary for Washington to maintain the cooperation of its Western European allies. This is true for two reasons. First, as Michael Mastanduno has argued, by securing the cooperation of the Pacific Rim countries the United States fulfills a classic hegemonic function. Gaining their cooperation secures that the public good of increased security resulting from the technology embargo is maintained. This concern is reflected in the fact that number of debates over the Reagan Administration's desire to strengthen existing controls with CoCom have centered around the growing technological capabilities of the South East Asian countries. Australia and Singapore, for example, are the largest producers of computer

technology in Asia outside of Japan. Secondly, if the United States fails to entice the allies into cooperating with its policies through these means, it must find alternate means of influencing their behavior. One very useful alternative is to threaten to cut off access to American technology or the American consumer market. If companies in the Pacific Rim countries are able to produce products and components of comparable quality to those in the United States, the these companies could act as alternate suppliers for allied firms, thereby undercutting a primary source of U.S. influence.

To gain the cooperation of "Third-Countries," the United States has threatened to deny technology to all countries, regardless of CoCom membership, that flout or undermine the controls. The cases of Singapore and Austria demonstrate that when national and corporate dependence on the United States is high, U.S. success is likely. Sweden's support of its firms, Datasaab and ASEA and its refusal to cooperate in the extradition of Richard Mueller demonstrate, however, that when states and firms are not dependent on the United States, U.S. influence is minimal.

Dependence and the Success of U.S. Influence

Austria and Singapore

In December of 1984, the Austrian Parliament unanimously approved amendments to its trade laws that were aimed at stopping illegal shipments of U.S. technology to the Soviet bloc. The amendment, which called for jail terms of up to two years and steep fines for offending companies and individuals, was a direct

outgrowth of Austrian dependence on American technology. The Commerce Department had argued that under export regulations that would take effect on January 16, 1985, it would refuse licenses to neutral countries like Austria unless tighter measures were taken. Foreign Minister Leopold Gratz indicated that the ruling was intended to assure Austrian industry unhindered access to American technology.[62] The move was supported by Austrian business as a means of avoiding U.S. penalties or threatening their access to U.S. technology and investment. As reported in the *International Herald Tribune*, the amendment "reflects Austria's concern that it might lose access to U.S. technology if it fails to convince the Reagan administration that it intended to prosecute violations of U.S. export law."[63]

In April of 1985, the Singapore Minister of Finance, Dr. Tony Tan, announced that his country would follow the Austrian example and was prepared to cooperate "not only with the U.S. but also with the other members of CoCom."[64] This announcement was made as an attempt to maintain a stable trading relationship between firms in Singapore and the United States. The majority of Singapore's exports of electronic products and components are produced by local subsidiaries or affiliates of American, European and Japanese multinationals. These exports have rising from $83 billion in 1970 to $3.9 billion in 1985.[65] In April of 1986, Secretary George Shultz met with Foreign Minister Suppiah Dhanabalan of Singapore to urge Singapore to apply stricter controls on exports of advanced technologies. Early that year, the United States blocked the sale of powerful IBM

mini computers worth approximately $248,000 by the Singapore Soviet Shipping Company, SinSov. As required under American law, IBM-Singapore applied for a license from the Commerce Department, and was subsequently informed that the license would be denied. Rather than challenging the United States on behalf of its firms, the Singapore government promised to tighten it export licensing system of controlled goods and technologies.[66] As a result of pressure from the United States, India agreed to abide by CoCom regulations in 1985 and Australia followed suit in 1987.

Sweden

Unlike the clear reaction from the Austrian government, American efforts to extend its control into Sweden were mixed. The Swedish cases of ASEA, Datasaab and Meuller demonstrate the extent and limitations of U.S. efforts to implements its policy in non-CoCom member countries. If the hypotheses linking dependence and political power are correct, then the United States should be as likely to implement its export control policy within CoCom and non-Cocom countries under similar circumstances.

In 1985, Sweden was the only remaining Western country that did not have national laws regulating the export and re-export of Western or American technology. Officially, Sweden maintains a neutral stance and does not take part in embargoes, and, as a result of several recent highly publicized cases, Sweden has been placed on the Pentagons list of "risk countries."

Datasaab and ASEA

In 1977 the Carter Administration refused to grant re-export licenses for electronic equipment needed by Datasaab Contracting AB to complete its shipment of an air traffic control system to the Soviet Union. Datasaab got around the restriction by illicitly smuggling the key components to the Soviet Union during corporate visits. When the violation came to light in 1980, in addition to punishing Datasaab, the United States sought to punish the Swedish government for not controlling its exports by terminating the sale of American Sidewinder missiles. These missiles served as a mainstay of the Swedish air force.

In 1982, to regain access to the American military suppliers, the Swedish Defense Department agreed to establish a covert operation to maintain surveillance over local companies using sophisticated computers. Datasaab, in turn, agreed to pay a $1 million to the United States government.[67] As predicted, threatening to cut off the supply of items considered necessary for national economic or military security gave the United States a potent source of influence over the Swedish government. The *Guardian* summed up the Swedish response:[68]

> Swedish industry is heavily dependent on advanced US electronic components and if these were stopped, the local export market, which accounts for 27% of GNP, would collapse within a few months. Thus the US is able to make its own terms and Swedish industry is being forced, despite official policies of neutrality, to join the blockade and even to submit to "voluntary" control and inspection by Americans. With little fanfare, the [Swedish] Government has put key Swedish companies under military surveillance to satisfy US demands.

U.S. influence in Sweden was, however, not absolute. Despite its initial concession, U.S.-Swedish relations were strained in October 1983 when Swedish authorities refused to open and release containers of equipment of goods associated with the Meuller case. And, most recently, Sweden's biggest electronics firm, Asea, is under investigation by the U.S. Department of Trade for the smuggling of six computers to Moscow to be used to coordinate Russian steel production. ASEA faces fines of up to £10 million and will be denied access to U.S. technology.[69]

Richard Meuller

Richard Mueller, a German businessman, led a sophisticated smuggling organization that shipped American goods and technology to the Soviet Union throughout the 1970's and 1980's. According to Richard Perle, Assistant U.S. Secretary of Defence Secretary, technology leaks like those generated by Mueller greatly facilitate the development of modern industry and weapons systems in the Soviet Union by saving them billions of dollars on research and development.[70]

In November of 1984, West German and Swedish officials intercepted a shipment of high technology goods that Meuller's organization was smuggling to the Soviet Union. The shipment included 50 tons of electronics equipment, making it the largest diversion of restricted American technology ever uncovered. The shipment contained two VAX 11/782 computers produced by Digital Equipment Corporation valued at $4.5 million. These computers are widely used in the U.S. military for tasks ranging from missile guidance to satellite transmission intercepts

and are considered very sensitive.[71] The computers had been shipped to Canada without needing any export licenses, then to Europe and eventually through South Africa and Sweden, and, finally, to Soviet Union.

The Mueller case was publicized by the Pentagon to demonstrate the scope of high technology crime. As one Pentagon spokesman stated, "this helps makes our allies aware of the threat and it dramatizes our security concerns right when Congress is debating the new export legislation."[72] Even when an "illegal" shipment of goods is discovered, however, the cooperation of allied governments and firms is not guaranteed. In 1968, as a result of pressure from local businesses who protested restrictions on trade and politicians who wanted to maintain Sweden's neutrality, Sweden withdrew from CoCom. As a consequence, although Swedish authorities were willing to impound the containers containing Meuller's electronic equipment, they claimed there was no legal basis that enabled or required them to confiscate the contents.[73]

In order to pressure the Swedish government confiscate the restricted equipment and then release it to American officials, the United States government threatened to terminate the shipment of American made armaments to the Swedish military for its next generation of fighter aircraft. The Swedish Government was already under pressure from the United States to change its policies following the recent discovery that the Swedish government-owned company Datasaab Contracting AB had supplied the Moscow airport with a sophisticated computerized air traffic control system. As a result of the Swedish government's perception of

dependence on the continued supply of American products it considered vital to its national security, Prime Minister Olof Palma decreed retroactively that it was illegal to ship "war material" to or from South Africa. The computers and electronic equipment in question were labeled "war material" and impounded. DEC in turn bought the products. While in transit back to the United States, U.S. Customs officials confiscated them as evidence against Mueller.

Summary of U.S. Influence over Third Countries

The United States government has been successful in securing the cooperation of non-CoCom member countries. Its influence over these "Third Countries" is not absolute, rather, as in the other cases, it is a function of foreign dependence on American suppliers and access to the American market.

SDI and the Role of Positive Sanctions

So far the cases discussed have involved firm and state reactions to threats of some form or another. It is important to remember that positive as well as negative sanctions are effective form of political influence. The promise of a U.S government contract or access to technology associated with American defense contractors can be a large inducement for modifying corporate policy. The contracts often provide access to American technology than cannot be gained from any other source.

In March of 1986, the United States and Germany signed an agreement for

German participation in the American Strategic Defense Initiative (SDI) projects.[74] Participation in the SDI project was negotiated by Assistant Secretary of Defense Richard Perle and Dr. Lorenz Schomerus, head of trade policy at the West German Ministry of the Economy. The agreement specifically linked German participation in high-technology military research projects with an agreement from the German government to tighten its export control procedures and to give the West German Ministry of Defense a larger role in implementing and enforcing the controls.

The promise of access to SDI technology can be manipulated as a stick as well as a carrot. The difference between a positive and negative sanction is largely a function of the target's base line of expectations. If an ally expects to gain access to SDI technology, the possibility of not gaining access to the technology may be interpreted as a cost or threat. For example, by 1986, the Department of Defense had made agreements to share SDI development and technology with Britain and Israel as well as Germany. The agreements, however, stipulated that continued access to SDI technology required these countries to control the technology in a manner acceptable to the United States:[75]

> . . . the U.S. government has made clear that it will not release its own SDI technology, nor participate in co-development and co-production programmes, unless it is completely satisfied that is allies can protect such technology from the Soviet Union.

As a result, despite verbal protest, the United States has been able to implement its high technology export control policy in Great Britain, Germany and Israel successfully.

V. Costs and Limitations of American Influence

The American government can used foreign dependence as a source of political influence. Restricting foreign access to American suppliers or markets may, however, have political and economic costs. These costs must be balanced against the benefits derived from using this source of political influence.

A. The Reciprocal Nature of Dependence

The hypotheses based on dependence, above, is correct in predicting all but one of the U.S. influence attempts. The hypotheses were incorrect in predicting the outcome of the tenth case, a dispute involving Toshiba of Japan. Despite the fact that Toshiba was both highly dependent on access to the American market and on the supply of information and technology from American producers, the United States was not able to deter Toshiba from violating its export embargo, nor was it able to inflict a substantial penalty on Toshiba for the violation. A brief review of the Toshiba case demonstrates some of the limitations of U.S. influence in the Western alliance.

In 1987, Toshiba Machine Company, an American subsidiary of Toshiba Corporation of Japan and Kongsberg-Vapanfabrik of Norway, sold computerized milling equipment to the Soviet Union that was capable of producing highly sophisticated propellers for Soviet submarines. The security implications of their actions are a matter of dispute, but the sale was in direct violation of multilateral

agreements restricting the sale of sensitive technologies to the Soviet Union. In response to this breach of security, the U.S. Congress sought to penalize Toshiba by banning all U.S. government purchases from Toshiba and all American imports from Toshiba Machine Company for three years. Senator Jake Garn went so far as to propose a bill that would ban any company that violated CoCom rules from doing business in the United States. The Administration sought to use the same sanctions to convince the Japanese government to strengthen its export control system. Given the dependence of Toshiba on the American consumer market, losses of over $100 million in sales for Toshiba were projected over the three year embargo. The hypotheses would predict that the United States should have been able to influence corporate policy, and, failing to do so, it should have been able to penalize Toshiba in order to deter future transgressions. The Administration did succeed in gaining a guarantee from the Japanese government to double the size of its export control staff and increase penalties for violators, but the vast majority of penalties against Toshiba were dropped. Then end product is a watered-down three year ban with exceptions for national security and other reasons.[76] The complete ban applies only to the Toshiba subsidiary, Toshiba Machines, that sold the restricted technology to the Soviets. As a result, despite an initial 100 per cent punitive tariff placed on Toshiba goods in April (including laptop computers), less than three months later the Pentagon placed an order for $100 million of laptop computers.[77] Instead of cutting off access to lucrative U.S. government and consumer markets for all Toshiba products, the final version of the sanctions

embargoed only Toshiba toasters, microwave ovens, and other "low-level" goods.

The primary reason that the United States government had to back away from its original penalties was American dependence on the supply of computer chips from Toshiba. The United States military has long pursued a policy of relying primarily on U.S. sources of supply. Following this philosophy, the U.S. military relies heavily on Texas Instruments for its semiconductor and computer needs. Texas Instruments, however, have moved the majority of its production facilities overseas -- notably to Japan where it runs a production plant with a subsidiary of Toshiba. As a result, cutting off all government contracts with Toshiba would result in cutting off U.S.military access to its major supplier of semiconductor and computer chips. The decision was also strongly motivated by economic concerns. American firms that relied on or sold Toshiba products lobbied strongly against the ban. Corporate spokesmen argued that high technology businesses were so complex and intertwined that there would be no way to avoid serious economic damage. As Edward Black, vice-president of Computer and Communications Industries Association, argued:[78]

> There is no major [U.S.] company that would go under because of the sanctions, but we are talking about whole product lines or market areas where a company could be so hobbled that it would be forced to withdraw from the market.

These lobbying efforts were headed by large industrial pressure groups including the American Electronics Association, the Computer and Business Equipment

Manufactures Association, the Business Roundtable, the National Association of Manufactures, and others.

In response to continued American efforts to control the activities of firms operating within their borders, the French and British governments argued that when some of the proposed changes in U.S. regulations in 1984 went into effect, their companies might "shift their purchasing away from the United States."[79] Within Great Britain, Paul Channon, U.K. Trade Minister, threatened to cut off access to the British consumer market for American computers if the United States did not stop its interference in British high technology trade.[80] The statement made in June of 1985, was the strongest challenge to the dispute between Great Britain and the United States over American insistence for total control of American made computers and software within and outside of the UK. While interpreted as a bluff by American officials, the threatened retaliation is intended to be a response in kind to the U.S. threat to cut off sources of American supply for British firms if those firms fail to abide by U.S. policy. As a result of strong criticisms from U.S. and foreign firms, the National Association of Manufactures, and allied governments, the U.S. Commerce Department announced a softening of its rigorous new export policy to stop leaks of high technology to the East block.[81]

The Toshiba case is important because it demonstrates that dependence can be reciprocal and threats can inflict real costs on the U.S. The dependence of firms and states on others may be used by all states as a source of political influence. The ability to exploit dependence is greatest when one country monopolizes certain

goods or technologies. The U.S. monopoly in high technology industries disappeared soon after World War II. Its lead in innovation, design and production of these technologies lasted longer, but the number of competent competitors has increased dramatically. While other countries remain dependent on the United States for its products and its market, the United States has become increasingly dependent on others as well.

Dependence is a function of the proportion of trade accounted for by one partner, and the availability of an alternate supplier or market. In 1987, the United States remained the largest supplier and market for computer products, accounting for 22.8% of world exports and 16.3% of world imports. Japan, however, the second largest supplier of computer equipment by a very close margin, accounting for 22.5% of world exports.[82] See Table 5.14. Over half of these exports went directly to the United States, indicating that Japan relied heavily on access to the American market. At the same time, the United States relied heavily on imports of Japanese computer equipment. Japanese exports of computer equipment accounted for 49.2% of all American computer equipment imports. The second component of dependence is the availability of alternate suppliers. The Hirschman Herfindahl indices of concentration presented in Table 5.3, above, indicate that both world markets and suppliers of computer products were highly concentrated in 1987. The concentration of world markets, HH = 41.71, and particularly the concentration of world suppliers, HH = 32.45, indicate that a few markets and suppliers dominate the market. Due to the unique nature of the computer industry, discussed above, it

can be argued that these number even underestimate the limited number of alternate suppliers of computer equipment. Given both the high proportion of Japanese trade with the United States, the high proportion of American trade with the Japanese, and the high concentration of world suppliers and markets, one would predict that the Japan was dependent on the United States and that the United States was dependent upon Japan.

Table 5.14: Top 10 Exports and Importers of Computer Products in 1987, SITC 752
(current thousands $US)

	Market		Supplier	
Rank	Country	Imports	Country	Exports
1	U.S.A.	$7,313,768	U.S.A.	$9,965,266
2	U.K.	$5,226,939	Japan	$9,374,521
3	F.R.G.	$5,171,938	F.R.G.	$4,223,722
4	France	$4,150,442	U.K.	$2,973,958
5	Canada	$2,731,471	France	$2,403,213
6	Italy	$2,678,068	Singapore	$2,362,727
7	Netherlands	$2,227,627	Ireland	$2,214,893
8	Switzerland	$1,454,810	Canada	$1,861,394
9	Japan	$1,387,249	Italy	$1,509,460
10	Spain	$1,217,605	Netherlands	$1,285,795

Source: United Nations, *1987 International Trade Statistics Yearbook*, vol II. (New York: United Nations, 1989).

As the Toshiba case demonstrates, when the United States becomes dependent on others for this technology, its actions can be affected as much as any other country's. Japan and the Asian NICs can use their rising dominance in this sector as a source of political influence. Citing an extreme case, Akio Morita, President

of Sony Corporation and one author of *The Japan that Can Say No*, argued that if "Japan sold ships to the Soviet Union and stopped selling them to the United States, this would upset the entire military balance."[83] Morita's scenario is unlikely, but it may be possible. Despite possessing more economic and military resources than any other country in this and many other sectors, the United States may not always be able to implement its policies unilaterally at home or abroad.

VI. Conclusion

Allied dependence on access to the American consumer market and access to American suppliers in certain industries provides the United States government with a source of leverage over firms operating abroad. This leverage enabled the United States to implement and enforce its export control policy abroad successfully throughout Operation Exodus, and can be used by all states as a source of political influence. The contrasting outcome of U.S. efforts during Operation Exodus and the Pipeline Embargo, as well as variations within each set of cases, demonstrate the potential scope and the limitations of this form of political influence. Cutting off access to American suppliers and American markets is a potent tool. When actors are dependent on access to American markets or American suppliers, then threatening to cut off this access can be a potent tool. U.S. influence, however, was not absolute. As predicted, when firms and states were not dependent on the United States, threatening to cut off access did not increase the probability of a

success.

The cases presented in this chapter support the subsidiary hypothesis that states tend to value continued access to foreign suppliers more than continued access to foreign markets for their firms. This is particularly true when the restricted products are considered vital to the national economic or military security. In contrast, as in the pipeline case, firms were often willing to seek out or develop alternate sources of supply, but were very sensitive to the threat of continued market access for their goods.

This finding has serious ramifications for excessive use of foreign dependence on American suppliers as a source of political influence. If firms develop alternate sources of supply, then their dependence on American suppliers decreases. As a result, the United State's government looses the ability to capitalize on foreign dependence on American suppliers, and, American firms lose both their customers and their former economic advantage of being on of a small number of producers of the restricted goods. Consequently, a source of political power is lost, and American economic competitiveness declines. The following chapter concludes the dissertation with a summary of the findings and additional implications of these findings for the study and use of political power.

Citations

1. The distribution of responsibility for enforcing export control legislation has been a source of interagency rivalry, particularly between the Commerce Department and the Department of the Treasury.

2. See: "The Spies who steal Computers," *Financial Times*, 17 May 1986, pp. I, XIII; Joseph Fitchett, "Silicon Embargo Against East Bloc Revealed by U.S.," *International Herald Tribune*, 25 May 1984; Joseph Fitchett, "Technology Bandit Led Ring for Russia," *International Herald Tribune*, 5 February 1985; David Buchan and Peter Montagnon, "Backing reluctantly into the limelight," *Financial Times*, 8 December 1987; Philip Hanson, *Soviet Industrial Espionage: Some New Information* (London: Royal Institute for International Affairs, 1987). For a review of U.S. export control policy in light of the fear of Soviet aggression, see: Metcalfe, Robyn S. *The New Wizard War: How the Soviets Steel U.S. High Technology -- And How We give it Away.* Redmond, Washington: Tempus Books, 1988.

3. Joseph Fitchett, "Even Friends Will Be Watched Closely as U.S. Guards Its High Tech," *International Herald Tribune*, 23 May 1984.

4. The Coordinating Committee on East-West Trade is discussed in greater detail in Chapter 2.

5. The United States government invoked both the of these arguments to prohibit trade with North Korea, Vietnam and Cambodia, Cuba, and the Soviet Union following its crackdown in Poland. In response to the Arab boycott of Israel and the seizure of hostages in Iran, the United States justified the extraterritorial extension of its regulations on the basis of firm association with American individuals or American corporations; while its actions against Libya were applied against all firms trading in United States origin goods and technology regardless of their affiliation with American firms. See Douglas Rosenthal, William Knighton, *Chatham House Papers #17: National Laws and International Commerce: The Problem of Extraterritoriality* (London: Routledge & Kegan Paul, 1982), pp 58-59.

For a discussion of the legal and political debate surrounding these regulations, see: Kenneth, Abbott, "Collective Goods, Mobile Resources, and Extraterritorial Trade Controls," *Law and Contemporary Problems* 50 (Summer 1987); A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, 2nd ed. (New York: Matthew Bender, 1983); and Lowe, "Public International Law and the Conflict of Laws,". *International and Comparative Law Quarterly* 33,

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6. A.L.C. de Mestral and T. Gruchalla-Wesierski, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.* (London: Martinus Nijhoff Publishers, 1990) p. 78; A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, p. 22.

7. In its simplest form, telecommunications includes communication switching equipment (now primarily electronic equipment and computers), terminals (including telephones, facsimile machines, and a myriad of electronics equipment and computers), and transmission equipment (including wire, fiber optic cable, and electronics and computer equipment used for microwave and satellite transmission). Similarly, the computer industry consists of completed computers, peripherals (printing machines, monitors, etc.), and subassemblies (including electronic components such as printed circuit boards and computer memory and data processing chips). Within the computer industry, 35-50% of all trade involves subassemblies rather than fully functional computers. This is due to both the structure of international tariff barriers and because economies of scale make it more efficient to import basic components from specialized producers rather than develop common components internally. As a result, the distinctions between the telecommunications, computer and electronics industries have become blurred.

8. In 1985 and 1986, IBM profits stagnated, but its dominance in the computer industry remains undisputed. *The Times*, 8 May 1983; Tim Kelly, *The British Computer Industry: Crisis and Development* (New York: Croom Helm, 1987), p. 220.

9. *Datamation Magazine*, August 1985; Tim Kelly, *The British Computer Industry*, p. 222.

10. Kevin Cahill, "Sh. . . the following may be a US secret," *the Times*, 17 April 1984; "British exports hit by US rules," *The Independent*, 25 April 1988; and Kevin Cahill, *Trade Wars: High-Technology Scandal of the 1980s* (London: W.H. Allen, 1986), pp. 82-85.

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13. Tim Kelly, *The British Computer Industry*, p. 216-217.

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17. Letter reprinted in its entirety in Stuart Macdonald, *Technology and the Tyranny of Export Controls*, p. 139.

18. *Re-export Controls for Goods of U.S. Origin*, internal compliance manual of large European electronics company. Cited in: Stuart Macdonald, *Technology and the Tyranny of Export Controls*, p. 142.

19. Memo circulated to staff in ICL's central sales department. See: "British exports hit by US rules," *The Independent*, 25 April 1988.

20. *Export License Compliance*, internal compliance manual of large European computer firm. Cited in: Stuart Macdonald, *Technology and the Tyranny of Export Controls*, p. 142.

21. Nancy Dunne, "Systime in $600,000 settlement of re-export charges," *Financial Times*, 15 May 1986. See also: Kevin Cahill, *Trade Wars*, p. 85.

22. For more detail on this case, see: Kevin Cahill, *Trade Wars*, (London: W.H. Allen, 1986), pp.177, and Tim Kelly, *The British Computer Industry*, p. 81.

23. Recent changes in legislation require that the license processing time be shorter than 120 days, but the average time for license processing is over one year. See: Kevin Cahill, *Trade Wars*, p. 177.

24. Nancy Dunne, "Systime in $600,000 settlement of re-export charges," *Financial Times*, 15 May 1986.

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26. Sections of a letter from the U.S. Department of commerce to Systime summarizing the charges follows:

- The Department alleges that Systime has committed a total of 46

violations of the Act and the Regulations. Accordingly, Systime is herein notified that administrative proceedings are instituted against it. . . including any or all of the following:

> Revocation of validated export licenses under Section 388.3 (a) (1);
> General denial of export privileges under Section 388.3 (a) (2);
> Exclusion from practices under Section 388.3; and/or
> Imposition of the maximum civil penalties allowed by law, $10,000 per violation or, for violation of national security controls occurring after December 1981, $100,000 per violation, under Section 388.3 (a) 4.

Source: U.S. Department of Commerce. Reprinted in its entirety in: Stuart Macdonald, *Technology and the Tyranny of Export Controls*, pp. 147-148.

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Chapter 6

Conclusion: The Potential Scope and the Constraints of Using Dependence as a Source of Political Influence

I. Introduction

Analysis of allied corporate and national reactions to United States' export control policy is instrumental in determining those conditions under which the United States is able to exercise control over actors and resources within another state's territory. This project investigated attempts by the United States to restrict the movement of strategic goods and technology around the globe since 1949. Analyses of these influence attempts supported the argument that dependence among states and firms is a potent and often overlooked source of political power, and that foreign dependence on American suppliers and access to American consumer markets in several industries has enabled the United States to enforce its export control policy abroad. Further, the cases supported the proposition that dependence can be used by all states as a source of political influence.

This chapter analyzes the potential scope and constraints associated with using dependence as a source of political influence. Section two presents the findings of the statistical analyses and comparative case studies and summarizes the primary links between dependence and political power. Section three discusses the potential for use of dependence as a means to pursue a variety of policy objectives in addition to its use in controlling exports of strategic goods and technology. Section four tempers the expanded use of dependence to achieve political objectives by identifying the costs and limitations associated with this source of political power. Section five concludes with by presenting some of the theoretical and

policy implications of this study.

II. Dependence as a Source of Political Influence: the Argument and Findings

A. Review of the Argument: Dependence and Political Power

The primary hypotheses analyzed above emphasize the link between dependence and political power. Building on the insights of Albert Hirschman, it was argued that an actor who values a particular trading relationship less will suffer proportionately less from its termination and will, consequently, be able to exercise proportionately more influence over its trading partner by threatening to terminate the relationship. If a firm or state values its trading relationship with the United States more than the trade it would forgo to abide by U.S. export control regulations, then threatening to cut off trade gives the United States government a source of leverage over the dependent firm or state.

Dependence is interpreted in terms of the costs of foregoing a particular relationship. The more costly it is for an actor to forego a particular relationship, the more dependent it is on the maintenance of that relationship. The costs associated with terminating a trading relationship with the United States are a function of two factors: the relative proportion of trade an actor conducts with the United States, and the availability of alternate trading partners. Dependence as a function of these factors is summarized in Table 6.1. U.S. influence as a sanction of firm and state dependence is summarized in Table 6.2. Variations of U.S. influence within and among the cases presented in the previous chapters can be

explained in terms of the proposed hypotheses linking dependence and political influence.

Proposed and competing hypotheses were tested in two ways. First, statistical analyses of United States attempts to implement its export control policy abroad since 1949 were performed; second, two in-depth comparative case studies were analyzed. These cases included failed U.S. efforts to block construction of the trans-Siberian Pipeline from 1982 through 1984, and largely successful U.S. efforts to control movement of computer and high-technology resources through Operation Exodus between 1982 and 1987. The statistical analyses served as a preliminary test of the hypotheses. They provided justification to pursue a more detailed comparative analysis of individual influence attempts. Further, they verified that the cases chosen for comparative analysis were representative of extraterritorial disputes in the post-World War II era.

Table 6.1: Dependence as a Function of Trade Concentration

Concentration of World Exports/Imports	Proportion of U.S. Exports/Imports	
	Low	High
Low	Low dependence	High sensitivity but low vulnerability to dependence on US
High	High vulnerability to dependence on others	High vulnerability to dependence on US

Table 6.2: U.S. Influence as a Function of Dependence

Dependence on Supply	Dependence on Market Access	
	Low	High
Low	Firm defiance, host government intervention	Firm compliance, host government indeterminate
High	Firm indeterminate, host government acquiescence	Firm compliance, host government acquiescence

B. Summary of Statistical Results

Competing hypotheses of state power and alliance dynamics were tested through the statistical analysis of 47 U.S. attempts to control actors operating abroad. Logit analyses were used to estimate the effects of the independent variables (dependence on American markets and suppliers, American economic and military hegemony, and host government intervention against the United States), on the probability that the American government would be able to implement its export control policy successfully. The regression equations were estimated once using data from a thorough quantitative analysis of individual case histories, and again using a variant of the Hirschman-Herfindahl index of trade concentration to indicate dependence for each case by industrial sector and year.

Statistical analyses of U.S. attempts to implement its export control policy abroad against the interests of its allies support the argument that dependence can be used as a source of political power. The United States was more likely to implement its policies successfully in situations where the states or firms involved were dependent on American suppliers or access to American markets.

Traditional indicators of economic hegemony were important; however, the success of several virtually simultaneous American efforts varied widely despite a constant level of economic hegemony. The presence of economic hegemony may imply firm and state dependence on the hegemon. Economic dominance, characteristic of hegemony, is highly correlated with the proportion of trade actors

have with United States. The presence of alternate suppliers or markets may, however, undercut potential influence resulting from foreign reliance on the hegemon's market and its firms. Arguments that link economic hegemony and political power are limited because they do not take the availability of alternate suppliers and markets into account. Arguments linking dependence and political power accounts for both the dominance of American trade and the availability of alternate suppliers and markets. As a result, the arguments support propositions based on theories of economic hegemony while they interpret behavior these theories cannot explain.

The military component of hegemony's effect on American influence has been less important than the economic component in facilitating success U.S. influence since 1949, and may even be counter-productive. Increasing relative military expenditure had little effect on the majority of cases, and actually decreased the likelihood of success in several instances. This supports arguments that military power is not necessarily fungible and may prove to be counterproductive.[1]

Firm and state perceptions of dependence closely matched measurements of dependence based on trade patterns in particular industries. This correlation indicates that the aggregate indicators of dependence offer a good approximation of dependence as perceived by the actors themselves. This is particularly useful since data on actors' perceptions is often limited and difficult to assess.

Dependence on access to American markets and American suppliers is a good

indicator of potential political influence over both states and firms. The findings indicate, however, that national governments and firms respond to different forms of dependence. The cases demonstrated that, when technically feasible, firms will often invest in the research and development necessary to develop internal sources of supply if external suppliers are cut off. As discussed in the following section, this has profound implications for the continued use of threats to terminate access to markets or suppliers as a source of political influence.

C. Summary of the Comparative Case Studies

The comparative case studies of the trans-Siberian Pipeline and Operation Exodus bolster the findings of the statistical analyses. Restricting the flow of high technology to the East through the Pipeline Embargo and Operation Exodus were centerpieces of the Reagan Administration's policy of economic Cold-Warfare against the Eastern bloc. The allies' basic conflict of interest regarding the goals of and means to pursue East-West trade remained largely unchanged. In contrast to failed American attempts to block construction of the trans-Siberian pipeline, however, the United States government largely succeeded in controlling the movement of computers and other high technology goods through Operation Exodus.

In both cases, the United States government was trying to manipulate others into actions they did not wish to take. Operation Exodus took place at virtually the same time and in the same international environment as the Pipeline embargo.

Traditional explanatory variables of state influence such as American hegemony in the Western alliance, systemic polarity and the perception of an external threat to the alliance remained relatively constant. The outcomes of the two cases, however, varied substantially. These differences can be explained by changes in the hypothesized variables of firm and state dependence.

Predictions made as a result of the comparative analyses are summarized in Table 6.3. The positions of the firms in the table is a function of their dependence on access to American markets and American suppliers. Based on Table 6.2, above, U.S. influence attempts over actors in the Low/Low quadrant in the upper left hand corner are likely to fail, while its influence attempts over those in the High/High quadrant in the lower right hand corner are likely to succeed. In the upper right hand corner, firm compliance is likely, but host government actions are indeterminate. And, in the lower left hand corner, firm actions are indeterminate, but U.S. influence over host governments is likely. The "+" and "-" signs indicate successful and failed U.S. influence attempts.

Table 6.3: Successful Implementation, 1980-1987

Dependence on Supply	Dependence on Market Access	
	Low	**High**
Low	- Mannesmann (FRG) - Dresser-France (FR) - Thomson Group (FR)	+ L.M. Ericsson (SW) + ASEA (SW)
High	- John Brown (UK) + Alsthome-Atlantique (FR) + FRG-SDI (FRG) + Kongsberg (NO) + Mueller (SW)	+ ICL (UK) + Systime (UK) + Butcher (UK) + Plasma (UK) - Toshiba (JA)

+ US Successful (firm compliance, host government acquiescence)
- US Not Successful

Between 1982 and 1984, the United States government attempted to stop Mannesmann, Dresser-France, John Brown Engineering and Alsthome-Atlantique from producing and shipping equipment for the construction of a trans-Siberian pipeline. Because these companies produced materials associated with pipeline construction and transport and, consequently, did not rely on American suppliers or on the American consumer market, U.S. influence during this crisis was very limited. As predicted by the hypotheses, with their host government's support, the firms refused to abide by U.S. export control regulations.

American influence during the Pipeline Crisis was not, however, completely absent. For example, the United States government was able to exploit Alsthome-Atlantique's dependence on General Electric. Because Alsthome feared

damaging its long-term ties with General Electric, it chose not to act as an alternate supplier of rotors and related technology embargoed from American sources.

Beginning in 1982, the Reagan administration sought to increase monitoring and enforcement of American controls over international movement and diffusion of high technology goods and information through Operation Exodus. Firms associated with Operation Exodus included Thomson Group, L.M. Ericsson, ASEA, ICL, Systime, Butcher, Plasma, Meuller, Kongsberg and Toshiba. Despite declining American hegemony in the Western alliance and a decreasing threat of Soviet aggression since the Pipeline crisis, the allies and their firms acquiesced to U.S. initiatives throughout Operation Exodus.

The primary factor difference between these cases and those pertaining to the pipeline crisis is the level of dependence between firms in the high-technology sectors of the computer and telecommunications industries relative to the industrial sectors of wide diameter pipes and compressors. As in the case of the Thomson Group, however, when dependence on American suppliers or the American market was low, American influence was not guaranteed and compliance was less likely.

The inability of the United States to control Toshiba Corporation and to penalize its non-compliance carries important implications for this theory. Initially, it appears to be an anomaly. Toshiba was dependent on access to both American suppliers and the American market, yet U.S. influence attempts failed. Close analysis of the case, however, demonstrated that the United States government was dependent on access to the supply of components produced by Toshiba. This

dependence empowered Toshiba and greatly limited the U.S. government's ability to punish the corporation for its lack of compliance. As discussed below, the reciprocal nature of dependence implies that all states may use dependence as a source of political influence.

III. The Scope of Dependence as a Source of Political Influence

The previous chapter's findings support the argument that the U.S. government has been able to implement its export control policy abroad by threatening to restrict access to American markets and suppliers. This section analyzes the ability of the United States government to use dependence as a source of political power in order to pursue other foreign policy objectives. It argues that the cases analyzed in this study were representative of general cases involving the extension of national authority across international boundaries. The findings from analyses of U.S. export control cases can be applied to the analysis and interpretation of efforts by all states to control actors and resources across international boundaries.

The potential of this from of influence is broad in scope. This breadth, however, must be balanced against the costs of using it to pursue political ends. The following section presents a series of cases that demonstrate the costs and limitations of using dependence as a source of political power.

A. Foreign Dependence on American Suppliers

Foreign dependence on American suppliers can be used to pursue a variety of political goals, among which is the pursuit of strategic trade policy.

Limited access to foreign markets access is a major concern of internationally oriented American firms as it may affect the competitive position of American industry. Of particular political concern are industries in which the United States still maintains a competitive or technological advantage over its foreign competitors, like the aerospace, computer and telecommunication industries. Foreign dependence on American firms in these industries, whether it results from their competitive or technological advantage, can be used as a source of political leverage.

The hypotheses above argue that threats to restrict foreign access to American suppliers and its consumer market in these industries can provide the American government with a source of leverage over state and firms. The political leverage that results from the unique characteristics of the firms themselves may enable them to remain competitive by gaining access to formerly restricted markets. When successful, this practice "levels" the international playing field by taking advantage of firm and state dependence on American suppliers and access to the American consumer market.

The FSX and the Boeing 767

Recent examples of U.S. leverage gained through the use of threats to restrict access to American suppliers include the Fighter Support Experimental (FSX)

project with Japan, Fujitsu's aborted attempt to buy Fairchild Semiconductor Corporation, and a co-development project of the Boeing 767X. In these cases, the American government was able to intervene and stop the supply of technological goods and processes from American firms that it considered vital to American competition on the global market.

In 1989, U.S. government intervention ended four years of negotiations between Mitsubishi Heavy Industries and General Dynamics over co-production of the FSX fighter plane.[2] The co-production agreement was challenged because of fears within the Administration that the arrangement would give the Japanese the technological and production knowledge necessary to compete with one of America's few remaining internationally competitive industries.

Mitsubishi's primary interest in the arrangement was to gain access to technology associated with the process of systems integration necessary for large scale production in the aerospace industry. Systems technology used in airplane construction can only be supplied by a limited number of firms in the United States and Europe, including General Dynamics, McDonnell Douglas and Boeing.

As predicted by the hypotheses, above, Japanese firm dependence on access to that technology gave General Dynamics unique bargaining leverage throughout the negotiations. Threats to cut off access to that technology also gave the United States government a direct means to control technology diffusion and the future competitiveness of the American Aerospace industry. Government interest in preserving the industry's competitiveness can be accounted for by the fact that, in

1989, during an era of increasing economic competition, General Dynamics and Boeing accounted for more than 2% of U.S. export revenues.[3]

Following a similar strategy, the Reagan administration blocked Fujitsu's 1986 proposal to buy Fairchild Semiconductor Corporation. The Administration justified its rejection of the offer in terms of national security, by arguing that it was necessary to maintain domestic ownership of a major supplier of computer chips for the Department of Defense. The Administration's actions were, however, equally motivated by its desire to maintain American economic security by challenging the strength of Japanese manufacturing in high-technology fields that once dominated by American companies.

Shortly after resolution of the FSX dispute, the Boeing Company announced an agreement to cooperate with Japanese manufacturers in producing the 767x passenger aircraft. The agreement provided an innovative example of how the diffusion of technology can be controlled, without foregoing the benefits of international cooperation and development. In this unique arrangement, forty Japanese engineers from three companies -- Mitsubishi Heavy Industries, Ltd., Fuji Heavy Industries, Ltd., and Kawasaki Heavy Industries -- took part in the design and building of the Boeing 767X aircraft. Boeing was able to negotiate a lucrative agreement for the development of the 767X by using foreign contractors to produce many of the plane's components and by allowing several Japanese firms to take part in aircraft design. To maintain industrial secrecy, however, the movements of foreign workers were restricted. Japanese workers, for example, were not allowed

inside factories to observe Boeing's production techniques and they were not given access to computer design simulation equipment.

B. Foreign Dependence on Access to American Markets

The dissertation argues that foreign dependence on access to the American consumer market can be used as a means of pursuing a variety of political goals. Even if American hegemony and the international competitiveness of its firms declines, the United States government can still influence the activities of firms and states by controlling access to its consumer market.

Digital Audio Tape and High Density Television

Two recent examples of influence resulting from foreign dependence on market access include international developments in Digital Audio Tape (DAT) and High Density Television (HDTV). It has been argued that Japanese development and marketing of advanced consumer electronics, such as DAT and HDTV, well in advance of any American competitor, is symbolic of the decline of American industry and American economic hegemony. Judging this event considering solely U.S. production and development, one could reach a similar conclusion. If foreign dependence on the American consumer market is considered, however, this conclusion must be reconsidered.

The dissertation argues that foreign dependence on market access provides a means of influencing the activities of firms operating abroad. Japanese firms must

maintain access to the American market in order to achieve the economies of scale necessary to market the DAT profitably. This dependence provides the United States government with a source of political power. The Japanese firms do not control the form of the DAT or the standards by which it will be produced. Instead, these functions are determined by the standards set in the U.S. consumer market. Their products are designed and redesigned to fit the specifications of U.S. regulators.

American threats to restrict the flow of technological knowledge or components from American suppliers may not provide any additional bargaining leverage at this time. However, threats to restrict access to the American market are taken very seriously and provide a means to exert influence both on firms and their governments. While this may not be worth the potential political costs at the present time, it is a current example of the implications of the theories discussed above.

C. Positive Sanctions

The majority of cases discussed throughout this project have involved firm and state reactions to threats of some form. It is important to remember that positive as well as negative sanctions are an effective form of political influence. The promise of a U.S government contract or access to technology associated with American defense contractors can be a substantial inducement to modifying corporate policy. For example, in March of 1986, the United States and Germany

signed an agreement regarding German participation in the American Strategic Defense Initiative (SDI) projects.[4] Participation in the SDI project was negotiated by Assistant Secretary of Defense Richard Perle and Dr. Lorenz Schomerus, head of trade policy at the West German Ministry of the Economy. As discussed in Chapter 5, the agreement specifically linked German participation in high-technology military research projects with an agreement from the German government to tighten its export control procedures and to give the West German Ministry of Defense a larger role in implementation and enforcement of the controls.

These cases demonstrate that threats to restrict or promises to grant access to American suppliers and the American consumer market can be used to gain political influence and achieve a variety of political goals.

IV. Costs and Limitations of Dependence as a Source of Political Influence

The analyses performed in the previous chapters indicate that states can use foreign dependence as a source of political influence. Restricting access to domestic suppliers or markets may, however, have political and economic costs. These costs must be balanced against the benefits derived to decide when to use dependence as a source of political influence.

This section highlights several limitations associated with this usage. They include the reciprocal nature of dependence, the affect of such a policy on the

reliability of American firms, and the problem of the indigenous development of restricted resources. The problems inherent in attempting to influence firms operating abroad are reflected in the fact that in several recent embargoes, including those relating to the Moscow Olympics, Afghanistan, and Uganda, the US has refrained from seeking to control actions of foreign subsidiaries of American firms.[5]

A. Reciprocal Nature of Dependence

Hypotheses of U.S. influence based on firm and state dependence provide accurate predictions of success in the majority of cases analyzed above. One notable exception, however, is the case involving the Toshiba corporation. Despite the fact that Toshiba was highly dependent on access to both the American market and the supply of information and technology from American producers, the United States was not able to deter Toshiba from violating its export embargo, nor was it able to inflict a substantial penalty on Toshiba for the violation. A brief review of the Toshiba case demonstrates some of the limitations of U.S. influence in the Western alliance.

In 1987, Toshiba Machine Company, a subsidiary of Toshiba Corporation of Japan and Kongsberg-Vapanfabrik of Norway, sold computerized milling equipment to the Soviet Union that was capable of producing highly sophisticated propellers for Soviet submarines. The military security implications of their actions were a matter of dispute, but the sale was in direct violation of multilateral agreements

restricting the sale of sensitive technologies to the Soviet Union. In response to this breach of security, the U.S. Congress sought to penalize Toshiba by banning all U.S. government purchases from Toshiba and all American imports from Toshiba Machine Company for three years. The Administration sought to use the same sanctions to convince the Japanese government to strengthen its export control system. Given the dependence of Toshiba on the American consumer market (losses of over $100 million in sales for Toshiba were projected over the three year embargo), the hypotheses would predict that the United States should have been able to influence corporate policy, and, failing to do so, should have been able to penalize Toshiba in order to deter future transgressions. The Administration did succeed in gaining a guarantee from the Japanese government to double the size of its export control staff and to increase penalties for violators, but the vast majority of penalties against Toshiba were dropped. Instead of cutting off access to lucrative U.S. government and consumer markets for all Toshiba products, the final version of the sanctions embargoed only Toshiba toasters, microwave ovens, and other "low-level" goods.

As discussed in Chapter 5, the primary reason that the United States government had to back away from its original penalties was American dependence on the supply of computer chips from Toshiba. As in the Fairchild case, above, the United States military has long pursued a policy of relying primarily on U.S. sources of supply. Following this philosophy, the U.S. military relies heavily on Texas Instruments for its semiconductor and computer needs. Texas Instruments,

however, has moved the majority of its production facilities overseas -- notably to Japan where it runs a production plant with a subsidiary of Toshiba. As a result, cutting off all government contracts with Toshiba would result in cutting off the U.S. military's access to its major supplier of semiconductor and computer chips.

The Toshiba case is important because it demonstrates that dependence can be reciprocal. Firm and state dependence on access to foreign markets and suppliers can be used by all states as a source of political influence. Consequently, despite possession of a preponderant amount of economic and military resources, the United States may not always be able to implement its policies unilaterally at home or abroad.

B. Reliability of American Firms

Threatening to cut off foreign access to American suppliers has given the United States a source of political leverage. However, use of that leverage can be costly to the American companies whose trade is terminated.

When American suppliers are restricted, firms that were dependent on them will search for alternate sources of supply. The initial consequence for American suppliers is the cost of losing a contract. Long term costs may, however, be much greater. The American companies risk losing future business by losing their reputation as reliable sources of supply. If these companies cannot guarantee that the government will not, at some point, intervene and stop a sale, then they cannot guarantee fulfillment of their contracts.

During the Pipeline crisis, for example, when Caterpillar Tractor Company's exports of pipe-laying equipment were terminated, a spokesperson for the company complained that, "there is no doubt that during the restrictions the Soviets came to regard us as an unreliable supplier."[6] As a result, once the embargo was lifted Caterpillar lost its contracts to a Japanese rival, Komatsu, whose main selling point was its guarantee to fulfill contract obligations without the fear that the Japanese government would intervene and terminate them at some point in the future.

Similarly, even when American exports are not restricted, the time-consuming and costly licensing requirements associated with U.S. export control regulations undermine the competitive position of American firms operating abroad. For example, in order to operate in Europe, Digital Equipment Corporation must obtain certification for the sale of all of its equipment, and its customers must inform the United States Commerce Department of the products' destination and intended use. In the mid-1980's, European customers expressed frustration and anger about the time delays and requirements to surrender proprietary information when purchasing products from American companies, like DEC. European competitors, such as GEC Computers, Plc. of Great Britain, Bull-SEMS SA of France, and Norsk Data A/S of Norway offer products similar to DEC, but they can do so in a more timely, cost-effective manner without requiring personal information from their customers to be sent to the Commerce Department. The result was that technology the United States government wanted to control was diffused. Customers purchased the products they desired, but DEC and other American companies did not profit from

the sales. In the practice, American firms are placed at an economic disadvantage by not being able to participate as efficiently in the international marketplace.

C. Indigenous Development of Restricted Resources

The statistical analysis demonstrated a tendency for firms to respond more readily to threats to terminate their access to the American consumer market than threats to cut off access to the supply of certain goods. When the supply of a particular good is cut off, firms seek out alternate suppliers. When alternate suppliers are not available, firms are often willing, when technically feasible, to develop the restricted goods internally. Internal research and development can be an extremely costly investment. Once foreign firms have made the investment and have borne the sunk costs of research, development, and production of a new product, they are not likely to return to their former sources, should that supply become available again.

In addition to a loss of business, restricting the supply of certain goods from American sources provides foreign competitors with a motivation to pursue research and development in areas that would not have been pursued had the products been available. Therefore, in the long run, the technological lead of the United States will be undermined if access to sophisticated products it now produces is restricted. One of the best incentives for foreign firms to invest in research and development is the possession of an existing model of the final product.

Finally, traditional arguments against protectionist practices emphasize that

they sacrifice the broader gains from liberalization and may provoke an international trade war. The gains from liberalization are traditionally considered in terms of consumer welfare and overall efficiency of American production. The gains from liberalization are particularly pronounced in high technology industries, and the negative effects of protectionist policies are particularly severe. To a large degree, trade in these industries involves the exchange of components rather than final products. Access to foreign suppliers of these components increases the speed and efficiency of innovation and competition in these industries. Long term competitiveness of the American industries may be weakened without the challenge of foreign competitors or access to international joint ventures.

V. Conclusion

The dissertation analyzed allied corporate and national reactions to United States' export control policy in order to determine those conditions under which one state can exert extraterritorial control over actors and resources. It demonstrated that dependence among states and firms is a potent and often overlooked source of political power. Dependence on American suppliers and access to the American consumer markets in certain industries has enabled the United States to implement its export control policy abroad since 1949, and can be used by all states as a source of political power.

This project demonstrated the utility of combining insights from international law, economics and political science to address common, underlying issues such as the nature of sovereignty and political power. Most importantly, by emphasizing interdependence and the context of state interaction, sources of international power and cooperation neglected in several prominent Realist theories were highlighted.

Interpreting state actions in terms of interdependence has several advantages over traditional conceptions of alliance dynamics in terms of external threat and the distribution of resources. First, interdependence emphasizes the presence of multiple links between states in international politics. These links and the number of alternatives available to an actor are as important a source of political power as the physical resources it possesses. Furthermore, these links may include the control of transnational resources and the possibility that several states may exert control over them. Traditional conceptions of the territorial state and state power

overlook these connections and their use as a source of political power.

Interdependence underscores the fact that the political resources resulting from a dependent relationship may be reciprocal. The dependence of firms and states on others may be used by all states as a source of political influence.

A primary implication of the argument is that despite continued American dominance in both the world economy and world politics, growth of alternate markets and supplier in other countries, such as Germany or Japan, will limit U.S. influence and may result in increased American dependence on foreign markets and suppliers. Consequently, despite possession of a preponderant amount of economic and military resources, the United States may not always be able to implement its policies unilaterally at home or abroad.

This project highlighted untapped political resources that result from interdependence between states and firms that may be used for or against each member of the alliance. The ability to use these resources has a direct and increasingly significant impact on national economic and military security, technology transfer, industrial innovation and competitiveness at home and abroad. At the same time, exploitation of dependence for political purposes may have political and economic costs, and these costs must be weighed against the benefits gained from using this source of political power. Understanding the effects of economic interdependence on political power and alliance dynamics is crucial in order to maintain peace and for resolution of conflicts resulting from competing national desires to control transnational activities. The continuing economic vitality

of Japan and South East Asia and the economic integration of Western Europe in 1992, combined with the revitalization of Eastern Europe and the economic crisis in the former Soviet Union, will intensify these disputes, making solutions to questions of national sovereignty and the control of transnational resources crucial.

Citations

1. See for example: David Baldwin, *Economic Statecraft* (Princeton: Princeton University Press, 1985).

2. Numerous articles and congressional reviews of the FSX case are available. See for example: Bruce Stokes, "Beat 'Em or Join 'Em," *National Journal*, 25 February 1989, and Wallace Offutt, "Can Japan take off in Aerospace?," *Across the Board: the Conference Board Magazine*, July/August 1989.

3. *New York Times*, 3 November 1989, D1.

4. *Le Figaro*, 21 April 1986; *Financial Times*, 21 April 1986.

5. Kenneth Abbott, "Linking Trade and Political Goals: Foreign Policy Export Controls in the 1970s and 1980s," *Minnesota Law Review* 65 (1981), pp. 739, 782, 840-49. In response to the taking of American hostages in Iran, the President did exercise his authority under the International Emergency Economic Powers Act to block the movement of Iranian assets possessed or controlled by all persons subject to jurisdiction of the United States. With the exemption of non-banking entities organized in foreign countries, the legislation was extended across international borders.

6.*Mini-Micro Systems*, July 1984, p. 84.

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Appendix A

Proposed and Competing Hypotheses

Proposed Hypothesis: **Interdependence and Influence**

H_1: *Country A is far more likely to be able to extend its control over economic and security resources within the territory of another country (B) when the resources in country B involve industrial sectors that are dependent on technical assistance from country A's firms or access to A's markets than it is when those resources do not.*

Traditional Hypotheses of Realism and the Distribution of Capabilities

A. Hypotheses Based on External Threat

H_2: *As the security threat from an opposing Superpower diminishes, alliance cohesion will diminish. The allies will be more willing to challenge infringements on their sovereign autonomy for the sake of the alliance or alliance leader and, as a result, successful implementation will be less likely.*

B. Hypotheses Based on System Polarity and of Hegemony

H_{3a}: *As the international system becomes multipolar, the influence of the two dominant states over others in the system will diminish. The extension of regulations abroad by the dominant states are less likely to be tolerated and implementation less likely to be successful in a multipolar world than in a bipolar one.*

H_{3b}: *As a state's economic or military hegemony declines its ability to entice or coerce others into doing its bidding declines as well. American attempts to implement its export control policy abroad against the interests of host countries and their firms are less likely to succeed as its hegemony declines.*

Appendix B

Variable Definitions for Summary of Statistical Analysis

Appendix B provides a summary of the variables and data used for analysis and the results of additional statistical analyses not included in the text. The first section of the appendix presents a series of tables that provide a the variable definitions and the values of each variable for each case used in the statistic analyses. A set of tables providing the results of additional statistical analyses are also included.

Table 7.1: Variable Definitions for Summary of Statistical Analysis

SUCCESS: Successful implementation of U.S. export control policy abroad. Success is coded dichotomously as Yes or No.

GOVINT: Intervention by the host government which challenges U.S. policy initiatives. GovInt is coded dichotomously as Yes or No.

MILEXP: The proportion of U.S. military expenditure in the Western alliance. This is very highly correlated with the relative size of U.S. armed forces and is an indicator of the military component of U.S. hegemony in the alliance. MilExp varies between .62 and .74.

SIZE: Combination of U.S. exports and imports as a proportion of total OECD exports and imports. This is an indicator of the economic component of U.S. hegemony. Sizes varies between .18 and .24.

MARKET1 Firm or state dependence on access to the American consumer market. Dependence on foreign markets is determined by a detailed reading of individual case histories and is coded dichotomously as High or Low.

SUPPLY1: Firm or state dependence on resources from American suppliers. Dependence on supply is determined by a detailed reading of individual case histories and is coded dichotomously as High or Low.

CONM: Concentration of world imports in a particular sector. The availability of alternate markets is calculated using the Hirschman-Herfindahl index of concentration of world imports in a particular industrial sector. ConM is a continuous measure from 0, indicating that imports are equally distributed among all actors and alternate markets are plentiful, to 100 indicated that products in that sector are being imported by one state and no alternate markets are available.

CONX: Concentration of world exports in a particular sector. The availability of alternate suppliers is estimated using the HH index of concentration of world exports in a particular industrial sector. ConX is a continuous measure from 0, indicating that exports are equally distributed and alternate suppliers are readily available, to 100 indicated that all products in that sector are being produced in one state.

P_x and P_m Percentage of the target country's exports or imports accounted for by trade with the United States for a particular industrial sector. P_x and P_m range from 0 to 1.

Table 7.2: Successful Implementation of U.S. Export Controls, 1951-1987

Case	US Mil Hegemony	US Econ Hegemony	Government Intervention	Dep on Markets ConM, %X to US	Dep on Suppliers ConX, % M from US	Successful Implementation
Battle Act, 1951	.66	.241	No	na	na	Yes
Battle Act, 1954	.75	.227	Yes	na	na	No
Ford Case, 1958	.74	.215	Yes	.439, 85%	.455, 71%	Yes
Rayonier, 1958	.74	.215	Yes	.323, 88%	.623, 95%	No
Fairbanks-Morse, 1959	.74	.214	No	.443, 96%	.547, 70%	Yes
Alcan, 1959	.74	.214	No	.490, 39%	.471, 98%	Yes
Ratheon Manuf, 1959	.74	.214	No	.349, 27%	.340, 26%	Yes
Hydrocarbon, FR, 1962	.69	.194	No	.349, 29%	.340, 1%	Yes
Hydrocarbon, FRG, 1962	.69	.194	No	.349, 30%	.340, 8%	Yes
Pipeline, FR, 1962	.69	.194	No	.349, 30%	.340, 8%	Yes
Pipeline, FRG, 1962	.69	.194	No	.349, 29%	.340, 1%	Yes
Pipeline, It, 1962	.69	.194	No	.349, 33%	.340, 24%	Yes
Viscount, GB, 1963	.69	.188	Yes	.421, 16%	.305, 40%	No
ITT, GB, 1963	.69	.188	Yes	.359, 5%	.330, 3%	No
Pharmaceutical, CA, 1964	.68	.185	No	.252, 31%	.390, 57%	No
Chrysler, CA, 1965	.68	.183	No	.422, 81%	.303, 86%	Yes
IBM-France, 1965	.68	.183	No	.442, 5%	.306, 36%	Yes
GE-Bull, FR, 1965	.68	.183	Yes	.374, 10%	.263, 39%	No
Fruehauf, FR, 1965	.68	.183	Yes	.421, 10%	.303, 7%	No
SAAF Case, FR, 1966	.72	.189	No	.406, 42%	.293, 91%	Yes
SAAF Case, UK, 1966	.72	.189	No	.406, 71%	.293, 48%	Yes
UK Aircraft, 1966	.72	.189	Yes	.406, 71%	.293, 48%	No
Pharmaceutical, CA, 1966	.72	.189	No	.256, 21%	.336, 63%	No
Farm Equip., CA, 1968	.75	.194	Yes	.338, 0%	.507, 3%	No
Bay Lab., IR, 1968	.75	.194	No	.324, 99%	.351, 58%	Yes
SNAM Progetti, IT, 1970	.72	.187	No	.370, 13%	.285, 21%	No
Cacermet SA, FR, 1971	.69	.172	No	.364, 5%	.271, 29%	Yes
MLW-Worthington, CA, '74	.62	.177	Yes	.449, 52%	.284, 85%	No
Litton, CA, 1974	.62	.177	Yes	.320, 66%	.280, 81%	No
Mannesmann, FRG, 1982	.62	.197	Yes	.335, 15%	.328, 1%	No
Dresser-France, 1982	.62	.197	Yes	.360, 8%	.274, 15%	No
John Brown, GB, 1982	.62	.197	Yes	.360, 15%	.274, 22%	No
Alsthome, FR, 1982	.62	.197	Yes	.360, 8%	.274, 15%	No
ICL, GB, 1982	.62	.197	No	.453, 5%	.309, 57%	Yes
Systime, GB, 1982	.62	.197	No	.453, 5%	.309, 57%	Yes
Thompson Group, FR, 1983	.62	.199	Yes	.570, 8%	.388, 8%	No
Mueller, SW, 1984	.63	.220	Yes	.449, 5%	.328, 57%	Yes
Belgian Army, 1984	.63	.220	Yes	.370, 2%	.317, 7%	Yes
L.M. Ericsson, SW, 1984	.63	.220	No	.608, 17%	.470, 38%	Yes
Datasaab, SW, 1984	.63	.220	No	.449, 7%	.329, 45%	No
Butcher, SW, 1984	.63	.220	No	.626, 47%	.466, 13%	Yes
Plasma, GB, 1985	.65	.218	No	.423, 15%	.322, 45%	Yes
ASEA, SW, 1985	.65	.218	No	.363, 61%	.310, 7%	Yes
FRG-SDI, 1986	.66	.201	Yes	.390, 20%	.999, 99%	Yes
Kongsberg, NW, 1987	.66	.189	No	.356, 6%	.300, 8%	Yes
Toshiba, JA, 1987	.66	.189	No	.417, 58%	.324, 87%	No

Table 7.3: Correlation Coefficients

VARIABLES:	SUCCESS	ConM*Px	ConX*Pm	ConM	ConX	GOVINT
SUCCESS	1.0000	.4297**	.3081	.2705	.1173	-.7455**
ConM*Px	.4297**	1.0000	.4012*	.0459	.1670	-.2733
ConX*Pm	.3081	.4012*	1.0000	.1944	.6626**	-.2557
ConM	.2705	.0459	.1944	1.0000	.2517	-.1348
ConX	.1173	.1670	.6626**	.2517	1.0000	-.0193
GOVINT	-.7455**	-.2733	-.2557	-.1348	-.0193	1.0000
MILEXP	-.0232	.4869**	.2245	-.3763*	.0800	-.0353
SIZE	.3663*	.1842	.1415	.3763*	.2794	-.1399
MARKET1	.4903**	.1897	.1971	.4280**	.0104	-.3478*
SUPPLY1	.5962**	.2590	.0754	.1108	-.0721	-.6432**
GNPPCP	.0730	.5036**	.3435*	-.1478	.1989	.0601
GNPP	.0064	.4800**	.1899	-.3425*	-.0045	.0024
Px	.4155**	.9922**	.3695*	-.0540	.1315	-.2774
Pm	.3168*	.4462**	.9415**	.2014	.4150**	-.2805

VARIABLES:	MILEXP	SIZE	MARKET1	SUPPLY1	GNPPCP	GNPP
SUCCESS	-.0232	.3663*	.4903**	.5962**	.0730	.0064
CONM*Px	.4869**	.1842	.1897	.2590	.5036**	.4800**
CONX*Pm	.2245	.1415	.1971	.0754	.3435*	.1899
CONM	-.3763*	.3763*	.4280**	.1108	-.1478	-.3425*
CONX	.0800	.2794	.0104	-.0721	.1989	-.0045
GOVINT	-.0353	-.1399	-.3478*	-.6432**	.0601	.0024
MILEXP	1.0000	-.1260	-.1690	-.0580	.5692**	.8076**
SIZE	-.1260	1.0000	.3609*	.1252	.4560**	.1135
MARKET1	-.1690	.3609*	1.0000	.2942	.1187	-.0164
SUPPLY1	-.0580	.1252	.2942	1.0000	-.0107	.0176
GNPPCP	.5692**	.4560**	.1187	-.0107	1.0000	.8538**
GNPP	.8076**	.1135	-.0164	.0176	.8538**	1.0000
Px	.5110**	.1487	.1477	.2670	.4944**	.4890**
Pm	.2652	.0821	.2788	.0837	.3581*	.2475

* = Significance at the .05 level
** = Significance at the .01 level

Table 7.4a: Logit Analysis of Success using Aggregated Data - Full Model

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	7.432	p>.10	0.225
Dependence on US Markets			
ConM * Px	-170.495	p>.10	-1.099
ConM	77.386	p>.10	1.270
Px	97.707	p>.10	1.085
Dependence on US Suppliers			
ConX * Pm	104.715	p<.10	1.488
ConX	-130.120	p<.10	-1.587
Pm	-42.980	p<.10	-1.306
Hegemony			
Economic Component			
SIZE	325.129	p<.05	1.815
GNPPCP	18.490	p<.10	1.637
Military Component			
MILEXP	-98.387	p<.10	-1.642
Government Intervention	-11.057	p<.05	-1.869
Chi Squared	5.698	p=1.000	df=29

Table 7.4b: Logit Analysis of Host Government Intervention - Full Model

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	34.695	p<.01	2.673
Dependence on US Markets			
ConM * Px	99.521	p<.01	2.346
ConM	-23.988	p<.01	-2.473
Px	--62.274	p<.01	-2.365
Dependence on US Suppliers			
ConX * Pm	-33.191	p<.10	-1.381
ConX	17.270	p<.10	1.626
Px	-62.274	p<.01	-2.365
Hegemony			
Economic Component			
SIZE	-44.294	p<.05	-1.713
GNPPCP	4.094	p<.01	2.360
Military Component			
MILEXP	-31.238	p<.05	-2.145
Chi Squared	34.695	p = .070	df=30

Table 7.5a: Logit Analysis of Success using Aggregated Data and GNPp to Indicate the Economic Component of Hegemony

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	36.547	p<.05	1.708
Dependence on US Markets ConM * Px	10.173	p<.05	1.807
Dependence on US Suppliers ConX * Pm	-0.661	p>.10	-0.241
Hegemony Economic Component GNPp GNPPCP Military Component MILEXP	 -29.040 3.995 -31.275	 p>.10 p<.10 p<.10	 -0.946 1.297 -1.367
Government Intervention Govint	-4.430	p<.05	-1.922
Chi Squared	42.969	p = .115	df=33

Table 7.5b: Logit Analysis of Success using Actors' Perception, using GNPp as an indicator for the Economic Component of Hegemony

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	23.174	p<.10	1.446
Dependence on US Markets Market1	2.428	p<.10	1.482
Dependence on US Suppliers Supply1	1.730	p>.10	1.271
Hegemony Economic Component GNPp GNPPCP Military Component MILEXP	 -76.204 6.190 19.791	 p>.10 p<.10 p>.10	 -1.237 1.390 0.656
Government Intervention Govint	-3.590	p<.05	-1.783
Chi Squared	20.249	p = .978	df=35

Table 7.6: Logit Analysis of Host Government Intervention, using GNPp as an indicator for the Economic indicator of Hegemony

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	7.678	p<.05	2.050
Dependence on US Markets ConM * Px	-3.829	p<.10	-1.555
Dependence on US Suppliers ConX * Pm	-2.348	p<.10	-1.435
Hegemony Economic Component GNPp GNPPCP Military Component MILEXP	 -0.464 2.189 -7.468	 p>.10 p<.10 p>.10	 -0.0327 1.561 -0.678
Chi Squared	40.100	p=.218	df=34

Table 7.6b: Logit Analysis of Host Government Intervention, using GNPp as an indicator for the Economic indicator of Hegemony

Explanatory Variable	Estimated Coefficient	Significance Level, t-statistic	
Constant	11.815	p<.05	2.229
Dependence on US Markets Market1	-1.048	p<.05	-1.833
Dependence on US Suppliers Supply1	-1.689	p<.01	-3.321
Hegemony Economic Component GNPp GNPPCP Military Component MILEXP	 4.907 0.684 -13.900	 p>.10 p>.10 p<.10	 0.303 0.574 -1.374
Chi Squared	47.803	p = .090	df=36

Appendix C

Short Case Studies of U.S. Influence Attempts, 1949-1987

This appendix provides a brief synopsis of the cases used in the statistical analyses, above. The cases are intended to provide a basis for the estimates of dependence using in the analyses that were derived from an analysis of individual case histories. They also serve as a prelude to the more detailed comparative analyses of the pipeline crisis and Operation Exodus in Chapters 4 and 5. The cases demonstrate the conflict of interest among the allies that pervades the export control arena, the crucial role of alternate suppliers and alternate markets, and the effectiveness of host government intervention against the United States.

A. Conflicts of Interest and Export Controls

The Battle Act, 1951 and 1954

One of the earliest examples of the success and limitations economic dependence as a source of political influence in the export control arena involved the American threat to cut off Marshall Plan aid to any country which did not comply with its post-war export control policy. The conflict of interest present in this case pervades all of the disputes discussed in this dissertation. Allied corporate and national actions throughout this dispute serve as a prelude to later reaction to U.S. influence attempts through 1987.

In order to secure allied cooperation in the early years of CoCom, Laurie Battle led the American Congress in instituting the Mutual Defense Assistance

Control Act of 1951, known as the "Battle Act." The goal of the Battle Act was to enforce compliance by prohibiting "all military, economic and financial U.S. aid to any nation which permitted the shipment of arms, ammunition, etc., to any nation or combination of nations threatening the security of the United States."[1]

European reactions to the Battle Act reflected very much the same anger and resentment their present counterparts displayed in during the 1982 Pipeline crisis and other disputes, discussed above. In his seminal work on the subject, Adler-Karlsson cited the *Economist* as an example of European sentiment arguing that the Battle Act, "implied an American veto over the trade policies of a score of countries," and that such a policy was "incompatible with the free and equal partnership between the United States and its allies."[2]

Allied sentiments were encapsulated in a speech made by Sir Hartley Shawcross in 1951, when he criticized the United States for ignoring accepted norms and expectations of behavior within the alliance:[3]

> This is not a matter which ought to be settled by the laying down of unilateral conditions or denial of supplies essential for our well being. It is preeminently one for frank, but friendly discussion among allies. For, at the end of the day, the success of the Atlantic alliance must depend on understanding and confidence between our countries. If we were partners -- as we must indeed be -- we must treat each other as partners. Harsh or unilateral action, the failure on either side . . . to understand the others point of view, his special difficulties, and lack of confidence was something inimical to partnerships.

Like their governments, the business community considered the Battle Act a direct challenge to their international activities. Most importantly, the Act violated the

international norm of *pacta sunt servanda* by requiring firms to stop all shipments of embargoed goods or forsake aid. Despite requests to honor their remaining commitments in accordance with this accepted international norm of economic exchange, the Congress argued that, "when the United States takes emergency action for its defense, it does so 'without regard to prior commitments'."[4] As Adler-Karlsson reiterates, "opposition to the embargo was . . . severe and many industrialists bowed only 'reluctantly' and with 'dismay and resentment' to the embargo regulations."[5]

The European states had a distinctly different interpretation of the value of the embargo from the United States. Economically, the Western European had a much stronger interest in maintaining their historical trade links with the Eastern bloc. Even though trade with the East was very low following World War II, trade was seen both as a source of future economic strength and a symbol of political cooperation. Politically, the European were incensed by the boldness of U.S. dictates and unilateral actions. The Battle Act was interpreted as a direct infringement on national sovereignty by the British, as dangerously over zealous by the French and as a severe economic threat by Germany. Equally important, the embargo was not seen by the Europeans as an appropriate means of controlling Soviet expansion. It was considered ineffective at best and destructive at worst.

Given these divergent interests, Allied compliance in the early 1950's can best be explained as a result of the fact at that time the Europeans were far more dependent on U.S. aid than East-West trade. The allies "buckled under U.S.

pressure" until about 1953. When economic recovery and trade with the East began to lessen European dependence on the Marshall plan, the level of their compliance diminished and open conflict erupted. As Figures 3.1 and 3.2 demonstrate, the data compiled by Adler-Karlsson shows a strong correlation between economic dependence and allied cooperation.

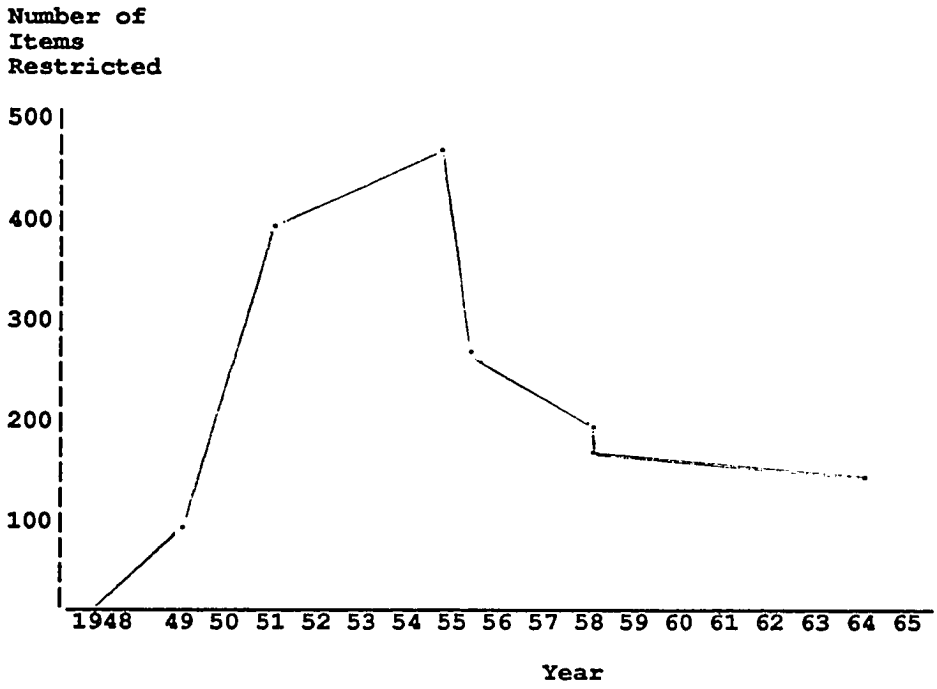
This result is at odds with models of political influence which emphasize the distribution of economic and military resources in the alliance. During this period, despite perceived changes in the international distribution of military resources between the Superpowers, the United States maintained unquestioned economic and military hegemony within the Western alliance. If the sheer possession of resources is sufficient to entice or coerce others into submission, one would predict that the United States should have been able to maintain its control over the allies. If, however, allied actions are a function of their dependence of particular resources provided by the United States, such as aid or military protection, then changes in the supply of these particular resources or changes in their need or dependence on them will affect their behavior.

Economic and military hegemony implies the possession of a majority of resources in general, however, it is the possession of those particular resources needed by others that provides economic and political leverage. Therefore, focussing on the dependence relationship between the United States and its allies will provide a much better indicator of potential influence than general indicators of economic or military dominance. As Adler-Karlsson argues, "The answer

[regarding European cooperation] is clearly to found in the American threats to cut off aid in cases of non-compliance."[6]

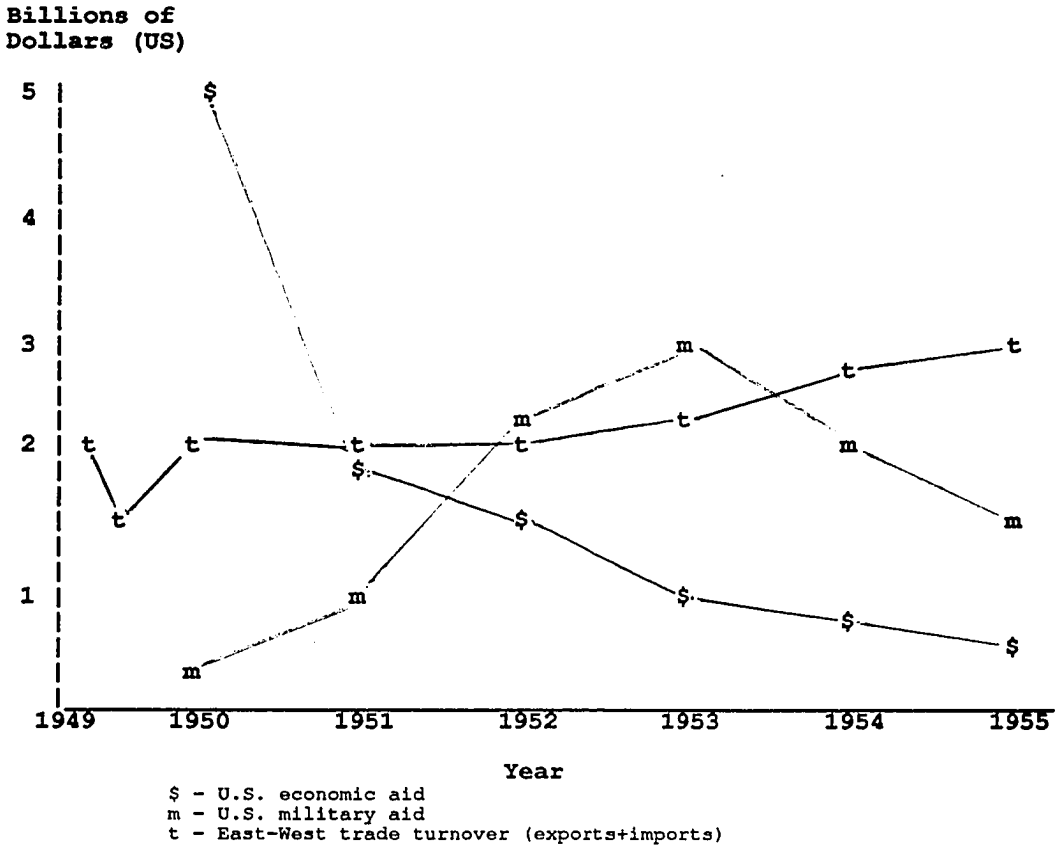
The graphs indicate the number of restricted items on the CoCom lists. The United States maintained a more restrictive domestic list and continually pushed the allies to adopt more stringent controls on a larger number of items. The number of items on the CoCom lists will, therefore, be treated as an indicator of U.S. influence. The lower the number, the less influence the U.S. was able to bring to bear. From the graphs of restricted items and U.S. aid relative to European trade, it would appear that U.S. power over its allies peaked between 1951 and August of 1954 and declined thereafter.

Figure 7.1: Approximate Number of Items on the Co-Com Lists



Source: Adler-Karlsson, Western Economic Warfare, (Sweden: Almquist & Wiksells Boktyckeri, 1968), p. 146.

Figure 7.2: U.S. Aid compared with East-West Trade in Europe



Source: Adler-Karlsson, Western Economic Warfare, (Sweden: Almquist & Wiksells Boktyckeri, 1968), p. 146.

This case demonstrates that despite a unquestioned American economic and military hegemony following World War II, U.S. influence over the actions of its allies was largely determined by their dependence on the United States. As long as the Allies remained dependent on Marshall Plan aid, they participated reluctantly in

a U.S. led embargo. As the costs associated with losing the supply of aid diminished relative to the benefits of trading with the East, the U.S. ability to entice or coerce others to cooperate diminished.

B. Dependence and the Success of U.S. Influence

This section presents a synopsis of several cases in which the United States was able to secure corporate and national compliance with its regulations despite continued conflicts of interest. As with the Battle Act in 1951, dependence on American suppliers and the American market gave the United States government a powerful source of leverage over actors operating abroad.

SAAF Case, 1966

The influence gained by foreign dependence on United States components is demonstrated in the case of aircraft production in 1966. In order not to undercut a United Nations arms embargo to South Africa, the United States forbad the sale of executive-type, non-military aircraft to the South African air force by U.S. firms. In keeping with its traditional position, the United States adopted more rigid interpretation of what should be considered a "military item" than the European allies. With U.S. firms off limits, the South African government approached French and British firms as alternate suppliers for its executive aircraft. These firms, however, were dependent on U.S.-made parts supplied either directly from the United States or from affiliates of its firms. Using this link to its advantage, the

United States government prohibited the use of these products in planes designated for export to South Africa. It thus enforced its stricter interpretation of the embargo on foreign firms, despite the more lenient interpretation of their governments. U.S. firms were eventually allowed to export the original planes provided that they were not to be used by the SAAF, but no assurance was ever given and the sales were lost to both the American and European firms. This case is an example of how control over foreign affiliates as well as purely domestic companies in Europe was exercised by the American government as a result of their normal reliance on key components for the United States and its affiliates.

German Industry and S.D.I. Case, 1986

As with the Marshall Plan in the early 1950's, positive as well as negative sanctions are effective forms of political influence. Promising to provide something that cannot be secured from any where else, be it aid or technology, is as effective as threatening to cut off access to similar items. For example, in March of 1986, the United States and Germany signed an agreement for German participation in American Strategic Defense Initiative (S.D.I.) projects.[7] A leak in the German press revealed that the agreement included correspondence between Assistant Secretary of Defense Richard Perle and Dr. Lorenz Schomerus, head of trade policy at the West German Ministry of Economy, showing that the German participation in high-technology military research projects in the United States was conditional

on the tightening of Bonn's export control procedures and on a bigger role of the West German Ministry of Defense in these procedures.[8]

IBM-France Case, 1964 and GE-Bull, 1965

Exploiting foreign dependence provides a source of political influence, but exercising that influence may have costs that are not immediately apparent. In 1964, the United States government prohibited IBM-France, a French subsidiary of an American multinational, from selling advanced computers to the French government. The action was taken as part of an American attempt to get France to sign the nuclear test-ban treaty and to join international restraints on the production of atomic weapons. The specific case is the result of a general ban on the export of sophisticated equipment to France that might be used in the development of its atomic or space programs. The case was resolved after two years in a compromise favoring the United States. The French agreed not to use the computers for their nuclear weapons program and the United States approved their sale for use in peaceful nuclear research and development. Unfortunately, France did not sign the Non-Proliferation Treaty until 1991.

This case is an example both of the potential influence gained from capitalizing on a dependent relationship and the repercussions of exploiting that relationship. The United States was able to exploit French dependence on IBM to alter French behavior. This success, however, had its political and economic costs. Politically, this dispute caused considerable friction between the United States and

France across a wide range of issues and reportedly affected France's denial of British entry into the European Common Market.[9] Economically, the denial of sales by the French affiliate emphasized to the French that they were technologically dependent on American firms is the electronics and computer industries. As a result, the French government began an intensive effort to develop and indigenous electronics and computer industries and made later attempts by American companies to acquire French affiliates more difficult. For example, General Electric had an extremely difficult time acquiring Machines Bull and was eventually forced to accept a joint venture arrangement, majority owned by Bull, to do research and development in computers for military purposes.[10]

To avoid excessive (or future) costs, the hegemon may occasionally chose to look the other way and allow practices that are clearly against its immediate interests. In late 1964, for example, shortly after prohibiting the sale of IBM computers to France, the Treasury department received requests from General Electric, which had recently acquired Machines Bull of France, to complete several contracts signed before GE joined with its French affiliate. The orders were for computers that were formally prohibited by American export control policy. The United States had the same potential resources at its disposal that it used to stop the sale of computers to France by IBM. The U.S. government chose, however, to not to use its potential leverage and permitted the sale of the computers.

The decision was made "in order not to offend the French government which was already upset by Bull's acquisition and by the IBM prohibition."[11] When GE-

Bull then requested permission to supply spare parts for tabulating machines that had been sold earlier to the Peoples Republic of China, the U.S. government again permitted the sale, but explicitly prohibited the sale of new machines. As a result, the United States compromised in order not to further offend France and expend excess political capital. It allowed the completion existing contracts and the supply of parts for existing sales, yet it effectively stopped the expansion of the Chinese market for France. Through the acquisition or Machines Bull by GE, the United States government effectively expanded the its potential future leverage.

C. Alternate Suppliers, Alternate Markets and the Failure of U.S. Influence

Dependence on American suppliers and access to the American market can be mitigated if alternate suppliers or markets can be found. If dependence is diminished, the leverage gained by threatening to cut off access to American markets or suppliers diminishes as well.

Czechoslovakian Computer Case

The presence of an alternate supplier limits the effectiveness of U.S. leverage over the activities of other states. For example, in the late 1960's, Czechoslovakia requested computer technology from G.E.-Bull in France and I.C.T. in Great Britain. At the time, the technology in question was not explicitly restricted under CoCom. However, when the British and French governments brought the potential sale to the attention of CoCom, the United States and other members rejected it on

the grounds that the sale would undercut CoCom's embargo in computers. The French government refused to accept the CoCom ruling. After threatening to reconsider its CoCom membership, the French government argued that no binding agreement existed for this particular type of technology and that it would therefore simply ignore the CoCom judgement in this case.

The United States government believed that it could successfully exercise the same control over G.E.-Bull that it had exercised over I.B.M.-France in 1964. However, it did not believe that it could exert any direct pressure on the British company International Computers and Tabulators (ICT). (International Computers Limited, discussed below is a descendent of ICT). From the argument of this thesis, the U.S. may have been able to influence ICT, even without a direct link through an American parent corporation; however, U.S. officials did not believe this to be the case.[12] The extension of U.S. control over the French subsidiary would have further strained US-French relations, and, unless the United States was able to restrain the British company as well, the gains from such antagonism were not worth the diplomatic costs. The conflict was resolved when the Czechoslovakian government removed its request.

M.L.W.-Worthington Case, 1974

In 1974, the United States government discovered that a Canadian firm was bidding for the sale of 30 locomotives to Cuba. It responded by threatening to cut M.L.W.-Worthington off access to the U.S. market and access to American

suppliers. M.L.W.-Worthington was not dependent on sales to the U.S. market. Consequently, the potential costs imposed by the United States for failing to comply with its regulations were small for the company and would not greatly affect the Canadian economy.

M.L.W.-Worthington was owned and run by U.S. citizens subject to the Cuban Assets Control Regulations. As a result, the U.S. parent coloration's request for a license was denied. The Canadian government lobbied for a change in U.S. policy and officially stated that:[13]

> The Canadian Government holds that the *Cuban Assets Control Regulations* of the U.S.A. should not be given affect in Canada through the parent-subsidiary relationship or in any other way . . . the Canadian Government wishes to emphasize the significance of this issue and to urge the U.S.A. Government to remove on an urgent basis any restraint on the directors or officers of M.L.W. Worthington, who are also U.S.A. citizens, which might interfere with the proposed sale of the Canadian Company.

In order to weaken the links between the U.S. Treasury and M.L.W.-Worthington, two U.S. directors resigned and, after an intense lobbying campaign by Prime Minister Trudeau in Washington, the deal was signed.[14]

D. Host Government Intervention and United States' Influence

There are a variety of ways in which host country governments can intervene against the United States on the behalf of their firms. The following cases present a different strategies followed by host governments, some strategies were effective,

others were only of limited success, and some proved costly to the firms they were trying to protect.

I.T.T.-Standard Electric Case, early 1960's

When the supply of particular resources or markets is cut off, firms often seek out alternate sources of supply or alternate markets for their goods. The I.T.T. case demonstrates that under certain circumstances, host country governments can create alternate markets internally. If an alternate sources or an alternate product may be found or developed, then the threat resulting from its stoppage is negated.

In the early 1960's, I.T.T., through its U.K. subsidiary, became entangled in a major dispute with the Treasury Department. Under the Trading with the Enemy Act, the Treasury ordered the U.K. subsidiary, Standard Electric, to cancel the supply of radio equipment already ordered for sale to the British Aircraft Corporation because it was to be installed in planes to be exported to the People's Republic of China. As a subsidiary of I.T.T., the Treasury insisted that Standard Electric of the U.K. was a person "subject to United States Jurisdiction," and as such would be subject to multiple sanctions including the denial of U.S. trading privileges if it failed to comply.[15] The United Kingdom vigorously protested the notion that Standard Electric was subject to American jurisdiction. The conflict was eventually resolved when the British government supplied the desired radios from its own stockpile and immediately ordered exactly the same sets from I.T.T. so that Standard Electric could replenish its stockpile.

The Viscount Case, 1963

Like the last case, the case of Viscount aircraft demonstrates the lack of dependence and subsequent leverage when alternate sources of certain components are available. In 1963, the United States forbid the use of its radar equipment in British Viscount aircraft ordered for purchase by the People's Republic of China. The prohibition was based on the premises that the radar equipment was produced by a U.S. affiliate and that the export of that equipment violated the American embargo with Communist China. The British government rejected the U.S. argument and ordered the British affiliate to produce and ship the radar equipment. The aircraft had, however, been designed specifically for the restricted radar system and the company argued that the order could not be filled on time if the system was removed. The United States government stood firm and refused to permit what it considered to be a blatant abuse of its controls. At considerable cost, the British firm eventually redesigned the plane to avoid using U.S. equipment. In this case, the British government effectively cut off the extension of U.S. extraterritorial controls by protecting the domestic production of its radar equipment and planes.

British Aircraft to the P.R.C., 1966

Even when foreign firms or affiliates attempt to alter their behavior in response to respond American regulations, their host government may not allow them to follow U.S. dictates. If the host country contains domestically owned companies in the industry, and they can readily fill the order, no foreign trade is

lost and the threat to the host country itself is minimal. This situation highlights the necessity of influencing both the multinational firm and its host government.

In 1966, a British subsidiary of a U.S. firm was denied a license to sell $12,500 worth of electrical connectors to be used in British-built aircraft intended for sale to the People's Republic of China.[16] The denial raised serious financial problems for the affiliated which solicited for reconsideration by the Treasury department. The United Sates government failed to reverse its policies. The British manufactures stated that it would redesign the plains to permit fulfilling the Chinese order. Furthermore, it threatened to redesign all other plans in its standardized production in order to avoid future threats of U.S. denial of supplies. Carrying out this threat would be extremely costly to the American subsidiary which had a volume of trade with one British customer in excess of $400,000 a year.[17] Despite the potential loss to its firm, the United States government did not change its policy and did not allow export of U.S. items to China at that time. The result of the threat is not known, and perhaps surprisingly, the U.S. government argued that the costs imposed on U.S. companies are not considered to be a factor in determining export control policy and as a result, the government makes no inquiry into the resulting damage to its firms.

Like the last case, this one demonstrates that when alternate suppliers are not be available, states and firms may be able to develop the restricted products internally. This process may be costly, but, as the cases in Chapters 4 and 5 demonstrate, once a firm has borne the research, development and production costs

it is not likely to return to its original U.S. supplier even if the U.S. restrictions are removed. Consequently, cutting off access to American suppliers may provide an incentive to develop internal production capacities that would not otherwise be created. The immediate result is a loss of U.S. influence, the long term result may be a loss of American competitiveness and preeminence in particular industries.

The Ford Case and the Eisenhower-Diefenbaker Agreement, 1958

The Ford case and the ones that follow it the effects and limitations of a large degree of government involvement and negotiation regarding export control policy. In this case, Ford of Canada rejected the chance to sell automobiles to China because of pressure from its U.S. parent corporation to abide by the Foreign Assets Control Regulations. The Ford case is important because of the high degree of dependence of Ford on access to the American market, and the large role that the automobile trade played in overall U.S.-Canadian economic relations.

The Ford Case took place against the background of economic nationalism which was stirred up in the Canadian election of 1957. Throughout the election, Canadian public opinion was sensitized to the potential dangers of "excessive control" of the Canadian economy by U.S. parents of Canadian corporations. The case became a symbol of conflict and resentment engendered by the American governments efforts to prevent Canadian affiliates from trading with China. Following the election, it offered a concrete occasion for the new Canadian government to demonstrate its desire and ability to hold the United States

accountable for its alleged "extraterritorial high-handedness."

The government added export controls to the agenda of a summit between P.M. Diefenbaker and President Eisenhower concerning regional security issues that was to take place in 1958. In the end, the extensive cooperative efforts between the United States and Canada reflected in the Canada-United States Joint Committee on Trade and Economic Affairs and the Committee on Joint Defense created in 1958 did not include the specific treatment of export controls. However, the reason for coordination of export controls, namely the integration of the economies and defenses of the two countries, received constant attention.

The Canadian government did not take legal action, suggested by the Opposition, to forbid companies from carrying out foreign laws if such laws were detrimental to Canada. Instead, P.M. Diefenbaker and President Eisenhower negotiated an agreement calling for consultation and understanding between governments and firms regarding export control policies. During President Eisenhower's visit to Canada in July of 1958, the U.S. and Canada issued a joint statement on export controls:[18]

> The Canadian and United States Governments have given consideration to situations where the export policies and laws of the two countries may not be in complete harmony. It has been agreed that in these cases there will be full consultation between the two governments with a view to finding through appropriate procedures satisfactory solutions to concrete problems as they arise.

The U.S. Government agreed to entertain requests for exemptions from its

policies. The agreement did not, however, fully represent an obligation for consultation since the United States reserved power to unilaterally impose its prohibitions on the U.S. parents of Canadian corporations.[19] Canadian affiliates were given the ability to seek the assistance of the Canadian government in aiding their parent's effort to obtain a special exemption or waiver of the regulations if its sales were hindered by these restrictions.

The authority of both the U.S. Treasury and the Canadian government was respected. The U.S. Treasury did not purport to assert jurisdiction over the Canadian affiliate, and agreed to deal only with the U.S. parent. The Canadian Government agreed not to interfere unless such interference was requested by a Canadian corporation. The goal of the agreement was to provide a means for consultation and negotiation in any case where it was believed that US law was blocking the willingness of a Canadian company to fulfill an order.

The primary limitation to this agreement was that many potential sales to China may have been turned down due to fear of economic sanctions, without ever being raised to the attention of the Canadian Government. Only in those cases where companies went to the Canadian government and where it subsequently made representations on their behalf could the Eisenhower-Diefenbaker agreement have made a difference.

The Rayonier and Aluminum Company of Canada cases offer some indication of the effectiveness of consultation in practice and of the standard which govern its application.

Rayonier Case, 1958

The Rayonier Case is often cited as an example of how the consultative procedures of the Eisenhower-Diefenbaker agreement could be used effectively. The case involved negotiations between the People's Republic of China and the Alaska Pine Company, Ltd., a Canadian subsidiary of Rayonier. Rayonier did not want the sale of pulp to be completed without obtaining permission from the U.S. Treasury regarding the Foreign Assets Control Regulations. In response, the Alaska Pine Company requested that the Canadian government assist in obtaining the license. One July 19, 1958, the Canadian government intervened and sent an *aide mémoire* to the United States Treasury requesting the relaxation of the U.S. regulations and outlining the steps necessary to exempt Rayonier and others considered by the U.S. to be "subject to U.S. law" from the trade restrictions.[20] As a result, the Treasury Department granted the necessary license to Rayonier enabling the transaction with the Alaska Pine Company to be completed. Shortly after permission was granted, however, fighting broke out in the Formosa straights and demand for the pulp was withdrawn. While the sale was never completed, the Canadian government had successfully intervened and modified U.S. restrictions.

This case has been used to demonstrate the success of the bilateral consultation procedures established in the Eisenhower-Diefenbaker accord. Such an assessment, however, must be considered in light of the economic and political context in which the case took place. The primary hypotheses of this dissertation would predict the same result even if the consultation processes were not in place.

Canada and the Canadian firms were not dependent on U.S. markets or U.S. technology. As a result, U.S. economic leverage in this case was minimal. Politically, the export of pulp is of relatively minor strategic significance and, after the tensions resulting from growing economic nationalism and official and public Canadian resentment of U.S. policies, asserting U.S. control was not worth the political costs.

Aluminum Company of Canada Case, 1959

The Aluminum Company of Canada case is another example of the limitations of the Eisenhower-Diefenbaker agreement. This case demonstrates that firms tend respond to their interests and fears of economic dependence even when institutions are established which may mitigate the potential costs of these relationships.

Multinational firms generally try to avoid conflict with their home or host government by not applying for licenses they think will be denied or that could lead to tensions. By avoiding prohibited business and advising their affiliates to do the same, they have done what the United States desired. In essence, due to anticipated reactions of the United States, the United States has in fact succeeded in achieving its goal.

The Aluminum Company of Canada (Alcan) reportedly refused an offer to purchase two thousand long tons of aluminum.[21] Alcan relied on the U.S. market for the vast majority of its sales and officially rejected the offer because it feared losing the business from its American customers if it proceeded with the sale. The

sale would have been beneficial for both Alcan and the Canadian economy as a whole. The Eisenhower-Diefenbaker understanding was based on the premise that under it was precisely under these conditions that consultations should be held and U.S. policy negotiated. Yet, the presence of the agreement did not alter the corporate decision not to proceed with the sale. The Eisenhower-Diefenbaker agreement was limited to the extent that it only came into play when the Canadian government interceded on behalf of a company that had already decided to go ahead with a sale and was awaiting export licenses before it did so.

Chrysler Co. of Canada and a Canadian Pharmaceutical Company, 1965-66

The case of the Chrysler Corporation of Canada Ltd. and the Canadian Car Retailer is an additional example of the lack of government intervention without corporate requests. A Canadian automobile exporter complained to the Canadian government that it was unable to obtain automobile parts for sale to China from Chrysler corporation of Canada and Canadian Car Retailer, both subsidiaries of U.S. owned corporations. The Canadian government held a the position that if it were asked by the U.S. parent for help in securing an export permit from the U.S. government, it would be willing to intervene; but, that the Canadian government would not become involved in business decisions of corporate negotiations among companies. The Canadian government did not pursue the matter and the restrictions remained.

Similarly, in August of 1964, the president of a Canadian pharmaceutical

company complained to the Canadian Department of Trade and Commerce that it had been told by its U.S. parent not to complete two planned exports to Cuba. The Canadian company lobbied the U.S. Treasury and managed to obtain a Treasury license for one transaction and a Department of Commerce license for the other. The sale was completed, but after it was over the U.S. parent advised the subsidiary not to seek future assistance from the Canadian government without obtaining prior clearance from the parent.[22] The result demonstrates a weakness in the Eisenhower-Diefenbaker agreement in that when incidents did not come to the Canadian government's attention, there was little its stand on the issue could accomplish.

Fruehauf-France, 1965

Finally, the Fruehauf-France case demonstrates that challenging United States export control regulations can be extremely costly even in a situation where little capital, technology or general know-how is provided by the American parent. In 1964-5 the Fruehauf case attracted notoriety equivalent to the Dresser case during the 1982 Pipeline dispute discussed in the next chapter. In this case, the French government and a French court successfully challenged the extraterritorial application of U.S. regulations and the initial sale was completed. In exchange for the sale, however, the companies involved suffered costs of over $750,000 and ruptured business relationships with their French as well as foreign customers.[23] In the end, rather than demonstrating its independence from U.S. controls, U.S.-

Fruehauf case became a symbol of the costs the U.S. could impose with only minor links to the corporation.

Fruehauf, an American corporation, acquired 70 percent ownership of a French company renamed Fruehauf-France. At the time of the acquisition, Fruehauf-France was already under contract to produce truck trailers for the French company Berliet which intended to sell 60 of the final tractor-trailers to China. In 1965, using its authority under the Trading with the Enemy Act, the U.S. Treasury warned Fruehauf that the proposed sale would result in the levying of severe criminal penalties against it.[24] When Fruehauf consequently ordered its subsidiary to cancel the order, Berliet refused and responded by threatening a lawsuit of over $1 million for breach of contract. This challenge, combined with the corporate perception that the affiliates business relations with its French clients would be destroyed if the order was canceled, led the French officials at Fruehauf to reconsider and to reject the Treasury's order.

French officials maintained minority ownership, controlling roughly one third of Fruehauf. At the urging of the French government, these officials requested that a French court intervene and appoint a provincial manager for ninety days so that the order could be completed. The French court appointed a French managing director on the grounds that it was saving French jobs and protecting a minority French interest in the firm. Fruehauf retaliated by appointing an American as managing director. A suit followed in criminal court. In the trial, the French court contended that the American majority's decision to cancel the order would probably

close the company and result in the firing over 600 employees. It determined that the corporate decision to stop the sale was not made in the company's interest, but was rather politically motivated by factors outside of the firm's appropriate domain. Canceling of sale against both the firm's interest and the French national interest, therefore the court ordered the sale to be completed.

After attempting to appeal the French court's decision, the American owners of Fruehauf attempted to buy-out the French minority in order to comply with the Treasury restrictions. The French court again intervened, forbidding the purchase. As a result the U.S. Department of Treasury argued that the subsidiary was no longer ruled by its U.S. parent and therefore was not subject to US jurisdiction for purposes of commercial controls.[25] Fruehauf, in turn, reapplied unsuccessfully for reconsideration of its license request with the Treasury department. The Treasury never responded to the request, and, following a formal protest made by the French government to the White House, the order was fulfilled.

The resulting sale was a victory for the French government and the French court. They had successfully defeated U.S. attempts to extend its influence over a domestic affiliate. The surrounding conflict demonstrated, however, that even when firm and state dependence are limited, the United States government is able to impose significant costs on firms which do not abide by its requests. It also demonstrates that U.S. based companies may comply with the requests of the United States government even at large costs to themselves, to prevent affiliates from undertaking transactions inconsistent with U.S. policy.

E. Conclusion

The brief summary of cases support the hypothesis that dependence on access to American suppliers and the American consumer market has given the United States' government a source of leverage over actors operating abroad. The cases demonstrated, however, that the presence of alternate suppliers or alternate markets mitigates the costs associated with terminating a dependent relationship. When alternate suppliers or markets are available, the leverage gained by threatening to cut off access to the United States is greatly diminished. Table 7.7 provides a summary of the cases using individual case histories to evaluate dependence on American markets and American suppliers.

Host governments have a variety of means available to challenge the United States on behalf of their firms. While these efforts can be effective, the costs of challenging the United States can be high for the firms involved. As a result, even when formal arrangements are made to challenge the extension of American regulations abroad, firms may comply with American regulations in order to avoid the potential costs of confronting the U.S. government.

Table 7.7: Successful Implementation of U.S. Export Controls, 1951-1987

Case	US Mil Heg	US Econ Hegemony	Government Intervention	Dependence on U.S. Markets	Dependence on U.S. Suppliers	Success
Ford Case, 1958	.74	.215	Yes	High	High	Yes
Rayonier, 1958	.74	.215	Yes	Low	Low	No
Fairbanks-Morse, 1959	.74	.214	No	High	High	Yes
Alcan, 1959	.74	.214	No	High	High	Yes
Ratheon Manuf, 1959	.74	.214	No	High	High	Yes
Hydrocarbon, FR, 1962	.69	.194	No	High	High	Yes
Hydrocarbon, FRG, 1962	.69	.194	No	High	High	Yes
Pipeline, FR, 1962	.69	.194	No	High	High	Yes
Pipeline, FRG, 1962	.69	.194	No	High	High	Yes
Pipeline, It, 1962	.69	.194	No	High	High	Yes
Viscount, GB, 1963	.69	.188	Yes	Low	High	No
ITT, GB, 1963	.69	.188	Yes	Low	Low	No
Pharmaceutical, CA, 1964	.68	.185	No	Low	Low	No
Chrysler, CA, 1965	.68	.183	No	Low	High	Yes
IBM-France, 1965	.68	.183	No	Low	High	Yes
GE-Bull, FR, 1965	.68	.183	Yes	High	Low	No
Fruehauf, FR, 1965	.68	.183	Yes	Low	Low	No
SAAF Case, UK, 1966	.72	.189	No	Low	High	Yes
UK Aircraft, 1966	.72	.189	Yes	Low	High	No
Pharmaceutical, CA, 1966	.72	.189	No	Low	Low	No
Farm Equip., CA, 1968	.75	.194	Yes	Low	Low	No
Bay Lab., IR, 1968	.75	.194	No	High	High	Yes
SNAM Progetty, IT, 1970	.72	.187	No	Low	Low	No
Cacermet SA, FR, 1971	.69	.172	No	Low	High	Yes
MLW-Worthington, '74	.62	.177	Yes	Low	Low	No
Litton, CA, 1974	.62	.177	Yes	Low	Low	No
Mannesmann, FRG, 1982	.62	.197	Yes	Low	Low	No
Dresser-France, 1982	.62	.197	Yes	Low	Low	No
John Brown, GB, 1982	.62	.197	Yes	Low	High	No
Alsthome, FR, 1982	.62	.197	Yes	Low	High	No
ICL, GB, 1982	.62	.197	No	High	High	Yes
Systime, GB, 1982	.62	.197	No	High	High	Yes
Thompson Group, FR, 1983	.62	.199	Yes	Low	Low	No
Mueller, SW, 1984	.63	.220	Yes	High	Low	Yes
L.M. Ericsson, SW, 1984	.63	.220	No	High	High	Yes
Datasaab, SW, 1984	.63	.220	No	High	High	No
Butcher, SW, 1984	.63	.220	No	High	High	Yes
Plasma, GB, 1985	.65	.218	No	High	High	Yes
ASEA, SW, 1985	.65	.218	No	High	High	Yes
FRG-SDI, 1986	.66	.201	Yes	High	High	Yes
Kongsberg, NW, 1987	.66	.189	No	High	High	Yes
Toshiba, JA, 1987	.66	.189	No	High	High	No

Citations

1. Adler-Karlsson, *Western Economic Warfare, 1947-1967*, p. 27. By the time this act was implemented the majority of its requirements had already been fulfilled. It served primarily to maintain rather than elicit allied cooperation.

2. Adler-Karlsson, *Western Economic Warfare, 1947-1967*, p. 39, for further discussion see pp. 40-49.

3. *Board of Trade Journal*, August 18, 1951, pp. 337-338; also cited in Gunnar Adler-Karlsson, *Western Economic Warfare, 1947-1967*, p. 39.

4. Gunnar Adler-Karlsson, *Western Economic Warfare, 1947-1967*, p. 43.

5. Gunnar Adler-Karlsson, *Western Economic Warfare, 1947-1967*, p. 40.

6. Gunnar Adler-Karlsson, *Western Economic Warfare, 1947-1967*, p. 45. Michael Mastanduno offers a different perspective, arguing that the Battle Act and aid denial may not have constituted a valid threat and hence may not be the primary reason behind Western European cooperation. Mastanduno persuasively asserts that the given the executive's continual failure to use negative sanctions despite repeated violations, the threat of removal of aid was not a credible one and therefore cooperation did not continue. See: Michael Mastanduno, "Strategies of Economic Containment: United States Trade Relations with the Soviet Union," *World Politics* 37 (July 1985).

7. Christian Lamoureux, "Sanctions and Export Controls in France," p. 159.

8. *Le Figaro*, 21 April 1986; *Financial Times*, 21 April 1986.

9. J. Behrman, *National Interests and Multinational Enterprises* (Englewood Cliffs: Prentice Hall, Inc., 1970), p. 105.

10. J. Behrman, *National Interests and Multinational Enterprises*, p. 102.

11. J. Behrman, *National Interests and Multinational Enterprises*, p. 108.

12. J. Behrman, *National Interests and Multinational Enterprises*, p. 108-9.

13. Note of February 13, 1974, Canada to the U.S. Department of State, released to the public March 6, 1974. Reprinted in A.L.C. de Mestral and T. Gruchalla-Wesierski, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.*, p. 166.

14. *Wall Street Journal*, 7 March 1974, p. 18, c3.

15. Cecil Olmstead, ed. *Extraterritorial Application of Laws and Responses Thereto*, p. 53.

16. J. Behrman, *National Interests and Multinational Enterprises*, p. 102.

17. J. Behrman, *National Interests and Multinational Enterprises*, p. 102.

18. Statement of 9 July 1958, 39 U.S. Department of State Bulletin 309, 4 August 1958. A. C. L. de Mestral and T. Gruchalla-Wesierski, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.*, p. 99.

19. For a more detailed discussion of this topic, see: A.L.C. de Mestral and T. Gruchalla-Wesierski, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.*, pp. 157-8.

20. H.C. Debates, 1958, vol. III, p. 2859, July 30, 1958. Also cited in A.L.C. de Mestral and T. Gruchalla-Wesierski, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.*, p. 158.

21. H.C. Debates, 1959, vol. I, pp. 274-5. Mr. Howard. Also cited in A.L.C. de Mestral and T. Gruchalla-Wesierski, p. 158.

22. A.L.C. de Mestral, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.*, p. 164.

23. A.L.C. de Mestral, *Extraterritorial Application of Export Control Legislation: Canada and the U.S.A.*, pp. 110-111.

24. See: A. Lowenfeld, *International Economic Law: Trade Controls for Political Ends*, 2nd ed. (New York: Matthew Bender, 1983).

25. See Craig 83 *Harvard Law Review* 579 (1970).