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Institutional Comparative Advantage: A Game-Theoretical Analysis of the Kodak-Fuji Dispute WTO/DS44

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UNIVERSITY OF REDLANDS

Institutional Comparative Advantage

A Game-Theoretical Analysis of the Kodak-Fuji
Dispute WTO/DS44

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Honors Thesis A.Y. 2010-11

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**Institutional Comparative Advantage in International Duopolies:
A Game-Theoretical Analysis of the Fuji-Kodak Dispute Settlement DS44**

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Introduction

The extraordinary increase in the international movement of goods, services, capital, people, and technology of the last few decades, mirrored by a decrease in transportation and communication costs hardly conceivable when the modern multilateral overseers of international commerce, finance, and development were designed at Bretton Woods, have dramatically changed not only the nature of international trade disputes, but also the way governments approach and understand trade disputes.

Many successful rounds of multilateral trade negotiations and the impressive growth of a variety of free trade arrangements among intricate networks of countries have brought further trade liberalization to a historical threshold: external barriers to trade, such as the “traditional” tariffs and quotas, have been radically reduced among most trading countries, and what exporters increasingly encounter as leading impediments to market penetration are the domestic institutional frameworks of importing countries. This phenomenon follows a quite intuitive logic: as borders become increasingly porous, what is on the other side of the borders becomes not only more visible and understandable, but also the most active determinant of what and under what conditions goods, services, capital, and so on, can legally enter the country. In other words, as external barriers to trade decrease, internal laws, regulations, institutional arrangements, and traditions become the most prominent obstacles to trade.

Yet, is it appropriate to consider the heterogeneity of domestic institutional arrangements simply under the same umbrella of those “barriers to trade” that multilateral organizations have the mandate to gradually eliminate? There is no doubt that domestic institutional arrangements can limit the legal marketability of foreign goods, and thus the volume of international trade. But where should the line be drawn between issues of international trade and international law, and

issues protected by national sovereignty? The uncertainty implicit in the next phase of trade liberalization has become one of the most important aspects of current international trade policy debates: it is a fundamental uncertainty both at the national level of trading countries, and at the multilateral level.

Thus, when an exporting country encounters difficulties in the penetration of a foreign country because of “unfriendly” institutional arrangements, what should the country do? Enter into bilateral negotiations that inevitably reflect the relative economic, political, diplomatic strengths of the countries at hand, or use the cosmopolitan-minded dispute settlement mechanism established under the auspices of the appropriate multilateral organization –specifically, the Dispute Settlement Body (DSB) of the World Trade Organization (WTO)? And even once the choice is made to have the multilateral body determine whether the importing country is unfairly blocking trade flows, on what basis should the DSB decide, given that there is no set guideline to follow in these cases? Article XXIII of the General Agreement on Tariffs and Trade (GATT) is purposely open to interpretations in this regard. Governments and multilateral organizations are forced to choose between furthering trade liberalization, which is understood to benefit world welfare, and limitations on domestic sovereignty, which are understood to be detrimental and dangerous at the national level. This is the fundamental question approached in this thesis: by carefully reconstructing the well-known Kodak-Fuji trade dispute between the United States and Japan (June 13, 1996- March 31, 1998), the thesis analyzes the possible strategies the exporting country has when facing an impediment to trade that is implicit in the institutional organization of the importing country.

The Kodak-Fuji case (DS44) is a key example of how trade disputes have changed since the advent of the WTO. The dispute clearly illustrates that in a world of substantially liberalized

international trade, issues of protectionism that are not the effect of explicit, trade related government policies must be looked at. In DS44, protectionism is found in the institutional and regulatory heterogeneity that allegedly limited the United States' ability to further penetrate the Japanese market. In order to analyze the strategies that nation states might or should implement to best navigate the new world of international trade disputes, this thesis presents the Kodak-Fuji dispute, develops an analytical, game-theoretical model of the case, and analyzes the consequences of the dispute on current and future obstacles to international integration that hinge upon issues of sovereignty.

Chapter 1 presents the history and chronology of the Kodak-Fuji dispute, and outlines relevant institutional differences between the United States and Japan. The different institutional structure creates the basis for the Kodak-Fuji dispute, as it was the *keiretsu* production and distribution network of Japan that allegedly limited the United States' ability to further penetrate the Japanese market. Chapter 2 develops a game theoretical model of the Kodak-Fuji dispute. The framework of the model that establishes the possible payoffs for the United States and Japan is characterized as a duopoly product market competition. An extensive form game is analyzed using backward induction, to determine the equilibrium path of play that denotes the best possible strategies not only for the United States and Japan, but also for nations faced with this type of dispute. The model shows that the way a country should respond to such international trade disputes depends on the country's expectation of the WTO's interpretation of GATT Art. XXIII as it pertains to the case at hand. Thus, a country should follow the unilateral, bilateral, or multilateral route depending on the country's belief of whether the WTO will consider the issue at hand an impediment to trade that belongs to its mandate or more pertinently an issue of national sovereignty outside its mandate. If the complainant believes that the WTO will see the

complaint as “sufficiently” trade related, the WTO DSB is the best forum for the resolution of the dispute. Finally, chapter 3 expands on the international jurisprudence of DS44, by looking at the consequences of the WTO DSB’s decision of the Kodak-Fuji case on future trade disputes that require compromises between non-interference with sovereignty and further liberalization. Reflections on what is to be considered an international trade dispute today, and what the imminent challenges to sovereignty might be, conclude the thesis.

Chapter 1

Factual History and Institutional Framework of the Kodak-Fuji Case

1. Introduction

Despite the deepening of globalization and decades of successful multilateral trade rounds, the increasing difficulty of establishing international rules that further liberalize the international movement of goods is a key reason for international trade disputes. Institutional and regulatory heterogeneity across countries is increasingly becoming the most important and yet most impenetrable impediment to continued trade liberalization, moving the international trade policy agenda from the dismantlement of specific trade barriers to issues of political and institutional sovereignty. While articles of the General Agreement on Tariffs and Trade (GATT) and of the General Agreement on Trade in Services (GATS) provide some limitation on the freedom of members of the World Trade Organization (WTO) to implement rules and regulations that may act as protectionist tools, the institutional framework of member countries is accepted as given once their membership is accepted. Heterogeneous institutional frameworks become relevant for trade liberalization once external trade barriers are diminished: so what to do then? Does a trading partner have any right to interfere with the culturally and historically determined institutional and industrial-organizational set up of another country, even when such set up inhibits further market penetration? One famous example of a trade dispute that found its origin in institutional and industrial-organizational differences between trading partners is offered by the Kodak-Fuji case known as the WTO Dispute Settlement 44. This chapter reconstructs the history and chronology of the dispute, and sets up the analytical basis for a game-theoretical analysis that will shed light on the strategic choices available to export-promoting trading

partners who claim unfairness of institutional differences that may or may not be removed or modified by the intervention of any multilateral body.

1.1 History of the Kodak-Fuji Dispute

Kodak and Fuji are not only the two largest producers and distributors of photo paper and photo film worldwide, but also the oldest. Kodak was established in the United States in 1878 and, until Fuji's establishment in Japan in 1934, Kodak's monopoly was left primarily unchallenged. Competition rapidly increased once Fuji was established, and the industry became a classic example of international duopoly. The rivalry and competition between these two producers continued throughout their history and finally came to a head in 1995 in the international dispute forum known as "WTO Dispute Settlement 44" (WTO/DS44).

The rivalry between Kodak and Fuji followed a continuous string of disputes between the United States and Japan, mostly due to American complaints around the Japanese market structure, considered by the United States an unfair impediment to her export expansion. Some of the disputes most similar to the Kodak-Fuji case are: 1.) Renegotiation of the semiconductor agreement between Japan and the United States (semiconductor producers in both countries) (Baron, 1997, p. 3). This dispute started in 1985 and, through bilateral negotiations and threats of trade sanctions by the United States, was resolved in 1986. The resolution left Japan conceding to most of the United States requests. This dispute was resolved through bilateral agreements between Japan and the United States, as many of the complaints brought by the United States were not actionable under the current GATT guidelines (Gantz, 1999, p.3). This was one of the first cases in which market structure was seen as a protectionist issue. 2.) The automobile-industry trade dispute of 1995 between Japan and the United States (automobile producers and

parts manufacturers) (Baron, 1997, p. 3). The automobile-industry dispute was resolved shortly before the Kodak-Fuji dispute began. This dispute was taken to the WTO Dispute Settlement Body (DSB), but was solved bilaterally before a panel was formed, as Japan chose to concede to the United States demands for deregulation before trade sanctions were implemented. While the United States was appeased by Japan's promises to expand its imports of foreign automobile parts and expand its number of foreign dealers, this was the first dispute in which Japan did not resort to a voluntary export restraint or voluntary import expansion (Nanto & Bass, 1995, p. 1).

3.) A series of disputes between Japan and the United States pertaining to cellular telephone service (Motorola and NTT) (Baron, 1997, p. 3). According to Dunoff (1998), George Fisher, then CEO of Motorola, "successfully urged the US government to threaten Japan with economic sanctions unless Japan liberalized access to the cellular telephone market" (Dunoff, 1998, p. 5). This dispute, which began in the 1980s, was also resolved bilaterally with Japan conceding to the US's demands under the threat of sanctions.

While these are just a few of the trade disputes that have existed between the United States and Japan, they illustrate a clear pattern of how negotiations took place. In most circumstances, the United States threatened sanctions and Japan conceded through bilateral negotiations for fear of losing an important political and diplomatic ally and trading partner. This trend, US threat and Japan concession, will become particularly important later in the chapter when I analyze the strategies taken by Fuji and the Japanese government in response to Kodak's claims.

In the late 1980s and early 1990s, Fuji established businesses and a substantial market share in the United States, Japan and across the world. During this time, Kodak's market share throughout the world and in the US sharply declined. Tsurumi & Tsurumi (1999, p. 814) suggest

that Fujifilm's increasing power in markets around the world was an important contributing factor to the decline of Kodak's domestic and international market share: "From 1987 to 1994, Kodak's market share in Canada fell from over 70 percent to 48 percent while Fujifilm increased its market share to 35 percent . . . In Asia and Oceania which was experiencing the fastest growth in photographic materials, Fujifilm's market share increased from 20 percent to 48 percent while Kodak's share fell to 28 percent from 70 percent." The decline in Kodak's dominance and increasing power of Fujifilm led to a worldwide duopolistic film market by 1995, shared by Kodak and Fuji nearly equally. In 1995, Kodak controlled 36 percent of the world market and 70 percent of its home market, while Fujifilm controlled 33 percent of the world market and 70 percent of its home market (Devereaux, Lawrence, & Watkins, 2006, p. 146).

Kodak took its first action against Fuji and the Japanese film market in August 1993, when, in order to protect its home market from Japanese imports, it filed an anti-dumping petition against photographic film components from Japan. The United States alleged that because the Japanese film industry was protected by its market framework, Japan was able to export goods into the United States "at less than a fair value and also curtailed access for US photographic materials to the Japanese markets" (Komuro, 1998, p. 165). When Kodak lodged this initial complaint against Japan, its financial performance was at an all-time low. As a result of Kodak's anti-dumping complaints, the United States Department of Commerce signed an agreement with the relevant Japanese exporters, one of whom was Fuji, which required Japanese exporters to increase the price of their products in the United States. For a short time this produced what Kodak hoped to achieve, and reduced the amount of Japanese film and film products imported into the United States. From a longer term competitive standpoint, however, this agreement accomplished nothing (Komuro, 1998, p. 166).

While Kodak temporarily eliminated some of the competition from Fuji and others in the US film market, the action pushed Fuji to find a different way to enter the US market. “Fuji accelerated its previously adopted decision to construct a photographic paper and manufacturing facility in the United States” (Komuro, 1998, p. 167). By creating manufacturing plants in the United States, Fuji was able to take advantage of the United States’ freer market structure, while avoiding any accusations of dumping. This response to anti-dumping measures is similar to the so-called tariff-jumping foreign direct investment—it had happened with Toyota earlier and could have been expected.

The dramatic decrease in market share across the world required Kodak to take fuller action and reform its market strategies. The first step Kodak took was to acquire a much more aggressive chief executive officer. George Fisher, the previous CEO of Motorola, had acquired reputation and experience in pressuring the United States government to act internationally to protect and strengthen its domestic markets. As a first move in a strategic plan to make the company more competitive in world markets Kodak hired George Fisher as its president and CEO in December 1933 (Dunoff, 1998, p. 5).

Under the leadership of George Fisher, Kodak began to pressure the United States government to initiate action against the Japanese government with regard to Kodak’s limited coverage of Japan’s market for photo film and photo paper. Initially, Kodak petitioned the US government through informal means, such as lobbying to pressure diplomatic actions against Japan’s Fujifilm. According to Dunoff (1998), Kodak took extensive lobbying and public relations actions before it filed the S301¹ (Dunoff, 1998, p. 5). The public relations campaign

¹ “Section 301 of the Trade Act of 1974, as amended (19 U.S.C. § 2411), is the principal statutory authority under which the United States may impose trade sanctions against foreign countries that maintain acts, policies and

included sending representatives to many of the large newspapers throughout the world to sway public opinion in Kodak's favor.

Throughout this process Kodak was also investigating why its market share was so much smaller in Japan than in other countries (Dunoff, 1998, p. 5). The importance of Kodak's constant scrutiny and research of Japanese and more specifically Fujifilm's practices will be expanded upon later in this paper.

At this point, since the unofficial petitioning of the government through media and lobbying pressure was ineffective, Kodak began to work on filing a S301 petition through the United States Trade Representative (USTR). A USTR petition is filed by an interested party with the US Trade Representative to request an "investigation of a particular practice of a foreign country (and the USTR determines within 45 days that an investigation is appropriate)" (Grier, 2005, sec. II.A.). In order to obtain the information needed to file the S301 petition, Kodak hired "a team of lawyers, economists, and translators" as well as experts in Japan to conduct thorough market research (Dunoff, 1998, p. 2). This extensive research took place while Kodak was establishing public opinion through the media and pressuring public officials through lobbying channels. Kodak also used its connections in Congress to pressure the USTR: "From May 18 to early July, members of Congress sent as many as six letters to the USTR" pressuring the USTR to take action with respect to the S301 petition (Iida, 2006, p. 102).

Kodak filed the S301 petition on May 18, 1995 which presented "allegations that [it] had been denied full and fair access to the consumer photographic film and paper markets in Japan" (Dunoff, 5). When Kodak filed the S301 petition, it included a 270-page report titled *Privatizing Protection: Japanese Market Barriers in Consumer Photographic Film and Paper*. The S301

practices that violate, or deny U.S. rights or benefits under, trade agreements, or are unjustifiable, unreasonable or discriminatory and burden or restrict U.S. commerce" (Grier, 2005, § 1).

petition alleged that Fuji took part in “anticompetitive practices” including “resale price maintenance, horizontal coordination of pricing, opaque and discriminatory volume-based rebates; and reliance on its trade association” through the vertical integration of the market (Fujii, 1997, ¶ 1). The claims Kodak made can be categorized into two main groups:

1.) Kodak’s lack of access to the Japanese market: a.) The US alleged that even the stores that chose to carry Kodak film did not sell it at Kodak’s competitive wholesale price, but rather near the wholesale price of Japanese film that was 3.1 times higher than that of film in the US (Devereaux, Lawrence, & Watkins, 2006, p. 155). b.) Kodak emphasized that it did not want a guaranteed market percentage but rather an end to “anticompetitive price stabilization” and unabated access to shelf space (Devereaux, Lawrence, & Watkins, 2006, p. 157). c.) The US claimed that rebates exist for Japanese producers that “illegally excluded competitors and [induce] resale price maintenance” (Devereaux, Lawrence, & Watkins, 2006, p. 158). d.) “Kodak claimed it was wholly absent from two-thirds of the Japanese Market,” implying the existence of Japanese barriers to distribution and marketing (Devereaux, Lawrence, & Watkins, 2006, p. 158).

2.) Practices by the government of Japan (GOJ) and Fuji that create trade barriers: a.) Fuji’s ties with its keiretsu partners through “interlocking financial ties” exceeds the Japanese Anti Monopoly Law’s (AML) guidelines (Devereaux, Lawrence, & Watkins, 2006, p. 156). b.) The GOJ has laws in place to prohibit systematic trade barriers, but the rules laid down by the AML are not enforced (Fujii, 1997, ¶ 2). c.) “Vertical market restraints” in the industries where keiretsu relationships are present are “impediments encountered by importers seeking access to the wholesale and retail distribution channels needed to convey their products to the end consumer” (Devereaux, Lawrence, & Watkins, 2006, p. 156). d.) Kodak claimed that a

distributional relationship with *tokuyakuten*, Japan's leading distributor of photo products, was necessary to excel in the Japanese market. Since the United States was not able to work with *tokuyakuten* because of the vertical market restraints, or establish a distribution system equal to the *tokuyakuten* because of economical restraints, Fuji *de facto* maintained monopolistic power over the domestic market (Devereaux, Lawrence, & Watkins, 2006, p. 156).

Kodak claimed that the GOJ was allowing Fuji to use the Japanese market system so that potential American competitors (Kodak) would be pushed out of the market without using any formal market barriers. Thus, the S301 claims were clearly a market opening strategy initiated by Kodak. According to Dunoff (1998), Fuji was stunned by the allegations assembled by Kodak. To counter the actions taken by Kodak, Fuji chose to assemble its own team of lawyers and lobbyists, and begin a dialog with the GOJ (Dunoff, 1998, p. 6). Fuji claimed that Kodak's allegations were outright lies (Passow, 1996, p. 16). Fuji's anger quickly translated into action: Fuji not only began to work on the investigation with the Japanese government, but also to use the media to sway public opinion in Japan, Europe, and the United States, and to assemble its own team of researchers. Fuji allocated "millions of dollars creating a 'rapid response team' that not only rebutted Kodak's claims; it often 'pre-butted' them" (Passow, 1996, p. 17). The USTR initiated its investigation of potential barriers to access to the Japanese film market on July 2, 1995 (US Trade Representative, 2010, p. 72).

Although the S301 petition and investigation was directed from the United States government to the GOJ, it was Fuji that responded to the allegations. The GOJ left it up to Fuji to do the research, both legal and factual, needed to counter the allegations presented by Kodak (Dunoff, 1998, p. 6). Fuji then submitted to the USTR a 585-page response entitled *Rewriting History* (Dunoff, 1998, p. 6). Fuji emphasized two main points in its response to Kodak: 1.)

“Fuji, pointing to its own 11% market share in the US, stresses that Kodak’s 10% market share in Japan is attributable to consumer identity with the national manufacturer. In their respective countries, both companies enjoy a market share of roughly 70%” (Fujii, 1997, p. 4). 2.) “. . . if Kodak has a grievance, it should seek remedies through the Japan Fair Trade Commission (JFTC), but that Kodak has not sought any such remedy in Japan” (Fujii, 1997, p. 4).

The USTR had 45 days to review the information submitted by Kodak and the response by Fuji to decide whether to pursue the investigation. The USTR not only reviewed the information submitted by Kodak and Fuji, but also “independently verified Kodak’s allegations through the US Embassy in Tokyo and other sources” (Passow, 1996, p. 15). The USTR based its decision to move forward with the case off of two main pieces of evidence: 1.) When Japan’s formal restrictions on trade were disintegrated because of international pressure during the Kennedy and Tokyo Rounds of the GATT (1964-1976), informal restrictions were created through an anticompetitive market structure (Passow, 1996, p. 15). Japan cooperated with international pressures in order to maintain its standing in the international community, but used domestic policies regulated by the Ministry of International Trade and Industry (MITI) to ensure that domestic producers would be protected. 2.) The restrictive market share established by MITI in the 1970’s is still in place today and the GOJ has chosen to tolerate its existence (Passow, 1996, p. 16). The allegations that the GOJ chose to allow restrictive market practices were based on the fact that industrial policy in Japan only loosely enforced the Anti-Monopoly Law (AML) (Passow, 1996, p. 16).

In the meantime, the USTR had to decide which method of involvement would benefit the United States the most and create the greatest likelihood of the United States gaining greater access to the Japanese market, not only in the photo industry but overall. There were two

different ways the US government could negotiate directly with the GOJ, fundamentally without or with WTO pressure: it could either deal with the complaints bilaterally through negotiations with the GOJ, or it could take part in talks with the GOJ while the WTO reviewed the case, in hopes of securing a bilateral solution before the WTO took action. Another possibility for the USTR was to appeal directly to the WTO DSB. If the DSB ruled in favor of the United States, it would have set a fundamental precedent in an international forum, accomplishing what the United States had been trying to achieve for the past four years through bilateral negotiations and threats of unilateral sanctions (Devereaux, Lawrence, & Watkins, 2006, p. 163).

MITI was the branch of the GOJ that the United States would negotiate with if there was a trade dispute. However, the dispute with regard to the film industry was not under MITI's jurisdiction because the aspect of the film industry's market that was under scrutiny did not include any international regulations. The allegations brought by the United States targeted anticompetitive business practices which are regulated by the Japan Fair Trade Commission (JFTC) (Passow, 1996, p. 18). MITI has jurisdiction over import restrictions and the film industry does not have any formal trade barriers. In addition, MITI did not want to interact with the United States through bilateral negotiations, because the past disputes between the United States and Japan were not resolved in Japan's favor. MITI took this opportunity to adopt a tough stance against the United States, by refusing to negotiate directly with the American government (Passow, 1996, p. 18). Since the JFTC had jurisdiction over the case, this was the ideal scenario for MITI to diplomatically refuse to cooperate with the United States, without directly opposing the US and without running the risk of losing the US as an ally. However, neither the United States nor Kodak chose to initially bring any complaint with the JFTC.

At the same time, the JFTC began to take action with regard to the Japanese film industry, apparently to prove to the United States its own effectiveness as a regulatory body. The JFTC had issued surveys of Japanese industries in the past, including the film industry, and had never made a suggestion for further investigation nor issued any penalties. The fact that the JFTC did not enforce the Anti Monopoly Act (AMA) had given the JFTC the reputation of being ineffectual. This reputation would not help to strengthen Japan's argument that the United States or Kodak should have sought relief through the resources that Japan had established. According to Passow (1996), "Kodak's Fisher said bluntly, 'We did not feel that the JFTC was the proper investigation forum.' The JFTC had been part of the problem" (Passow, 1996, p. 19). This statement illustrates that not only was Kodak unwilling to work with the JFTC, it also believed that the JFTC was part of the structure of the Japanese market that allowed discrimination against foreign products. In any event, on February 21, 1996, the JFTC announced that it would conduct a survey regarding anticompetitive business practices in the Japanese film market² (Passow, 1996, p. 18).

There was a large amount of political pressure on the USTR in deciding what action to take, not only from Kodak, which had invested huge sums of money in the case, but also from the Clinton administration, which was coming up for reelection. Shortly before the S301 petition was filed, "President Clinton had announced the imposition of 100% punitive tariffs on Japanese luxury automobile imports, effective if an agreement [was] not reached by the end of June 1995" (Baron, 1997, p. 306). Since the Administration had just taken this hard stance on trade issues, it did not want to take action again with regard to the Kodak-Fuji dispute until after

² After the survey began, Prime Minister Ryutaro Hashimoto appointed Yasuchika Negoro, "the former head of the Tokyo High Prosecutor's Office, to chair the five member executive council of the JFTC" (Passow, 1996, p. 19). Ryutaro Hashimoto had only held the position of Prime Minister for less than a month by then. He had previously held the position of Trade Minister, where he vigorously fought US demands during the automobile industry dispute (Passow, 1996, p. 19).

the election. Using the WTO DSB would buy time, if nothing else. Yet, the political pressure kept building: “Fisher and Wolff lobbied members of Congress, and Fisher obtained a letter of support from Senate majority leader Robert Dole” in order to prove to the USTR that Kodak was very serious about achieving a resolution to this problem and that Kodak had the backing of Congress (Baron, 1997, p. 306).

The USTR also had to foresee what would happen if the United States lost the dispute at the WTO DSB. During the time of the Kodak-Fuji dispute, the DSB was still a very new system and had several critics in Congress. The political consequences of a loss at the WTO DSB would not be predictable, but a loss would certainly reinforce the view of the DSB-skeptics in Congress. It was understood that if the USTR chose to use the WTO panel as its dispute resolution mechanism, it would cite violations of the 1994 GATT agreement with regard to “liberalizing countermeasures” that were meant to keep out imports in the photo film and paper Japanese sector (Devereaux, Lawrence, & Watkins, 2006, p. 164).

On June 13, 1996, the USTR announced that it would appeal to the WTO dispute resolution because several of the allegations against Japan were in violation of Japan’s GATT and GATS obligations with regard to “anti-competitive practices” (Dunoff, 1998, p. 6). This was not the only way that the USTR could have acted against Japan: for instance, it could have recommended to the administration that the United States threaten Japan with trade sanctions or enter into bilateral negotiations with the GOJ. The USTR made the decision to issue the complaint with the WTO because of the level of detail that Kodak was able to bring to the dispute. There is a high level of evidence needed to issue a complaint at the WTO, however there is an even higher level needed to dispute the claim. It is left up to the respondent to ensure proof that the allegations being issued are incorrect or exaggerated.

On June 13, 1996, the USTR requested consultations with the WTO DSB on the basis of the S301 petition filed by Kodak. The main claim of the USTR against Fuji-Japan was that “certain acts, policies, and practices of the Government of Japan with respect to the sale and distribution of consumer photographic materials in Japan are unreasonable and burden or restrict US commerce” (US Trade Representative, 2010, p. 72). The WTO recognized the following allegations: 1.) “The Japanese Government treated imported film and paper less favorably through these measures³, in violation of GATT Articles III⁴ and X⁵” (World Trade Organization, 2010a, sec 1); 2.) “These measures⁶ nullify or impair benefits accruing to the US (a non-violation claim)⁷” (World Trade Organization, 2010a, sec 1).

The GATT Dillon round of 1960 contained an agreed upon statement that nations engaged in a dispute at the level of the WTO are required to meet for consultations prior to the establishment of the panel. Before the dispute was brought to the level of the WTO, the United States had tried to engage the GOJ in bilateral negotiations, but the GOJ had refused to cooperate (Devereaux, Lawrence, & Watkins, 2006, p. 168). According to Devereaux et al. (2006), perhaps in light of prior disputes with the US, the GOJ had oriented its trade policy negotiations towards international *fora* such as the WTO, so that “solutions that emerged from changing the rules” would be emphasized (Devereaux, Lawrence, & Watkins, 2006, p. 144). The United States had already threatened the GOJ “with more than \$6 billion in punitive duties under Section 301 if it did not open up its home market to allow more US cars and car parts to be sold in Japan” (Dunoff, 1998, p. 17). Therefore, it is likely that the GOJ may have chosen not to

³ “These measures” refer to “Japan’s laws, regulations and requirements affecting the distribution, offering for sale and internal sale of imported consumer photographic film and paper” (World Trade Organization, 2010a, sec 1).

⁴ Article III: National Treatment on Internal Taxation and Regulation.

⁵ Article X: Publication and Administration of Trade Regulations.

⁶ “These measures” refer to “Japan’s laws, regulations and requirements affecting the distribution, offering for sale and internal sale of imported consumer photographic film and paper” (Trade Organization, 2010a, sec 1).

⁷ Non-violation claims fall under GATT Article XXIII: Nullification or Impairment, which focuses on a contracting party being impeded directly by another member of the contacting party.

participate in negotiations directly with the United States to provoke their use of an international forum.⁸

Before a DSB panel is formed, the dispute settlement process gives the involved parties 60 days to settle the dispute bilaterally. The United States and the GOJ met only twice during the 60 day period, leaving the matter unresolved. On September 20, 1996, the United States requested that the WTO DSB establish a panel. The arduous task of finding suitable panel members, that both the US and GOJ could agree on, began on October 16, 1996. Japan nominated representatives from Switzerland, Brazil and New Zealand (Devereaux, Lawrence, & Watkins, 2006, p. 170), and after several negotiations the proposed panel was established. Both the EU and Mexico chose to support the US claims against Japan, most likely because they saw the institutional structure of Japan as a possible restriction on their goods as well. Japan agreed to allow the European Union to join the talks only if the United States accepted the Japanese request for the inclusion of discussions on restrictive practices in the American market (Devereaux, Lawrence, & Watkins, 2006, p. 168). The US conceded to two requests made by Japan: the fact that Japan was entering into the dispute would not be considered an admission of guilt with respect to the alleged violations; and that “any agreement would be limited to areas of government responsibility” (Devereaux, Lawrence, & Watkins, 2006, p. 169). But the United States did not accept investigations on its own restrictive market practices. The US also required that the discussions include not only information with regard to the private sector but the public or government sector as well (Devereaux, Lawrence, & Watkins, 2006, p. 169).

⁸ Shortly after the USTR requested consultations with the WTO DSB, Kodak filed a private party complaint with the JFTC under Article 45-1 of the Anti Monopoly Act of Japan; the complaint was received by the Investigation Department in August 1996 (Passow, 1996, p. 19). Kodak acted on request of the USTR, and the agenda was to ensure that Kodak and the United States had reached out to all the correct parties. The complaint filed with the JFTC was however much narrower than the case originally filed by Kodak with the USTR. The hidden rationale was to test whether the JFTC would take action, and to see whether the investigation would be kept confidential (Passow, 1996, p. 2).

The amount of time allowed for review in a WTO DSB case is normally six months. However, soon after the panel was established the chairman realized the complexities of the case would require an extension of the review period of an additional six months. The panel members soon found that not only was there an extensive amount of documentation to be reviewed (“21 specific measures by the United States” and “nearly 20,000 pages of documentation that both sides had presented as evidence),” but also the nature of the claim was more complicated than a typical case because it was under the “non-violation provisions of the GATT 1994 and GATS” (Devereaux, Lawrence, & Watkins, 2006, p. 170). A typical dispute focuses on failures of a country to fulfill the obligations included in an international trade agreement, in which case the dispute is very straightforward because the panel has only to decide whether the obligation was actually violated. The non-violation claims by the United States were under the GATT article XXIII, which states that “if any contracting party should consider that any benefit accruing to it directly or indirectly under this agreement is being nullified or impaired or that the attainment of any objective of the agreement is being impeded as the result of (c) the existence of any other situation, the contracting party may, with a view to the satisfactory adjustment of the matter, make written representations or proposals to the other contracting party or parties which it considers to be concerned” (World Trade Organization, 2010c). Since the issue brought forward by the United States was not in direct conflict with an agreement, but rather focused on the structure of the Japanese market, there was substantially more evidence and criteria for the WTO DSB to consider before making a decision.

On December 5, 1997, the WTO DSB issued its decision. It ruled against the United States, stating that:

- 1.) “the United States *did not* demonstrate that the Japanese ‘measures’ it cited individually or collectively nullified or impaired benefits to the United States within the meaning of GATT Article XXIII:1(b);
- 2.) “the United States *did not* demonstrate that the Japanese distribution ‘measures’ it cited accorded less favorable treatment to imported photographic film and paper with the meaning of the GATT Article III:4;
- 3.) “And the United States *did not* demonstrate that Japan failed to publish administrative rulings of general application in violation of GATT Article X:1” (Devereaux, Lawrence, & Watkins, 2006, p. 170).

The United States and Japan received official notification of the decision on January 30, 1998, and on April 22 of that year the adoption of the decision was finalized. The United States had the option to file an appeal which would have stopped the ruling from being adopted until the appeal had been finalized, an option the United States chose not to exercise.

The GOJ was of course pleased with the decision that proved that the WTO DSB ruled strictly on facts. Despite the negative reaction to the ruling in the United States government, the USTR and Kodak, the US government indicated that the WTO had established a precedent that would help in future disputes over the actions of private industries regarding the openness of the Japanese market. “In particular, uncertainty over whether actions taken by the private sector (and officially tolerated by a domestic government) could be considered ‘measures’ that would be actionable under Article XXX:1 was removed by the case: The panel said that such measures could indeed be actionable, and validation of this principle was regarded as a victory by the United States in its war against Japanese barriers, even if it had lost this particular battle” (Devereaux, Lawrence, & Watkins, 2006, p. 171).

While the United States Government chose not to appeal the DSB's decision, soon after the ruling Kodak re-approached the USTR for another S301 petition to continue to fight for broader access to the Japanese film market. Kodak had a substantial amount of influence in Congress, and soon after the WTO ruling 218 members of the House of Representatives signed a petition indicating that Congress was ready to put more pressure on Japan (Devereaux, Lawrence, & Watkins, 2006, p. 171). The initiative required monitoring by the United States of "the Japanese film and photographic paper sector to ensure that it was as open as Japan claimed" (Devereaux, Lawrence, & Watkins, 2006, p. 171).

Kodak worked hard to ensure that the government continued to pressure Japan, but the USTR chose not to issue another S301 petition. According to Passow (1996), the Kodak-Fuji case put an end to the market-opening disputes between the United States and Japan, and marked a change in US foreign policy (Passow, 1996, p. 28): the United States has not used Section 301 to retaliate against trading partners without first using the WTO DSB since the Kodak-Fuji case (Passow, 1996, p. 28).

The Kodak-Fuji case was a landmark decision in the history of the WTO DSB. Not only was the Kodak-Fuji case the first the United States lost at the level of the WTO, but it also marked the beginning of an increased use of the WTO to resolve trade disputes. However, the Kodak-Fuji dispute also provided evidence that "WTO rules were not well suited to deal with problems related to weak national enforcement of competition policy. The ruling also indicated that it was very difficult to prove a case under non-violation" (Passow, 1996, p. 29).

The academic community clearly praised the decision of the USTR to choose the multilateral route. Bhagwati (1998) for instance emphasized the opportunity such decision offered to an international body to review the complaints made by an American company,

opening a dispute settlement path more beneficial than unilateral action from a welfare standpoint. Davis (2008) considered the effects of the multilateral route on American foreign (trade) policy the most important aspect of this case. In Davis' words, the choice of the USTR to use the WTO DSB was "the best response to political pressure," because it proved that the US had done everything it could to open the Japanese market without using muscle power, that is, without threatening unilateral trade sanctions (Davis, 2008, p. 15). More generally, DS44 is widely viewed as an important case because it marked a change in American foreign policy with regard to international trade disputes, established a needed precedent for non-violation complaints, and established credibility of the WTO DSB.

While the Kodak-Fuji dispute must be considered an integral aspect of the WTO DSB history, some scholars suggested that the WTO made a mistake when it chose to hear the case. Komuro (1998), for instance, stated that "the Panel's broad definition of 'measures' and low standard of causation... in the context of non-violation complaints could cause problems in the... future" (p. 55). Linarelli (2000) considered the belief that only a very narrow scope of argument should be accepted in order for a non-violation complaint to reach the WTO DSB as a common response to the outcome.

1.2 Institutional Differences in the Kodak-Fuji Dispute

"The first step to evaluating the options for framing the trade relationship between the United States and Japan is to appreciate the setting and the two players" (Porges, 1991, p. 307). The differences in institutional structure between the United States and Japan start from the basic form of their governments.

The United States is a constitutional federal republic. Japan is a parliamentary government with a constitutional monarchy. While both the United States and Japan have governmental systems set up in three main branches, the ways the branches interact with each other and with private industries differ substantially. The three branches of the United States government are the executive branch, which houses the President and his Cabinet, the congressional branch, which houses the senate and the house, and the judiciary, which houses the Supreme Court and all of the lower courts. The Japanese government is broken up into three branches as well, the executive branch which houses the Emperor, the Prime Minister, and the Prime Minister's Cabinet, the legislative branch, which is a bicameral Diet comprising the House of Councilors and the House of Representatives and the judicial branch, which houses the Supreme Court and the lower courts. The Prime Minister of Japan is elected, but the Emperor is selected through hereditary succession. In both the United States and Japan, the bureaucracy plays an important role in how trade disputes are initiated, responded to and acted upon. In Japan, MITI is an office formed by the prime minister and his appointed council. MITI has a very large jurisdiction over foreign trade (Okimoto, 1989, p. 114). In addition, Japan has established the Fair Trade Commission (JFTC) as an independent administrative agency that is charged with the implementation of the Antimonopoly Act through quasi-legislative and quasi-judicial powers (Fujii, 1997, p. 13). In the United States, the US Trade Representative (USTR) and the corresponding office are determined by the President. The USTR is the President's trade advisor, negotiator, and spokesperson in trade issues, and a Cabinet member (United States Trade Representative, 2010b).

The structure of the US political system is one that supports clear separation of powers within the government and between the government and the economy. Porges (1991) described

this concept well: “US negotiators work for a government marked by congressional-executive conflict, a fluid, entrepreneurial political system in which fast decisions are possible, and in which there is antipathy to overt industrial policy as such” (p. 307). By contrast, the Japanese political system is much more integrated not only within the government, but also between government and economy. Again, according to Porges (1991), “Japanese negotiators work for a government marked by stability, coincidence of interests (usually) between the Diet and the bureaucracy, a political system in which consensus is slow to emerge but solid, and a tradition of state involvement in the economy” (p. 307).

The structure of the Kodak-Fuji case deeply reflected the different ways in which the corporations interacted with their respective governments. In the United States, Kodak first chose to lobby Congress to pressure the USTR to investigate the Japanese market structure. When this indirect method of government involvement did not produce the desired effect, the company was forced to take official action by means of a Section 301 petition. Kodak had “to define the size and shape of the government’s agenda of trade complaints,” and Porges suggests that this is not unusual in the United States since “industrial policy as such has been repeatedly rejected by the political process” (Porges, 1991, p. 308). The second moment in which country-specific relationships between government and market were highlighted coincided with the presentation of the arguments at the WTO DSB. Once the USTR chose to take the dispute to the WTO, decision-making was complete territory of the United States government at the exclusion of Kodak. On the other hand, when the USTR began its investigation of the Japanese market structure (immediately after Kodak filed the S301 petition), it was Fuji rather than the government of Japan that responded to the allegations. But was it really Fuji? Or, given the intertwined nature of the Japanese government and corporate worlds, was Fuji also speaking its

government's directives? On the other hand, the United States government and its corporate sector speak and act separately; while the government may support the corporate sector, and the corporate sector may lobby the government, there are specific and transparent channels of action and facts that must be proved by corporations in order to gain government support.

The government of the United States is expected to be separate from the economy, while the Japanese government is not. Hall & Soskice (2001) list basic economic factors that characterize the US system as a liberal market economy (LME) and the Japanese system as a coordinated market economy (CME). According to Hall and Soskice, the US economy is characterized by the following factors: 1.) The market is made up of hierarchies and competitive market arrangements; 2.) Firms adjust in response to supply and demand of goods; 3.) Equilibria are a result of balance between supply and demand; by contrast, the Japanese system is characterized by the facts that: 1.) Firms depend on non-market relationships; 2.) Firms rely more on collaborative, as opposed to competitive, relationships; and 3.) Equilibria are more often the result of strategic interactions among firms and other actors (p. 8). In light of the Kodak-Fuji case, perhaps the most important institutional differences between the American and Japanese market structures have to do with the way firms secure investment funds and with their inter-company relationships. In the United States, a company secures funds by relying on its "valuation of equity markets, where dispersed investors depend on publically available information to value the company" (Hall & Soskice, 1991, p. 28). Thus, US businesses do not typically rely on established trust-based relationships in order to gain funding from a financial institution. Companies are monitored through publicly available information, which forces companies to focus on current levels of profitability in order to ensure continued access to funding, and makes them less able to focus on long-run profitability. Interactions among

American companies are based primarily on “standard market relationships and enforceable formal contracts. In the United States, these relations are also mediated by rigorous antitrust regulations designed to prevent companies from colluding to control prices or markets and doctrines of contract laws” (Hall & Soskice, 1991, p. 31). The arms-length approach of the liberal market economy of the United States forces competition between industries and prevents coordinated relationships from keeping new firms out of the industry.

The structure of the Japanese market supports instead close ties between firms and subcontractors through *keiretsu* relationships. “*Keiretsu* relationships are viewed by most scholars as neither market nor hierarchy” (Dyer, J., 654). This is because *keiretsu* is primarily based on interpersonal relationships and trust, but is not organized in a purely top-down structure. The *keiretsu* relationships are broken into three main levels: the large firms and central banks, the medium firms and distributors, and the small firms and local stores. The large firms and banks participate in two different sets of *keiretsu* alliances. The first are inter-market keiretsu, which consist of large firms and banks. These banks and large firms hold prominently known and respected names such as Mitsui, Mitsubishi and Sumitomo (Gerlach, 1992, p. 82). The names of these companies represent trust, stability and loyalty, which accompany extraordinary political power and influence. Many of these large banks and industries were a powerful aspect of the *zaibatsu*, a type of *keiretsu* relationship before it was dismantled after WWII. It is common for the leaders of these corporations to have previously held government positions, and typically maintain sound connections with the government even after they moved to the private sector. These connections are an important component of the links between Japan’s market and government. An important aspect of the inter-market *keiretsu* is its ability to hold securities from other large firms: most large firms hold large amounts of securities from

other firms for long periods of time. This ability to hold the securities provides stability not only to the holding firms, but also to those that issued the securities. The political power combined with financial interdependence among companies allows for an intermingled relationship between powerful companies and the government. The second type of *keiretsu* relationships is the vertical *keiretsu*. These relationships are prominent among all three levels of businesses, but are restricted to a single industry. There are strong vertical *keiretsu* relationships between large firms/banks and their respective medium level firms and distributors. These vertical *keiretsu* dictate management behavior and the allocation of resources. Often the medium firms and distributors will carry the name of the high level *keiretsu* in order to establish a market base as well as show loyalty within the *keiretsu* itself. Vertical *keiretsu* relationships also exist between the medium level firms and distributors and the respective small firms and local stores that sell the final products to consumers, thus determining what products are carried and sold at local stores/firms. The *keiretsu* relationships within industries create business relationships that are based on networks and alliances rather than on prices and market fluctuations (Dyer, 1992).

The aspect of the *keiretsu* relationships that more directly relates to the Kodak-Fuji case is the distribution system, which is characterized by agreements between suppliers and distributors that inevitably create a barrier to entry for firms outside the *keiretsu* (Itoh, 1991, p. 184). The Japanese distribution system displays a much lower concentration than its American counterpart. This is because both *keiretsu* relationships and government policy have continuously supported the establishment of small firms and prevented the establishment of large corporations. “[Small firms] receive preferential tax treatment and a “Large Store Act” regulates the establishment of new stores by big retailers” (Itoh, 1991, p. 177). The decentralized distribution system follows from the vertical *keiretsu* relationships as each large company has an

established set of smaller distributors. Since these distribution channels are specific and loyal to a given large corporation, it is much harder for another company to enter the market, since it will often have to establish its own distribution channels. It is this web-like aspect of the Japanese market and distribution system that the US allegedly could not enter, because distributors were loyal to their respective industry providers.

1.3 Toward a Game-Theoretical Analysis

In order to translate the Kodak-Fuji dispute into a game-theoretical model to shed light on the strategies available to exporting firms or countries that face impediments to trade rooted in institutional aspects of importing countries, it may be helpful to streamline the main steps taken during the dispute by the players, i.e., United States, Japan and the WTO, and to summarize the most important institutional and industrial organizational differences between the United States and Japan.

An outline of the chronological steps taken by the three players (plus Kodak and Fuji) during the dispute should include the following:

DS44 Part 1: Gathering Data

- 1.) Kodak files the S301 petition (including "*Privatizing Protection*"), thus requesting intervention by the USTR/Administration/Congress.
- 2.) USTR initiates investigation, thus considering Kodak's request for intervention
- 3.) Fuji, after working with its government, files the report "*Rewriting History*" with the USTR in response to the allegations presented by Kodak.

DS44 Part 2: The Dispute

- 4.) US requests bilateral negotiations with Japan
- 5.) Japan refuses to participate in bilateral negotiations with the US: using jurisdictional boundaries (possibly as an excuse) MITI forces the US to use the WTO DSB instead of implementing unilateral threats/sanctions. USTR weighs options, and requests consultations with WTO DSB. The forum becomes multilateral.
- 6.) US requests that the WTO DSB establish a panel, possibly to create an international precedent with regards to non-violation complaints regarding market structure.
- 7.) The WTO acknowledges that non-violation disputes are an issue facing global trading partners and establishes a DSB panel.
- 8.) WTO DSB issues a decision that rejects the argument submitted by the United States, while creating a precedent that acknowledges non-violation complaints as a viable issue facing the global community.

From an institutional point of view, two main differences between the politico-economic structures of the United States and Japan seem integral to this case study. The first is the relationship between firms in the market; the second is the relationship between the government and the market.

In Japan, *keiretsu* relationships form monopoly-like groups of companies, which affect the ability of foreign companies to enter the Japanese market. The United States market is much more open to foreign firms. The clash between the fundamental differences of market structure create what seems to be a disadvantage for US firms trying to expand their exports in the Japanese market, when compared with Japanese firms trying to enter the US market. Herein lays the protectionist aspect of the dispute, even if Japan does not implement import restriction policies. While it is clear that the US is being blocked in some way from penetrating the

Japanese market further, this form of barrier to entry is not directly covered by the GATT articles.

The second main difference consists in the relationship between the market and the government. In the US, there is strong government enforcement of anti-monopoly laws. Beyond the enforcement of these laws, there is very little interaction between the government and the market. In Japan, the anti-monopoly act is enforced far less, and does not preclude the existence of *keiretsu* relationships among firms. This enables trust-based relationships to be established and maintained, both between firms and between firms and the government. Given that imports are not being blocked by formal protectionist policies, but rather market structure, a ruling in favor of the United States would limit Japan's domestic sovereignty. Issues that are traditionally considered domestic are not directly covered by the GATT articles.

The first institutional difference applies to the content of the dispute, while the second applies to the resolution of the dispute. The United States chose to use the WTO DSB because the JFTC was considered unfit to determine if the *keiretsu* relationships among suppliers and distributors constituted a form of market barrier, and thus of protectionism in disguise.

Figure 1 illustrates the actual steps taken by the players in DS44 regarding Kodak and Fuji. Given this outline of the dispute, and the institutional characteristics described above, I prepare a game-theoretical model that illustrates all possible responses by countries faced with this type of dispute. In Chapter 2, I will illustrate all the possible options open to parties to the dispute in order to derive conditions under which the equilibrium path of play features use of the WTO DSB to settle the trade dispute.

The first section of the tree, DS44: Gathering Data, is important because it illustrates the amount of research and data necessary to initiate this type of dispute with the WTO. However, it

is not the most crucial aspect of the dispute from a game-theoretical perspective. The portion of the dispute I include in the model reflects the choices governments can make once a dispute of this type is initiated. My analysis focuses on the best possible response, for each nation, when faced with the actions of the other. Through this model, I show that the key uncertainty is found in a nation's ability to predict the WTO's understanding of what constitutes a trade dispute vis-à-vis an issue of domestic institutional sovereignty.

between Kodak and Fuji as they compete for larger shares of the Japanese photo film and paper market. The larger extensive form of the game is between the United States, Japan and the WTO. The extensive form uses the payoffs derived from the product market competition in order to explain and analyze the actions of the three players.

Furthermore, Kodak and Fuji are modeled as an asymmetric duopoly. Two main components create asymmetric conditions in the Japanese market. First, Fuji has a home country advantage in the form of consumers' brand favoritism. Second, Fuji is assumed to have lower costs because it is producing and distributing within its own market, which is set up to benefit domestic producers as explained in Chapter 1. The *keiretsu* framework of the market makes it more costly for Kodak to distribute and sell its product in the Japanese market in comparison to Fuji. Because the dispute focuses on the market structure of Japan, the market in question is only the photo film and paper market in Japan. Fuji produces quantity (q_F) and Kodak produces quantity (q_K). The inverse market demand is represented by:

$$P(q_K, q_F) = A - q_K - \theta q_F, \quad \theta < 1, \quad (1)$$

where A is the strength of the demand and θ represents brand favoritism by Japanese consumers for Fuji. As A increases, the demand for photo film and paper in the Japanese market increases. If θ is set to 1, the brand favoritism for Fuji is nullified and sets Kodak and Fuji on the same level. A lower θ represents higher brand favoritism for Japanese products and a higher θ represents lower brand favoritism. This parameter is of particular importance with regards to the Kodak-Fuji dispute because it affects the absolute advantage Fuji has in its home market.

Kodak selects q_K to maximize profits, π_K , given its beliefs about Fuji's output choice:

$$\pi_K = (A - q_K - \theta q_F)q_K - C_K q_K, \quad (2)$$

where C_K is Kodak's constant marginal cost of producing and distributing its products in the Japanese market. Fuji selects q_F to maximize profits, π_F , given its beliefs about Kodak's output choice:

$$\pi_F = (A - q_K - \theta q_F)q_F - C_F q_F, \quad (3)$$

where C_F is Fuji's constant marginal cost of producing and distributing its products in the Japanese market. I assume that the costs to Kodak as the market stands are greater than the costs to Fuji ($C_F < C_K$). This assumption is reasonable because it is assumed, as mentioned before, that the Japanese market structure increases the distribution and penetration costs for Kodak. A second assumption I make when considering profit maximization is that changes relative to the case only occur in Japan; costs and profits of both Kodak and Fuji throughout the rest of the world are held constant. The first-order condition for profit maximization for Kodak is:

$$A - 2q_K - \theta q_F - C_K = 0, \quad (4)$$

which, solved for q_K , leads to Kodak's reaction function:

$$q_K = \frac{A - \theta q_F - C_K}{2}. \quad (5)$$

Similarly, the first-order condition for profit maximization for Fuji is:

$$A - q_K - 2\theta q_F - C_F = 0, \quad (6)$$

which, solved for q_F , leads to Fuji's reaction function:

$$q_F = \frac{A - q_K - C_F}{2\theta}. \quad (7)$$

The reaction functions in (5) and (7) define, respectively, Kodak's and Fuji's optimal responses given their beliefs about the output of their rival.

The output levels of Kodak and Fuji that satisfy (5) and (7) simultaneously constitute a Nash equilibrium. Solving (5) and (7) simultaneously yields,

$$q_F^* = \frac{A+C_K-2C_F}{3\theta}, \quad (8)$$

the equilibrium output for Fuji, and

$$q_K^* = \frac{A+C_K-C_F}{3}, \quad (9)$$

the equilibrium output for Kodak. Given the cost and demand parameters described above, the output produced by Kodak would increase if the costs to Kodak and Fuji were equalized. If costs and demand variables were equalized the total quantity produced by Fuji would decrease, because it would no longer have an absolute advantage in the photo film and paper market.

Substituting the equilibrium levels of output found in (8) and (9), into the profit functions (2) and (3), I obtain the expressions for profits (10) and (11). The status quo equilibrium profits for Kodak are:

$$\pi_K^* = \frac{(A+C_F-2C_K)^2}{9}. \quad (10)$$

Similarly, the status quo equilibrium profits for Fuji are:

$$\pi_F^* = \frac{(A+C_K-2C_F)^2}{9\theta}. \quad (11)$$

The profits to Kodak are dependent upon two factors: the difference between its costs and the costs incurred by Fuji; and the difference in demand parameters for Kodak and Fuji. The higher Kodak's costs compared to Fuji's are, the lower Kodak's profits are.

Consumer surplus is generated by the available output of photo film and paper in the Japanese market. In order to analyze the effect that the Japanese market structure has on its own consumers I derive consumer surplus at the status quo equilibrium levels of output for both Kodak and Fuji:

$$\begin{aligned}
 CS^* &= \int_0^{q_F^*} \int_0^{q_K^*} (A - x - \theta y) dx dy - P(q_K^*, q_F^*) q_K^* q_F^* \\
 &= \left[\frac{2A - C_F - C_K}{3} \right] \left[\frac{A^2 - AC_K - AC_F - 2C_F^2 - 2C_K^2 + 5C_F C_K}{18\theta} \right],
 \end{aligned} \tag{12}$$

where x is the quantity produced by Kodak and y is the quantity produced by Fuji.

The above assumptions and equations provide the framework for analyzing the Kodak-Fuji dispute as a sequential-move game of perfect information in extensive form. Fuji's power in the Japanese market is measured by θ , the consumer preference for Fuji, and by Fuji's cost advantage at status quo, $C_F < C_K$. These specifications allow the model to take into account the absolute institutional advantage that the Japanese market structure gives to its industries.

3. Extensive Form Game

An extensive form game is needed in order to model the interactions of the respective players once a dispute is initiated. The initiation of a dispute triggers a host of possible responses by the respective players. In the Kodak-Fuji dispute, the important players are the United States, Japan and the WTO. The United States initiates the dispute. Japan then has two possible options,

illustrated in Figure 1 below: either to cooperate with the United States and open discussions, or refuse to cooperate and thus force the US to take further action or relinquish its complaints. The first step taken by Japan opens two possible cases. The first case is one which illustrates the actions taken by the countries when participating in bilateral negotiations. The second case incorporates the WTO as a player and describes the actions taken by countries when the dispute is decided upon by the WTO. The payoff to the United States will depend on the profits to Kodak; the payoff to Japan will depend on the profits to Fuji and the consumer surplus achieved by Japanese consumers in the photo film and paper market; and, finally, the payoff to the WTO will depend on world welfare or the total surplus. Figure 1 below outlines the possible actions taken throughout the dispute and their respective payoffs.

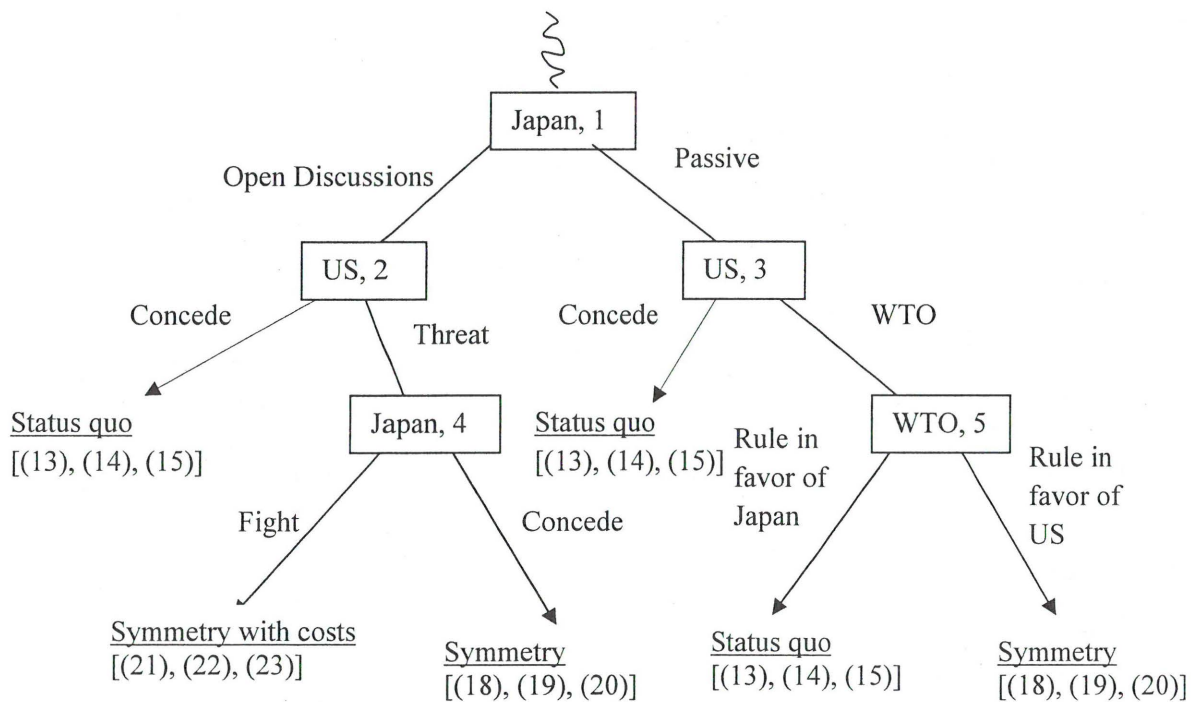


Figure 1: Extensive Form of Kodak-Fuji Dispute
Payoffs to: (USA, Japan, WTO)

Given the history of disputes between Japan and the United States, I make the assumption that any dispute of this nature would be initiated by the United States, leaving the initial decision of how to react up to Japan, denoted by decision node 1. There are two possible actions for Japan in response to the United States' initiation of a dispute. The first possible option, which has been the most commonly used by Japan, is to open up bilateral discussions with the United States. The second possible option for Japan is to take a passive stand by refusing to participate in talks with the United States. If Japan opens bilateral talks, then the United States' options are represented by decision node 2; the US can either concede or threaten trade sanctions against Japan. If the US chooses to concede, I assume that the payoffs to Japan and the US would stay at the status quo and have no effect on consumer surplus. The payoff for the United States at the status quo is defined by the profits to Kodak at the status quo:

$$\pi_K^* = \frac{(A+C_F-2C_K)^2}{9} \quad (13)$$

The payoff for Japan at the status quo is defined by the profits to Fuji plus the consumer surplus to the Japanese consumers in the photo film and paper market at status quo:

$$\pi_F^* + \delta CS^* = \frac{(A+C_K-2C_F)^2}{9\theta} + \delta \left[\left[\frac{2A-C_F-C_K}{3} \right] \left[\frac{A^2-AC_K-AC_F-2C_F^2-2C_K^2+5C_FC_K}{18\theta} \right] \right], \quad (14)$$

where $\delta > 0$ measures the value the Japanese government places on consumer surplus in relation to Fuji's profits. Finally, the payoff to the WTO at status quo is:

$$\alpha_{US}\pi_K^* + \pi_F^* + CS^* = \alpha_{US} \left[\frac{(A+C_F-2C_K)^2}{9} \right] + \left[\frac{(A+C_K-2C_F)^2}{9\theta} \right] + \left[\frac{2A-C_F-C_K}{3} \right] \left[\frac{A^2-AC_K-AC_F-2C_F^2-2C_K^2+5C_FC_K}{18\theta} \right], \quad (15)$$

where $\alpha_{US} > 0$ is a scale representing the WTO's interpretation of what constitutes a trade dispute within its mandate. If α_{US} is set to 1, the WTO views the dispute as an issue completely

related to trade; if α_{US} is set to 0 the issue is seen as domestic and outside its mandate. The lower α_{US} the more willing the WTO is to view potentially domestic issues as trade related, therefore enabling the US's claims to be heard. The status quo payoffs denoted above are representative of the asymmetric competition between Kodak and Fuji without any action taken.

In bilateral negotiations at decision node 2, if the United States threatens Japan with trade sanctions, Japan is forced to make a decision between conceding to the demands of the United States or refuse the demands and further the dispute, illustrated by decision node 4 in Figure 1. If, in response to the United States' threat of trade sanctions, Japan chooses to concede to the United States, the competition in the Japanese photo film and paper market is equalized. I make the assumption that the United States' request would be for Japan to change its regulation of its market so that Fuji would no longer have an advantage in distribution and product placement.¹⁰ The home country advantage to Fuji is denoted by θ in the initial demand function. In the newly created symmetric market, $\theta = 1$ and $C_F = C_K$ in order to eliminate the home country advantage. The profit functions for Kodak and Fuji in the symmetric market are equal:

$$\pi_K^S = \frac{(A-C_F)^2}{9} = \pi_F^S, \quad (16)$$

where C_F now represents the cost to both Kodak and Fuji. Equalizing the cost to Fuji and Kodak and eliminating brand favoritism impacts the consumer surplus of the Japanese consumers in the photo film and paper industry. I make the assumption that equalizing the market will decrease prices and increase output therefore having a positive effect on consumer surplus. The consumer surplus under a symmetric market where $\theta = 1$ and $C_F = C_K$ is represented by:

¹⁰ As noted in Chapter 1, Kodak argued that its product was not being advertised or distributed at the same level as Fuji, which was creating a severe disadvantage for Kodak. Kodak also argued that its wholesale prices were much lower and that the Japanese government was forcing price matching regulations on Kodak's products making it impossible for Kodak to compete with Fuji, which already had the brand favoritism of Japanese consumers.

$$CS^S = \left[\frac{A-C_F}{3} \right]^3. \quad (17)$$

Given the symmetric profits to Kodak and Fuji, the payoff to the United States under symmetry is:

$$\pi_K^S = \frac{(A-C_F)^2}{9}. \quad (18)$$

The payoff to Japan under symmetry is:

$$\pi_F^S + \delta CS^S = \frac{(A-C_F)^2}{9} + \delta \left[\frac{A-C_F}{3} \right]^3. \quad (19)$$

Finally, the payoff to the WTO under symmetry is:

$$\alpha_{US} \pi_K^S + \pi_F^S + CS^S = \alpha_{US} \left[\frac{(A-C_F)^2}{9} \right] + \frac{(A-C_F)^2}{9} + \left[\frac{A-C_F}{3} \right]^3. \quad (20)$$

The WTO does not move at this subgame, but in order to complete the model its payoff must be considered.

If, in response to the threat of trade sanctions, Japan chooses not to concede, it would have to fight the United States through more bilateral negotiations and take the chance of trade sanctions being implemented on both sides. Entering into this sort of trade dispute is extremely costly for both parties and therefore is rarely a method recommended or supported by countries. In order to simplify this model, I make the assumption that if the two countries enter into a trade dispute bilaterally the United States will win, creating symmetry in the market. This is a reasonable assumption given the history of disputes between Japan and the United States as I explain more thoroughly in Chapter 1. If, however, Japan does choose to engage the United States bilaterally in a trade dispute, the payoff for the United States would be measured by the

profits to Kodak at symmetry minus the large cost incurred by Kodak and the United States government:

$$\pi_K^S - K = \frac{(A-C_F)^2}{9} - K, \quad (21)$$

where K is the large cost incurred by Kodak and the United States in order to participate in the dispute. The payoff to Japan under the same situation would be measured by the profits to Fuji in a symmetric market plus the consumer surplus to the Japanese consumers in a symmetric market minus the cost incurred by Fuji and the Japanese government,

$$\pi_F^S + \delta CS^S - K = \frac{(A-C_F)^2}{9} + \delta \left[\frac{A-C_F}{3} \right]^3 - K, \quad (22)$$

where K represents the cost incurred by Fuji and the Japanese government. The payoff to the WTO when Japan and the United States take part in a trade dispute is measured by the world welfare. The world welfare is measured by the payoff to United States plus the total payoff to Japan:

$$\alpha_{US} \pi_K^S + \pi_F^S + CS^S - 2K = \alpha_{US} \left[\frac{(A-C_F)^2}{9} \right] - K + \frac{(A-C_F)^2}{9} + \left[\frac{A-C_F}{3} \right]^3 - K, \quad (23)$$

where K represents the cost incurred by the United States and Japan. I do not differentiate between the cost incurred by the United States or Japan, but rather just make the assumption that there is a large cost incurred by both. Therefore, the WTO recognizes the large cost incurred by both countries in its payoff.

At decision node 1, if Japan responds passively to the original action by the US, the United States is forced to make the next move, illustrated by decision node 3 in Figure 1. At decision node 3, the United States can concede its demands to the uncooperative Japan or it can

choose to use the WTO DSM. If the United States concedes to Japan, the market will maintain the status quo. At status quo, the payoffs to the United States and Japan are represented by (13) and (14), respectively. If the United States instead chooses to use the WTO DSM, the result of the dispute becomes dependent on the preferences of the WTO. The WTO as a world organization seeks to maximize world welfare. The preferences of the WTO are represented by:

$$\alpha_{US}\pi_K^S + \pi_F^S + CS^S = \alpha_{US} \left[\frac{(A-C_F)^2}{9} \right] + \frac{(A-C_F)^2}{9} + \left[\frac{A-C_F}{3} \right]^3, \quad (24)$$

where α_{US} is the weight that measures the WTO's understanding of what constitutes a trade dispute, that is, the interpretation of GATT article XXIII as it applies to the dispute. I make the assumption that the WTO places equal weight on the profits to Fuji and consumer surplus.

If the WTO rules in favor of Japan, the market will stay at status quo, the payoffs to the United States, Japan and the WTO are represented by (13), (14) and (15), respectively. If the WTO rules in favor of the United States, Japan will be forced to change its market structure in order to equalize the costs and market opportunities between Kodak and Fuji. Under the equalized market, the payoffs to the United States, Japan and the WTO are represented by (18), (19) and (20), respectively.

The above equations explain all the possible payoffs to the United States, Japan and the WTO given any resolution to the trade dispute. Given the conditions described above and the extensive form game illustrated in Figure 1, I use backward induction to determine the equilibrium path of play for countries faced with this type of dispute.

In order to determine the equilibrium path of play for a dispute of this type, I examine the two possible cases presented to Japan. To begin backward induction of the first case of bilateral

negotiations, I look at decision node 4. Here Japan is forced to make a decision between fighting and conceding to the United States. The payoff that Japan faces if it chooses to fight the United States is represented by (22). The payoff Japan faces if it concedes to the United States is given by (19). Given these two possible sets of payoffs, Japan would unambiguously choose to concede to the United States without a fight. At this point we reach decision node 2. The United States must choose between conceding to Japan and reaching its status quo payoff (13) and threatening Japan with trade sanction and reaching symmetric payoffs (18). Given that the United States knows that under pressure of threat Japan will concede to its wishes, the US will always threaten Japan because the payoff to the United States at symmetry (18) is higher than the payoff at status quo (13).

In order to consider the second case where the WTO's DSM is called upon, I begin backward induction at decision node 5. At this point, the WTO has been employed and is forced to choose between ruling in Japan's favor and thus leaving the market at the status quo (15), and ruling in the US's favor and thus creating a symmetric market (20). The decision of the WTO is dependent upon α_{US} , the WTO's interpretation of GATT article XXIII as it relates to the dispute. Given the payoffs established previously for the WTO at status quo (15) and in a symmetric market (20), the WTO would chose to rule in favor of Japan when:

$$\alpha_{US}\pi_K^* + \pi_F^* + CS^* \geq \alpha_{US}\pi_K^S + \pi_F^S + CS^S, \quad (25)$$

where $\alpha_{US}\pi_K^* + \pi_F^* + CS^*$ represents the total surplus (world welfare) at the status quo and $\alpha_{US}\pi_K^S + \pi_F^S + CS^S$ represents the total surplus (world welfare) for a symmetric market.

Solving the above inequality for α_{US} illustrates the willingness of the WTO to rule the dispute as trade related in terms of the profits to Kodak, Fuji and consumer surplus:

$$\alpha_{US} \leq \frac{\pi_F^S - \pi_F^* + CS^S - CS^*}{\pi_K^* - \pi_K^S} \equiv \hat{\alpha}_{US}. \quad (26)$$

The sign of the inequality reverses because $\pi_K^* - \pi_K^S < 0$. The profits to Kodak under symmetry are greater than the profits to Kodak at the status quo because the consumer preference for Fuji has been eliminated and the costs have been equalized.

The condition described above, illustrates a defined cutoff where the WTO would rule in favor of Japan rather than the United States. Given this condition, the higher $\hat{\alpha}_{US}$ is, the more likely it is that the WTO rules in favor of Japan. Intuitively this makes sense because a higher $\hat{\alpha}_{US}$ is a less stringent condition on (26), which means that the WTO understands GATT article XXIII to encompass fewer domestic issues. A series of comparative static exercises on equation (26), which describes the likelihood of a ruling by the WTO, shows what economic conditions would lead the WTO to rule in favor of Japan. A summary of the effects that changes in these variables have on the WTO's ruling is provided in Table 1 below.¹¹

¹¹ Derivatives in Appendix 1.

Table 1: Partial Derivative of α_{US} with respect to:

Differentiate α_{US} with respect to:	Differentiate α_{US} with respect to each variable	Change in α_{US}	Likelihood of WTO ruling for Japan
Profits to Fuji at symmetry	$\frac{\partial \alpha_{US}}{\partial \pi_F^S}$	<0	↓
Profits to Fuji at status quo	$\frac{\partial \alpha_{US}}{\partial \pi_F^*}$	>0	↑
Consumer Surplus at symmetry	$\frac{\partial \alpha_{US}}{\partial CS^S}$	<0	↓
Consumer Surplus at status quo	$\frac{\partial \alpha_{US}}{\partial CS^*}$	>0	↑
Profits to Kodak at status quo	$\frac{\partial \alpha_{US}}{\partial \pi_K^*}$	>0	↑
Profits to Kodak at symmetry	$\frac{\partial \alpha_{US}}{\partial \pi_K^S}$	<0	↓
Change in profits to Fuji	$\frac{\partial \alpha_{US}}{\partial (\pi_F^S - \pi_F^*)}$	<0	↓
Change in Consumer Surplus	$\frac{\partial \alpha_{US}}{\partial (CS^S - CS^*)}$	<0	↓
Change in profits to Kodak	$\frac{\partial \alpha_{US}}{\partial (\pi_K^* - \pi_K^S)}$	>0	↑

Factors that increase the likelihood of the WTO ruling in favor of Japan are: an increase in profits to Fuji at status quo, an increase in consumer surplus at status quo and an increase in profits to Kodak at status quo. Factors that decrease the likelihood of the WTO ruling in favor of Japan are: an increase in the profits to Fuji at symmetry, an increase in consumer surplus at symmetry and an increase in profits to Kodak at symmetry.¹²

¹² An increase in Fuji's profits as the market is switched from asymmetric to symmetric, all else held constant, the WTO is less likely to rule for Japan. This response is consistent with the goals of the WTO, because an increase in the profits to Fuji shows that even in a changed market structure the firm is still profitable. Given an increase in profits to Fuji when the market is at status quo, all else held constant, the likelihood that the WTO would rule for Japan is increased. Intuitively, a higher level of profits for Japan at status quo creates a larger potential loss of profit if the market were forced into symmetry by the WTO ruling against Japan. Given an increase in consumer surplus in the Japanese market under symmetry, all else held constant, the WTO is less likely to rule in favor of Japan. This is consistent with the goals of the WTO: an increase in consumer surplus under symmetry signals that a symmetric market is increasing total surplus. Given an increase in consumer surplus in the Japanese market at status quo, all else held constant, the WTO is more likely to rule for Japan. Economically, this is consistent with the goals of the WTO, because an increase in consumer surplus at status quo would indicate that the asymmetric market does not have a negative effect on consumer surplus. Therefore, if the consumer surplus in the respondent's market increases

Now given our understanding of the effects that each single variable has on the way the WTO will rule, I will look at key groups of variables in order to determine how changes in relative profits and consumer surplus will affect the way the WTO will rule. A decrease in the difference between π_F^S and π_F^* means that creating a symmetric market creates a smaller decrease in profits to Fuji. If the forced change from status quo to a symmetric market has a smaller impact on Fuji's profits, while still allowing consumer surplus and profits to Kodak to increase, as described by this derivative, the WTO would be less likely to rule for Japan because overall world welfare substantially increases. An increase in the difference between the consumer surplus achieved under a symmetric and asymmetric market illustrates that a forced change in market structure creates a large change in consumer surplus. Thus, given a larger positive change to consumer surplus the WTO would be less likely to rule for Japan. A decrease in the difference between profits to Kodak at symmetry and status means that there is a smaller change in profits to Kodak when the market is forced to symmetry: the WTO will be less willing to change the market structure of Japan if the resulting increase in profits to Kodak is less. In sum, only a decrease in the difference between profits to Kodak at status quo and symmetry would make the WTO more willing to rule for Japan.

Conversely, the WTO would choose to rule in favor of the United States when the inequality in (25) is reversed. Given the reversed inequality, the lower α_{US} the more likely it

the WTO will be more likely to rule in favor of the respondent. Given an increase in profits to Kodak at status quo, all else held constant, the WTO is more likely to rule for Japan. An increase of profits at status quo illustrates the ability of Kodak to compete in the Japanese market at status quo without the need for WTO interference. Economically, this is consistent with the goals of the WTO because an increase in profits to Kodak at status quo shows that the Japanese market structure is not limiting Kodak's profits. Given an increase in profits to Kodak when the market is changed from asymmetric to symmetric, the WTO is less likely to rule for Japan. An increase in Kodak's profits at symmetry signifies the limit that the Japanese market structure was putting on Kodak at status quo. Therefore, it economically makes sense that given an increase of profits to Kodak at symmetry the WTO would be less willing to rule in favor of Japan. In sum, the WTO would be more likely to rule for Japan if: profits to Fuji under symmetry, profits to Fuji at status quo, consumer surplus at status quo or profits to Kodak at status quo increase; and less likely to rule for Japan if: consumer surplus at symmetry or profits to Kodak at symmetry increased.

will be that the WTO will rule in favor of the United States. Intuitively this makes sense because a lower α_{US} describes a situation where the WTO is adopting a broader interpretation of GATT article XXIII in order to rule on more domestic issues as they relate to trade. The economic conditions described previously that would influence the WTO's likelihood to rule in favor of Japan, are directly opposing the conditions that would make it more likely that the WTO would rule for the United States.

Given this understanding of how the WTO would rule, the United States can choose either to concede its demands for market reform or initiate the use of the WTO DSB. Given the case in which the WTO rules in favor of the United States, the US at decision node 3 would elect to use the WTO DSB. In this case, Japan at decision node 1 would be indifferent between opening discussions and taking a passive approach because the end result is a symmetric market.

Given the case in which the WTO rules in favor of Japan (26), the US at decision node 3 would be indifferent between using the WTO and conceding because the outcome would be the same. In this case Japan at decision node 1 would take the passive approach because looking ahead, either the US concedes or the WTO rules in Japan's favor resulting in a status quo decision that retains the asymmetric market.

The above model offers a way of thinking about how countries will use the WTO dispute settlement mechanism in a dispute that involves the domestic institutional structure of a trading partner. Since a dispute involving domestic institutional structure is not directly regulated by the GATT, the nation that initiates the dispute will have to use GATT article XXIII to argue its case. However, the guidelines for the application of Article XXIII are not exact which creates uncertainty for the members of the WTO. Countries involved in the dispute will have to evaluate

the likelihood of the application of Article XXIII by the WTO. Their moves will therefore be conditioned by their perception of the WTO's inclination with respect to the subject matter, within or outside its mandate.

4. Conclusion: Implications of the Model

This model of the Kodak-Fuji dispute illustrates the conditions, actions and criteria that are required in order to establish an equilibrium path of play for countries trying to penetrate an institutionally different market structures. In a model of duopolistic competition I establish payoffs for the United States, Japan and the WTO at the status quo, symmetry, and symmetry with costs. The status quo payoffs are defined by a situation in which the United States' action is unsuccessful and the institutional structure of the Japanese market remains unchanged. The symmetry payoffs are defined by a situation in which the United States successfully changes the institutional structure of the Japanese market, eliminating the consumer preference for Fuji and equalizing the costs between Kodak and Fuji. Lastly, the symmetry with costs payoffs implies a situation in which the United States and Japan take part in bilateral negotiations that result in conflict and trade sanctions. The United States achieves its goal of equalizing costs and competition in the Japanese market, but only after both the United States and Japan have incurred substantial costs.

The nature of the payoffs within the model is based on assumptions and simplifications of the players' preferences. The objective of the United States within the model is to maximize the profits to Kodak. In order to achieve a maximization of Kodak's profits, the United States seeks to have Japan's institutional structure reorganized so as to be more liberal and accessible to foreign competition. If Japan were forced to create a more liberal market structure, Kodak

would penetrate the market more easily, increasing its profits. However, while the United States wants Japan's market to be restructured, it does not want a precedent to be set that allows the WTO to interfere with the domestic affairs of sovereign nations. This is not directly considered in the model, but becomes important when the WTO has to make its final decision regarding the dispute.

The objective of Japan within the model is to maximize the profits of Fuji plus a weighted emphasis on Japanese consumer surplus. Japan wants to maintain its market structure because Japan places a heavier emphasis on producer profits than consumer surplus. The differential weighting of profits and consumer surplus is based on the interconnectedness of *keiretsu* leaders and government.

The objective of the WTO within the model is to maximize world welfare. The WTO was created to foster world welfare through multilateral trade liberalization. Its mandate does not extend to issues that fall within domestic jurisdiction, as a ruling over them would be a breach of that nation's sovereignty. The WTO DSB is made up of representatives from sovereign nations, none of whom would be willing to relinquish any of their nations' powers.¹³ In cases where the institutional structure of a nation is being disputed as a protectionist policy, the WTO's objective to increase world welfare is in contradiction to its limited ability to rule on domestic issues; it is this contradiction between the preferences of the WTO that is encompassed by the parameter alpha (α_{US} in the model). The weight denoted by alpha represents the willingness of the WTO to encompass domestic issues under GATT Article XXIII, that is, the trade-off the WTO faces between increasing world welfare and interfering with the sovereignty

¹³ The WTO DSB is "[m]ade up of all member governments, usually represented by ambassadors or equivalent" (World Trade Organization, 2010d, ¶ 1).

of nations. Since the WTO was not created to handle this type of dispute, there is not an article that directly explains how to rule in such a case. The WTO's ruling in DS44 set a precedent that allows for domestic institutional structures to be reviewed by the WTO under GATT article XXIII. Since DS44, there have been numerous rulings citing article XXIII in their initial request for consultations, which will be discussed at length in Chapter 3.

I use the framework of the dispute and the possible payoffs to analyze the dispute through a model of a sequential-move game among the United States, Japan and the WTO. Through this analysis two cases are established that create the parameters for equilibrium. If the WTO chooses to include less domestic issues in its interpretation of GATT article XXIII, the WTO will be more likely to rule in favor of Japan and the reverse is true as well. However, the way in which the WTO reaches a decision is based on economic criteria that vary depending on the situation of the specific dispute. The assumptions made about the players' objectives substantively simplify the complexity of the dispute; thus, when deriving policy implications from this model we must keep in mind that while the model provides a basis for understanding the nature of trade disputes founded on differences in institutional structure the resulting picture is not complete.

The importance of alpha within this model is of ultimate importance, but also encompasses the greatest limitations to the model. Alpha, the WTO's cutoff between what is understood to be a trade related dispute and what is left to domestic governments, is not defined by any GATT article. The uncertainty of the WTO's definition of a trade dispute vis-à-vis institutional differences yields the asymmetric information character of the dispute. There is asymmetric information between the WTO and the countries involved; neither the complainant nor the respondent knows the WTO's interpretation of Article XXIII. There is also initial

asymmetric information between the complainant and respondent stemming from the information available to each government and firm. The political nature of the WTO DSM makes the uncertainty even greater; each member of the WTO has a representative who votes on any given dispute. These representatives, change as the political administration of member countries change, limiting the predictability of the decision making mechanism.

This model is applicable to current trade policy only if we assume that the WTO will agree to hear the dispute. Given that a defined understanding of what constitutes a trade dispute does not exist, there is a risk that the dispute will be forced to be resolved through bilateral negotiations, or dropped altogether if the WTO refuses to hear the dispute on the grounds that it falls outside its mandate. While the Kodak-Fuji dispute created a precedent for institutionally based claims to be heard under Article XXIII, the WTO is not bound by this precedent to hear all future cases with somewhat similar characteristics. The non-violation complaints that are discussed in this chapter are solely institutionally based; Chapter 3 will discuss the possibility of environmental policy disputes falling within this category. Future research done on different categories of non-violation disputes could create a wider definition of disputes that would fit my model's assumptions. For instance, to create a more detailed analysis of this dispute it would be interesting to look at changes in alpha with respect to revenue and cost parameters.

The Kodak-Fuji dispute has influenced the policy decisions made by member countries in two ways: first, it established a precedent allowing institutionally based disputes to fall under article XXIII non-violation claims; second, it created a basis for how countries should structure their non-violation disputes in the future. If there is a substantial amount of evidence provided to the initiating country's government (in this case the United States) by the private complainant (Kodak), the administration should initiate a dispute by issuing an investigation (if it is the

United States, an S301 investigation would be used). Given the trend of disputes described above and in Chapter 1, it is most likely that an initial request for bilateral negotiations will be faced by an uncooperative respondent party (Japan). Under this situation, the complainant party should request that a panel be established by the WTO DSB. From this point forward, the respondent party will be unable to refuse to cooperate under the GATT agreement of 1994 and both countries will present their evidence to the DSB. Whenever the complainant cannot prove that a substantial increase in world welfare will result from a ruling in its favor, the complainant should participate in bilateral negotiations. The decision to push for the use of the WTO or the use of bilateral negotiations is based on the belief the government has about alpha which ends up determining the way both countries should design their strategies.

Studying non-traditional trade disputes is becoming more important as globalization increases trade interactions and disputes across the world. The policy implications of this model will be expanded upon in Chapter 3 in order to illustrate the benefits of using the WTO in place of bilateral negotiations; in addition, the next chapter will describe the changing definition of international trade disputes, and apply the results found in this chapter to other types of trade disputes. To exemplify the benefits of using the WTO DSM in place of bilateral negotiations, the opportunity the WTO offers to developing nations to be more influential in trade disputes will be examined.

Chapter 3

Consequences of DS44: New Definitions of Sovereignty and Trade Disputes

1. Introduction

The General Agreement on Tariffs and Trade (GATT), established in 1947, transitioned into the World Trade Organization (WTO) in 1995. The most important aspect of the transition from the GATT to the WTO consisted in the transformation of a large set of agreements (the so-called “rounds” and several sector-specific agreements), each characterized by a different group of signatory countries, into an international institution that equated membership with acceptance of all the GATT and sector-specific agreements signed since 1947. This had at least two implications of extraordinary importance for the international trade regime: it linked membership to the WTO with a uniformity of international trade rights and obligations across countries; and it allowed a super-national body to enforce the implied obligations on member countries, a power that an international organization –but not an “agreement”—can have. Thus, with the establishment of the WTO came the development of the Dispute Settlement Understanding (DSU), an international forum for the 140 member countries to bring grievances regarding actions by other member countries that violate the agreed upon terms of the organization.

The conversion of the GATT into the WTO occurred concurrently with a dramatic increase in globalization, especially technology-driven global communication and international trade. According to Director-General of the WTO Peter Sutherland, the closing of the Uruguay Round with the General Agreement on Trade in Services (GATS) and the creation of the WTO was “a universal ‘revolutionary framework for economic, legal and political co-operation,’ firmly linking the Round and its offspring, the WTO, with the much-heralded process of

globalization or 'deep integration,' which he sees as the savior of the planet" (Dunkley, 1997, p. 7). Yet, expectations on the impact of the WTO on world affairs were more mixed. According to Dunkley (1997, p.3), "prognosis regarding [the WTO's] likely impact range from a glorious new dawn of globalism and a massive stimulus for the world economy, to an economic, social and environmental disaster or the creation of a world-dominating bureaucracy" (Dunkley, 1997, p. 3). Nevertheless, there were high hopes for the future of globalization under the supervision of a world organization endowed with the mandate to implement international law on international trade matters. This was a very welcome change at the time, mostly in response to "an explosion of governmental regulatory activity for a wide range of developmental, structural, redistributive, welfare, environmental and general social purposes, much of it allegedly having direct or indirect effects upon trade" which had become prevalent during the twentieth century and "especially the post-war period" (Dunkley, 1997, p. 8). The protectionist policies that became prevalent, "though legitimate in many people's eyes, lead to what Free Traders call 'non-level playing fields', or very uneven, disrupted avenues of access to national markets, and these are claimed to be the cause of problems ranging from uncompetitiveness of particular national industries to general inefficiencies and economic stagnation" (Dunkley, 1997, p. 9). Clearly, the protectionist trade policies that were dominating the twentieth century could not survive the rapid increase in globalization. "The world trade ratio (proportion of world production traded across national borders) actually fell dramatically during the first half of the century, but has increased from about 7 percent in 1950 and 15 percent in the mid-1970s to around 22 percent" in 1997 (Dunkley, 1997, p. 19-20).

One of the most interesting consequences of trade liberalization is the increased interdependence across countries: the more countries trade with each other, the more dependent

their economies become to what happens outside their borders. Borders become increasingly porous, and the distinction between “domestic” and “foreign” policy becomes increasingly blurred. As Bown (2009, p.1) points out, “international trade disputes between countries are an inevitable feature of economic relations in an interdependent world.” Membership to the WTO gives countries the option, but not the obligation, to use the WTO for the settlement of their disputes. When a dispute arises between two member countries, each of the parties will have to evaluate whether to bring the dispute at the international forum (the WTO’s Dispute Settlement Body, or WTO DSB) or negotiate a resolution in a bilateral fashion. Acknowledging that any trade related action is not purely economic but also political, both economic and political considerations are vital in analyzing the choice of a nation to use the WTO DSB rather than a bilateral negotiation.

This chapter will discuss the politico-economic and strategic consequences of the Kodak-Fuji dispute in a climate of increasing globalization. The primary implications of the dispute surround governments’ use of dispute resolution forums, the definition of sovereignty and the current understanding of what defines a trade related issue. Increased acceptance of multilateral organizations across nations has created several options for dispute resolution, namely the WTO DSM and bilateral negotiations; the advantages and disadvantages of these options will be analyzed. In addition, the enforcement power of the WTO has changed and possibly limited the notion of national sovereignty. This change in the definition of sovereignty will be analyzed through a case study of the evolution of the European Union (EU). The definition of trade related issues, as discussed in Chapter 1, was redefined by the Kodak-Fuji dispute. The effects this change has had on current trade disputes will sum up the importance of the Kodak-Fuji dispute.

2. WTO DSM vs. Bilateral Negotiations

To examine the importance of politics in all aspects of the DSM and bilateral negotiations an understanding of developing nations' ability to use the DSM when compared with developed and institutionally sound nations is vital. Most disputes that are brought to the WTO never make it to the litigation phase; they are resolved through consultation, a process highly encouraged by the WTO. In some cases, especially when developing nations are involved, during the consultation process, the "power ratio" between members can lend itself to the resolution of disputes; and arguably its inclusion can provide a measure of this 'power ratio', as much as anything else" (Qureshi, 2003, p. 182).

Special political relationships affect the way the nations choose whether and how to use the WTO DSU (Bown, 2005, p. 12). In this section, two political relationships will be analyzed: the relationship between a developing nation and a nation supporting it through assistance funds, and the relationships between nations already involved in a preferential trade agreement (PTA) (Bown, 2005, P. 12).

A nation receiving development assistance from another nation is unlikely to issue a complaint against it, in fear of losing financial support. The direct aid given to a developing nation is an important component of their economy, sometimes even more than exports and/or imports, and developing nations are rarely willing to put that aid in jeopardy over a trade dispute. Imbalance of political and economic power gives developed and institutionally sound nations an advantage in any type of dispute. However, the inequality of power is more obvious during bilateral negotiations than when the WTO is used. Bilateral negotiations are resolved through compromise between two countries; when there is an imbalance of power the more powerful

nation typically succeeds in reaching its objective policy. The effects of a disparity in power can become evident even when both countries are fully industrialized. For example, as illustrated in Chapter 1, prior to the Kodak-Fuji dispute the United States was able to persuade Japan to concede in every single instance.

Secondly, a nation's choice of dispute mechanism will most likely be influenced by prior membership in a PTA. Given a previously established agreement there are two possible reasons that a nation would choose not to initiate a dispute through the WTO. First, there is the obvious fear of worsening the political relationship and consequently the overall trade relationship with a PTA member country. If this fear is present, the ability for one nation to influence another politically has a very important role. During political negotiations, one government has the power to convince the other that its relationship is much more important than a single dispute, which could persuade the less powerful nation not to initiate a dispute and/or to concede to the demands of the other. A country's decision to use the WTO DSM is also affected by the existence of a dispute settlement system within the PTA. Yet, depending on the conditions of the PTA, asymmetric political powers among member nations of the PTA would likely have more effect on the resolution of a dispute at the PTA level than the WTO DSM level.

Research done by Chad P. Bown for the Brookings Institute found that "there is strong evidence that potential political-economic costs of international relations make it less likely that an exporter will participate in a trade dispute in the instances in which the respondent is a politically important country to the exporter" (Bown, 2005, p. 15). Although the political aspect of the DSM is not technically recognized, it is one of the most essential considerations that nations make when deciding to initiate a complaint or not.

The political pressure of powerful trading partners is heavily influential when disputes are being argued. Political power is magnified when used outside of the WTO DSU; bilateral negotiations rely solely on political power, influence and threats, whereas the WTO DSU is based on multilaterally agreed upon rules and relies on representatives from every member country to determine the correct solution.

The Kodak-Fuji case is a prime example of the WTO DSU equalizing political power during a dispute, and validated new strategies for countries to use when initiating and participating in a dispute where there is a disparity of power. Prior to the Kodak-Fuji dispute, the United States had come out on top of all disputes between the United States and Japan, as discussed in Chapter 1. The strategy implemented by Japan in DS44 forced the United States to use the WTO DSM. This type of strategy, as outlined in the model in Chapter 2, is most beneficial when the respondent country believes that the dispute will be found to be not sufficiently trade related.

3. What is Sovereignty Today?

Member countries of the WTO have given an international organization, the WTO, an opportunity to limit and define the sovereignty of most of the world's economic powers with regards to market accessibility and trade laws. As noted by John Jackson, the definition of sovereignty has evolved over time, and what used to be considered sovereignty has changed so much that "[n]o sensible persons today would agree that such sovereignty legitimately exists anywhere in the world" (Jackson, 1999, p. 294). According to Jackson, the old definition of sovereignty "could be characterized as the nation state's power (embodied in the monarch?) to violate virgins, chop off heads, arbitrarily confiscate property, and all other sorts of colorful

actions” (Jackson, 1999, p. 294). While it is easy to agree that this is no longer the definition of sovereignty, what sovereignty is today is still up for debate. I will follow Jackson’s understanding of sovereignty, which in its essence “really refers to questions about the allocation of power; normally government decision-making power” (Jackson, 1999, p. 294). In regards to international matters and specifically the mandate of the WTO, sovereignty refers to the differentiation between individual governments’ decision-making power vis-à-vis the power given to multilateral organizations.

Globalization has amplified the magnitude and multitude of international organizations and treaties that have become part of the political and economic reality of most nations across the world. Participation in organizations and treaties is a vital aspect of international relations today for security and economic reasons, but governments must weigh the potential benefits with the potential loss of sovereignty. “That is, when someone argues that the US should not accept a treaty because it takes away US sovereignty to do so, what that person most often means is that a certain set of decisions should, as a matter of good government policy, be made at the nation state level, and not at an international level” (Jackson, 1999, 294). For the US, the potential loss of sovereign power is understood to be a negative; “[b]y way of contrast, small countries might find membership in certain types of treaty-based international institutions actually enhances sovereignty in certain real senses” (Jackson, 1999, p. 295). Being a part of a larger group that has defined standards and regulations can provide a shield to protect smaller countries from political and economic influence of larger countries. Membership in a multilateral organization can also provide legitimacy for domestic governments against powerful internal interest groups; an established multilateral treaty is harder to eliminate than domestic regulations. “For example, a dispute settlement mechanism might, in the eyes of a small country, redress some of the

imbalance of power when it comes to handling dispute or sources of tension about the way another nation has been applying its international economic policies (such as trade barriers)” (Jackson, 1999, p. 295-296). As discussed before, while the benefits of multilateral organizations are most obvious for small and developing nations, they are truly beneficial in any situation where there is a power discrepancy.

Not only did the Kodak-Fuji dispute exemplify the benefits of the WTO DSU for a less politically influential country, but also changed what is understood to be a valid trade dispute in the twenty-first century, which parallels an increase in trade and globalization. The WTO’s choice to hear the dispute with regards to Japan’s market structure legitimized a category of disputes that had been previously viewed as sovereign. As previously discussed, the institutional structure of a market is not found directly anywhere in the GATT articles. By choosing to hear the Kodak-Fuji case, the WTO DSB legitimized the WTO’s willingness to regulate the market structure of a nation when it is found to be a significant barrier to trade. In the Kodak-Fuji dispute, the Japanese market structure was not ruled to be a significant enough barrier to trade to validate a ruling for the US, however by choosing to hear the case, the WTO created a precedent for a case of that nature in the future.

4. Moving Towards Homogeneous Institutional Structures: A Case Study of the EU

The world is moving towards freer trade and formal agreements, but the institutional structure of governments and markets across the world have remained largely unchanged. The dilemma individual countries face can be understood by looking at “a classic situation represented by the prisoner’s dilemma, in which independent actions by a group of players can result in worsening the situation for all; but cooperation can prevent such a result” (Jackson, 1999, p. 296).

Cooperation and unification of trade policies are easier to obtain than the homogenization of governments, which has strong ties to each country's culture, tradition and political system. Yes, homogenization of trade and political structures is becoming more and more prevalent throughout the world, and is often led by the integration of domestic markets. A key example of this process is the establishment of the European Union (EU).

The European Economic Community (EEC) was established in 1958 primarily on economic terms, to spur cooperation among European nations as a response to the economic and physical destruction caused by WWII. "The founding document of the EEC, the Rome Treaty, specified in detail the mechanics of achieving a free trade arena and customs union" (Caporaso, 2000, p. 4). The goals of the original EEC were primarily economic, similar to the original goals of the GATT; "it suggested that countries should follow their comparative advantage, specializing in producing what they do best and then trading with others" (Caporaso, 2000, p. 4). The initial goals of the EEC were economic rather than political or social for several reasons; the six founding countries were looking for a way to increase economic growth, while social policies were still very different among countries and therefore an unlikely candidate to inspire increased cooperation (Caporaso, 2000, p. 4). But even if member countries were not initially willing to adopt any unified social policies, the EEC de facto created limitations to sovereignty with regards to the individual nations' ability to regulate their economic policy. "But the issue of whether sovereignty had been transferred to a supernational body, the Community, or was 'pooled,' that is, collectively held by an association of states that reaches decisions on specified matters by a qualified majority, was muddled by the Luxembourg compromise reached in 1966 among certain member states outside the framework of the Treaties and never accepted as legitimate by some of the other member states" (Williams, 1991, p. 156). This compromise

basically argued that there were some issues so vital to individual national interests to justify giving members veto power over EEC proposals. This ability to veto is similar to the ability of a nation to veto a decision under the original GATT agreements.

Given the similar historical foundations of the EU and the WTO, I will now focus on the EU's transformation from an "interstate treaty into something approaching a constitutional document akin to constitutions governing domestic society" (Caporaso, 2000, p. 29). This transformation began with a case brought to the European Court of Justice (ECJ) by an Italian citizen regarding his electricity bill. The dispute put the law of Italy in direct conflict with the law of the European Community; the ECJ was asked to determine how the domestic and super national laws were to be balanced. "The ECJ... argued that the member states had limited their own sovereignty by transferring powers from the States to the Community, thus binding themselves and their own nations" and making the law of the Community supreme (Caporaso, 2000, p. 31). This case is similar to the WTO DSB choice to hear the Kodak-Fuji case, because in order to do so, the DSB had to decide that the institutional structure of Japan was potentially an issue related to trade and therefore more appropriately under the jurisdiction of the WTO rather than Japan.

The homogenization of the European market has been looked at as a model for members of the WTO. "Whilst Free Traders dislike attempts to harmonize environmental standards between countries because ecological differences supposedly reflect 'natural' comparative advantage, they strongly favour harmonisation of product and process standards because these are thought to be discretionary and amendable to protectionist manipulation" (Dunkley, 2000, p. 207). Homogenizing standards of production is meant to streamline the efficiency of trade, increase information and therefore increase world economic welfare. However, in order to

homogenize many products member governments have to come to an agreement on what those standards should be. The area of largest concern surrounding harmonization of standards across members of the WTO is with respect to environmental standards. “Although the environment is not formally covered by GATT it is rapidly becoming the most ticklish issue the new WTO faces” (Dunkley, 2000, p. 213). While the Kodak-Fuji dispute represents a case focused on industrial organization, most cases brought to the WTO surrounding environmental issues, a growing concern in the world today, are argued under article XXIII of the GATT much in the same way as the Kodak-Fuji dispute was.

5. A New Definition for Trade Disputes

So, in conclusion, when does domestic regulation become an international trade issue? Two recent trade-related cases are presented. The first dispute never made it to the WTO, but rather has continued to be an issue between the United States and Mexico, both members of the North American Free Trade Agreement (NAFTA). The second dispute was issued at the level of the WTO by Indonesia against the United States, focusing on a US safety regulation that affects clove cigarettes exported by Indonesia into the United States.

The cross-border trucking dispute between the United States and Mexico illustrates three important points about trade disputes that are not argued using the WTO DSM: first, the dispute can continue forever; next, PTAs do not have the influence and enforcement power that the WTO DSM has; and finally, changing institutional standards can create severe disputes between trading partners. The cross-border trucking dispute began in 1982 under the Reagan Administration. Mexican trucks are not allowed to operate within the United States for several reasons: among them, they do not meet the environmental or safety standards required of US

truckers, and there is no way of implementing the safe driver provisions required of US truckers. “The dispute is a symptom of a broader conflict that has been brewing for years: the tension between NAFTA and the U.S. system of domestic environmental protection law” (Putnam, 2004). When the dispute was initiated in 1982, neither the WTO nor NAFTA had yet been established. The establishment of NAFTA in 1992, included the provision the US would allow Mexican trucks across the border in order to comply with the agreement’s requirement “that each member state refrain from discrimination and unequal treatment with respect to citizens of the other member states” (Putnam, 2004). As the US showed no signs of allowing Mexican trucks across the border beyond the established deadline (1995), “Mexico filed an arbitration action pursuant to Chapter 20 of NAFTA. The arbitral panel issued its opinion in the case, *In re Cross-Border Trucking Services*, on February 6, 2001. The panel agreed with Mexico, finding that the United States was in breach of its NAFTA obligations” (Putnam, 2004). Since the initial panel ruling, the United States has issued a number of appeals on several different grounds, which halted the ability of Mexican trucks to enter the United States. Among the many appeals, the most relevant for this discussion focused on the contrasting environmental standards placed on US trucks and Mexican trucks. The United States implements higher environmental standards than Mexico does. If this case would have been taken to the WTO, rather than to the NAFTA dispute resolution system, it is likely that the ruling would have been in favor of the United States. WTO provisions state: “the WTO agreements confirm governments’ right to protect the environment, provided certain conditions are met, and a number of them include provisions dealing with environmental concerns” (World Trade Organization, 2010e).

As a result of the discrepancy between the US’s environmental laws and the guidelines directed by NAFTA, Mexico implemented severe tariffs on imports from the United States as a

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