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Putting Out the Epidemic:
Factors Affecting Ratification Speed of the World Health Organization's Framework Convention on Tobacco Control

by

Spencer D. Ramsey

Dr. John Boli
Adviser

Department of Sociology

Dr. John Boli

Adviser

Dr. Frank Lechner

Committee Member

Dr. Meggan Arp

Committee Member

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Abstract

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The Framework Convention on Tobacco Control is a treaty created under the auspices of the World Health Organization to combat the growing tobacco epidemic. The treaty was opened for ratification in June, 2003, and as of March, 2012, 174 states have ratified the treaty. In this study, world-polity and world-systems theories are used to attempt to explain the speed of ratification of the WHO FCTC. World-polity theory predicts that states which are more integrated into world culture will be likely to ratify the treaty sooner than states that are not as integrated. World-systems theory holds that core countries, especially those with tobacco companies, will not ratify the treaty as quickly as the periphery because it goes against their economic interests. The linear-regression analysis shows that no single variable or group of variables significantly affects the ratification speed of the treaty. However, cross-tabulations demonstrate that states with more INGO memberships were likely to ratify the treaty sooner than others, and that core countries were likely to ratify the treaty sooner than others. These findings support explanations of the ratification speed from both world-systems and world-polity perspectives. The finding that core countries were likely to ratify the treaty sooner indicates that the tobacco companies' focus has shifted to exploiting the periphery rather than the core. This relationship results from the prevalence of stronger regulation in core states, which makes it easier for the tobacco companies to influence peripheral states. The finding that states with more INGO memberships were likely to ratify the treaty sooner shows that states that are more integrated into world culture adopt its principles faster than states which are not as integrated.

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Introduction

According to the World Health Organization (WHO), the tobacco epidemic has become one of the biggest public health threats in the world. The WHO website states that tobacco kills over five million people each year and the number is predicted to increase to eight million by 2030 (2011). The rise in tobacco use and tobacco-related deaths is partly the result of globalization. Tobacco companies have been able to use ever increasing global networks to expand into new markets, especially markets with weak tobacco control policies.

In response to the rapidly growing tobacco epidemic, the Framework Convention on Tobacco Control was created under the auspices of the WHO. The treaty was created in an attempt to standardized tobacco control around the world in hopes of ending the tobacco epidemic. Even from its conception, the FCTC was a highly supported treaty, which is demonstrated by how quickly 174 states ratified it. However, the factors that led to the rapid success of the FCTC have not been studied.

This study addresses that issue by asking the exploratory question: what factors explain how quickly after ratification became possible that a given state ratified the FCTC? I approach this question by first reviewing the history behind the FCTC to gain a better understanding of its origins. I then develop two main theories of globalization (world-polity theory and world-systems theory) that could explain the treaty's rapid acceptance. Using world-polity theory, I argue that states that are more integrated into world culture will be likely to ratify the treaty sooner than others. The main world-systems theory argument is that core states, especially those with large tobacco companies, will be likely to sign the treaty later than other countries. The study then proceeds by analyzing data for

both world-systems and world-polity theories using linear regression models and cross-tabulations.

History

The Growing Epidemic

It is evident that globalization has contributed to the tobacco epidemic. Globalization has opened up new markets to large tobacco companies, allowing them to better distribute their product. This access has resulted in three main features of the tobacco epidemic.

The first feature is the growing rate of tobacco-related deaths. Studies show that over 4 million people die each year due to tobacco-related disease. The number of deaths in 2020 is estimated to reach at least 8 million (Rabin & Sugarman, 2001). Additionally, this drastic increase in tobacco-related deaths is not just a result of population increase. When the numbers are view as percentages, the increase in tobacco-related deaths becomes more evident. In 1990, tobacco related diseases led to 6% of all deaths. Studies estimate that, by 2020, 12% of all deaths will be tobacco-related (Rabin & Sugarman, 2001).

Additionally, studies have shown a shift in tobacco sales from rich industrial countries to poor and underdeveloped countries. Although developed countries have higher cigarette sales per person, consumption has been slowly decreasing. In 1980, cigarette companies sold 2,980 cigarettes per person, but in 1990 the sales decreased to 2,590 per person in developed countries. However, in developing countries, on average sales went from 860 to 1,410 cigarettes per person in the same time frame (Rabin & Sugarman, 2001).

The second feature of the tobacco epidemic is the growing economic and political power of international tobacco companies. During the 20th century, most countries maintained a local monopoly on the national market. However, as a result of globalization, the structures of cigarette companies have changed. The global cigarette market is now dominated by three large transnational companies: Phillip Morris, British-American Tobacco (BAT), and Japan Tobacco. As these companies grew in economic power, they became able to widely distribute their product. As a result, local companies lost their monopolies in national markets. The success of these large companies resulted in rising market shares that led to local companies going out of business. When the local companies were pushed out, their connections with their governments were severed. The large tobacco companies stepped in and gained political influence to insure that regulation remained low.

Additionally, these large tobacco companies gained economic influence through the success of their product. Not only were these companies able to provide a "better" and more reliable product, they were also able to use their financial backing to more successfully market their products. This power helped promote their product and outsell local competitors (Rabin & Sugarman, 2001).

The final feature of the tobacco epidemic is the expansion of cross-border problems, which is exemplified by smuggling. Smuggling is a result of some countries having high taxes on cigarettes. States often use taxes as one approach to tobacco control. They impose taxes because they not only bring in extra revenue, but they also dissuade people from buying products. However, high taxes result in the smuggling of cigarettes across borders. Smuggling ensures that tobacco companies continue to sell their product despite high

taxes. In some cases, companies have even been found guilty of working with smugglers to increase sales in countries with higher taxes (Rabin & Sugarman, 2001).

WHO FCTC

Recognizing the drastic extent of the tobacco epidemic and the power of the tobacco industry, the World Health Organization decided to tackle the issue head-on. The idea for an international treaty was first proposed by the WHO Expert Committee on Smoking Control in 1979. The committee suggested that WHO consider creating a treaty to control the tobacco epidemic if their other efforts failed to produce results. In 1993, the subject was again broached, this time by Dr Ruth Roemer. Roemer partnered with a special WHO program to begin raising support for an international legal approach to the tobacco epidemic (WHO, 2009).

In 1994, at the 9th World Health Conference on Tobacco or Health, Roemer and Dr Judith Mackay submitted a resolution calling for WHO and national governments to create an international convention on tobacco control that could be adopted by the United Nations. The resolution passed and the mandate was added to WHO policies. This decision led the World Health Assembly to create a resolution to begin developing a framework convention on tobacco control (WHO, 2009).

In 2000, the World Health Assembly accepted the draft texts of the treaty and called for negotiations to begin on the framework convention. Finally, in 2003, the World Health Assembly adopted the WHO Framework Convention on Tobacco Control. The Framework Convention was opened for signatures from June 16, 2003 until June 29, 2004. During this period the treaty gained 168 signatories, making it one of the most widely and rapidly embraced treaties produced by the United Nations. By November 2004, 40 members had ratified, approved, or confirmed the treaty, thereby empowering the Framework

Convention to enter into force in February, 2005 (WHO, 2009). By 2011, 174 parties had ratified the Framework convention.

Since such a large proportion of states have ratified the treaty, the likelihood of ratification cannot be studied because too few countries have yet to ratify. Therefore, the issue is the time required to ratify and the question becomes: what factors explain how long after ratification became possible that a given state ratified the FCTC?

Theories

The two dominant theories of globalization are world-polity theory and world-systems theory. Although both theories attempt to explain various aspects of globalization, the theories have different notions of what factors matter most. World-polity theory asserts that there is a set of standard norms and principles that are followed by members of a global polis. However, world-systems theory emphasizes economic factors that create a world hierarchy that allows capitalists in stronger states to exploit everywhere, especially in peripheral states.

World-Polity Theory

World-polity theory is based on the principle that the world has developed into one large society into which actors have become increasingly integrated. This social system has produced a world culture which provides a set of normative principles and models that govern all members. As members become more involved in world culture, they become more aware of these principles (Boli and Thomas, 1997).

When examining globalization, conventional thinking tends to emphasize how world-cultural principles reflect the economic and political interests of the more dominant states such as the United States and Western European countries. However, world-polity

theory recognizes that dominant states are also subject to world-cultural processes. As a result, these dominant states have less control over global development than other theories suggest. Additionally, world-polity theory emphasizes that factors such as "religious beliefs, humanitarian sentiments, and faith in universalism, compassion, conscience, paternalism, fear, prejudice, and compulsion to proselytize" are quite often the basis of these world culture principles (Nadelmann, 1990). The principles that reflect universal morals are more readily adopted into this world culture.

Some of most prominent carriers of world culture are international non-governmental organization (INGOs). INGOs aim to increase progress through spreading the principles of world culture, which help to maintain and expand modernity. These organizations seek to reflect and enact world culture, which allows them to instill their beliefs in individuals and institutions with the support of the public and government institutions. INGOs also gain support for their endeavors by providing arguments showing why world-cultural principles are beneficial to states, individuals, and institutions. INGOs hope that as members become aware of world culture, they are more apt to follow its norms.

Once world cultural principles become commonly accepted, they are expanded as governmental and international organizations begin lobbying for certain law and policy changes. Prohibition movements, such as the global anti-tobacco movement, are one example of this process. Prohibition movements develop in order to provide individuals with security, order, and justice (Nadelmann, 1990). These movements seek to legitimize world cultural principles through their incorporation by authoritative institutions such as states. As more states begin to adopt these principles, the movement grows stronger.

In his article, Nadelmann states that prohibition movements can be broken down into five stages. In the first stage, society does not object to the action as long as it is done in moderation and under certain conditions. However, during the second stage, the action is deemed to be evil and a problem. In this stage, most governments begin to discourage and restrict the activity. The third stage is marked by proponents of the movement requesting action to suppress the activity and sometimes criminalize it. In order to expedite the process and continue gaining more support, proponents of the movement, such as INGOs, take further actions, including educational and organizational efforts. As a result of these requests, international conventions are created to work with governments to continue promoting the ideals of the movement.

If the third stage is successfully accomplished, the fourth stage of legitimation begins. In this stage, the activities are finally criminalized and can be policed throughout the world. International organizations and conventions are then formed to manage and enforce these new laws. These organizations must then create methods for dealing with deviants, such as states that refuse to conform. The final stage is achieved when the activity is greatly reduced. When the movement reaches this stage, the activity only persists on a small scale and in obscure locations.

When looking at the global anti-tobacco movement from the world-polity perspective, it is important to study the movement's guiding principles. These guiding principles are represented by the FCTC, which is the result of the cooperation of numerous proponents of the movement. Predictions about this movement can be made by analyzing the principles of the FCTC and comparing them to other world-cultural principles.

When studying the principles of the FCTC, two underlying ideals are the basis for every principle: basic human rights and world citizenship. The Universal Declaration of Human Rights (UDHR) asserts, "all human beings are born free and equal in dignity and rights" (1998). The United Nations composed this doctrine to identify the rights that all human beings are entitled to from birth. This doctrine allowed for these universal rights to be globally disseminated and adopted.

The FCTC, like most prohibitive movements, arose in response to an activity that was infringing on the security and rights of individuals. The FCTC states in its preamble that "the parties to this convention… recalling also the preamble to the Constitution of the World Health Organization… states that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being" (2003). This principle directly reflects Articles 3 and 25 of the UDHR. Article 25 states, "everyone has the right to a standard of living adequate for the health and well-being of himself and his family" (1998). This principle is also exemplified in Article 12 of the FCTC, which states that each party shall strive "to promote public awareness about the health risks of tobacco consumption and exposure to tobacco smoke, and about the benefits of the cessation of tobacco use."

The principles that were defined in the Universal Declaration of Human Rights signified the realization of a higher moral code that every person was a part of. This realization developed into the notion of world citizenship. While world citizenship entails a broad range of rights, as illustrated above, it also entails obligations. Among them are the expectations that world citizens will work to improve humanity, act on behalf of others,

and endeavor to help individuals (Boli and Thomas, 1997). These expectations are crucial to the FCTC principles.

The principle of working for the betterment of humanity is seen throughout the FCTC. It is exemplified in the FCTC's embodiment of basic human rights in its guiding principles. By basing its guiding principles on these rights, the Convention is seeking to improve humanity through ensuring that these rights are upheld for all individuals.

Additionally, the FCTC has an overarching theme of continual progress, which falls in line with the principle of working for the betterment of humanity. In the introduction, Article 2 states that "parties are encouraged to implement measures beyond those required by this Convention… nothing shall prevent a Party from imposing stricter requirements" (2003). This principle is just one example of how the FCTC pushes for progress. The Convention is stating its support of Parties (states) taking the necessary steps to accomplish its main goals, which are to "protect present and future generations from the devastating health, social, environmental, and economic consequences of tobacco consumption and exposure to tobacco smoke" (2003).

This principle is also exemplified by the continual progress called for in Article 20. This article calls for continuous research and surveillance in order to compile more data on the consequences of tobacco use and the benefits of its regulation. This data can then be used to further aid the anti-tobacco movement.

Additionally, the world citizenship principle of acting on behalf of others is evident throughout the FCTC. Article 16 of the Convention exemplifies this principle. This article declares that members must act to protect children through both preventing tobacco sales to minors and holding violators accountable for their actions. This article shows that the

Convention is acting on behalf of others, and working to protect those who are unable to protect themselves.

Finally, in accordance with another world citizenship principle, the FCTC is seeking to help individuals. This principle is specifically addressed in Article 14, which declares that party members must act to reduce tobacco dependence and promote cessation among individuals. The Convention not only requires members to promote the benefits of a tobacco-free lifestyle but also to provide treatment for those who are dependent on tobacco. Furthermore, the FCTC seeks to help individuals who are economically affected by the anti-tobacco movement, such as tobacco growers. This call for aid is demonstrated in Article 4.6, which states the Convention's understanding of the importance of "assistance to… tobacco growers and workers whose livelihoods are seriously affected as a consequence of the tobacco control programs" (2003).

The three essential principles embodied by the world citizenship construct are all exemplified by the Convention's main goal, which is to "protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke." These goals were decided upon because they would help individuals achieve a higher standard of health.

The FCTC is the first treaty to be drafted by the WHO. The WHO cannot force member states to sign the treaty or ratify it; acceptance and implementation are obligatory. This lack of authority shows how the FCTC relies on the principle of rational voluntaristic authority (Boli and Thomas, 1997). The lack of coercive authority is addressed in the treaty's foreword, which states, "Member States that have signed the Convention indicate that they will strive in good faith to ratify, accept, or approve it, and show political

commitment" (2003). This statement shows that the WHO recognizes its lack of coercive power and that Member States must voluntarily accept its authority. Furthermore, because of the WHO's lack of power, Member States must use their authority to uphold the principles of the Convention.

Due to the lack of power possessed by the WHO and its FCTC, the Convention must embody principles and ideals that Member States will accept and adopt. As stated before, world-polity theory asserts that individuals and states are more willing to adopt these principles if they fall in line with world-cultural principles. Normally, a movement's ideals and principles are also strengthened when they are based on scientific evidence. In order to convey this legitimacy, the FCTC committee members relied on scientific evidence collected by external groups when drafting the treaty. The importance of possessing this scientific support is illustrated by the fact that the Convention begins the foreword by asserting that the treaty is evidence-based.

Additionally, this belief in the importance of empirical data is conveyed throughout the Convention. The importance of scientific data is especially evident in Article 20. This article requires members to start gathering data in order to improve the methods of the Convention and help advance the anti-tobacco movement.

The inclusion of these principles shows that the anti-tobacco movement is based on important principles of world culture. Therefore, world-polity theory predicts that, once actors are aware of the anti-tobacco movement, they will be inclined to integrate it into their ideology as they do with other forms of world culture. As a result, members who are more conscious of and integrated into world culture will be the first to join in. Conversely, members who are not as deeply involved in world culture will join late or not at all.

World-Systems Theory

World-systems theory asserts that economics is the driving force behind globalization. Immanuel Wallerstein (2004) shows how the world-system developed as capitalism expanded. As European capitalism began to expand through trade and conquest, capital accumulated rapidly in these countries. Wallerstein asserts that, as a result of competition for capital, the world became increasingly connected through economic interaction. Consequently, wealth continued to accumulate in "core" European countries. This wealth allowed them to set up a division of labor that enabled them to exploit weaker countries. World-systems theory asserts that the effects of this division of labor are still relevant in modern society, in that states can be grouped into three zones of the world-economy: core, semi-peripheral, and peripheral zones.

Core countries are centers of accumulation of wealth and power. Other characteristics of core states include that they are industrialized, have relatively strong states, and have strong military forces. These states are able to use their power to control weaker states in order to advance their interests (Wallerstein, 1974). The United States, the United Kingdom, Japan, and France are a few examples of modern core countries.

Peripheral countries are on the other end of the spectrum. They are poor countries that lack strong centralized governments. Peripheral countries are not industrialized and they focus on labor-intensive production. This type of production results in core countries exploiting the periphery for its raw materials and natural resources (Lechner, 2001). Afghanistan, Cambodia, Ecuador, and Vietnam are all examples of modern peripheral countries.

Semi-peripheral countries are between the core and periphery. These states have characteristics of both the core and periphery and act as a buffer between the two zones. Semi-peripheral states are stronger than peripheral states and do not rely on the core as heavily. Even though these states are stronger than the periphery, the semi-periphery is still exploited by the core (Lechner, 2001). Modern examples of semi-peripheral countries include Algeria, Chile, Cyprus, and Sri Lanka.

World-systems theory holds that state policy is dominated by capitalist interests, so capitalist core states use their power to create structures that protect and promote their economic dominance. In order to maintain their dominance, capitalists in core countries exploit weaker countries, thereby reinforcing the social structure. Since world-systems theory asserts that power is held by dominant economic entities, states are not the only power actors in the system. Transnational corporations (TNCs), most of which are based in core countries, are the principal organizational form of global capitalism. As a result of the TNCs' power, states generally act to promote the interests of these large organizations

Since world-systems theory focuses on economic factors, it tends to minimize the effects of cultural globalization. Wallerstein (2004) asserts that culture is just another tool of the dominant capitalists, used to legitimate and reproduce the system. Peter Taylor (1996) advanced this idea by claiming that, while culture is always present in the world-system, the dominant culture at any time reflects the culture of the powerful core countries, or the single dominant hegemon. This focus on politics and economics, combined with an instrumental view of culture, places the theory in opposition to world-polity theory.

World-systems theory predicts that core countries, and especially the ones with tobacco companies (which are large TNCs), will act out of self-interest and exploit weaker countries. With the rise of scientific evidence revealing the adverse effects of smoking, core countries are more likely to put regulations on tobacco domestically. These regulations help to decrease the social costs of tobacco, such as increased healthcare costs. In response to these increasing regulations and anti-tobacco sentiment, global tobacco companies seek out new markets. These new markets tend to be in semi-peripheral and peripheral countries. Since these new markets do not have strong regulations and the adverse effects of tobacco are often minimized by the core, tobacco sales are higher in these zones. Additionally, world-systems theory predicts that core states will promote exploitation of these countries because it is to their economic advantage to do so.

As stated above, world-polity theory predicts that these powerful countries that are deeply in tune with world culture would join in the fight against tobacco. The theory also asserts that these countries will help to protect weaker states because of their belief in world-cultural principles such as basic human rights. However, world-systems theory asserts that entities will only act in ways that benefit their economic interests. Leslie Sklair (2002) supports these predictions through his discussion of human rights. Sklair asserts that First World governments often overlook human rights violations of other states because of national interests. These motives arise from the capitalist nature of the world-system.

Hypotheses

These theories of globalization lead to the question of what factors influence how rapidly a country ratifies the convention. When examining the question, it is evident that

both world culture and economic interests greatly affect a country's eagerness to ratify. Due to the complexity of global relations that arise from these factors, it is not possible to explain the trends of the anti-tobacco movement with just one theory. For this reason, I have formulated two hypotheses concerning the length of time for a country to ratify the treaty.

Hypothesis 1: World-polity theory predicts that countries that are more integrated into, or exposed to, world culture will be more likely to ratify the convention, and will do so earlier than other countries.

Hypothesis 2: World-systems theory predicts that core countries that have large tobacco TNCs and markets will be less likely to ratify the convention and will do so later than other countries.

Even though my hypotheses involve both the likelihood a state will ratify as well as how fast they will, this study only examines the speed or rapidity of ratification since so few states have yet to ratify.

Research Methods

Dependent variables

For the dependent variables, I collected data on states' commitment to the treaty through ratification. The data came from the WHO FCTC website, which records the dates when states sign and ratify the treaty. In order to change this data into quantifiable variables, I first developed a simple coding system assigning each country a value of 1 if the country had ratified the treaty and a value of 0 if it had not ratified the treaty. I intended to analyze ratification with several independent variables using a logistic regression model to find out who has and has not ratified. However, I found that only 20 countries have not ratified, while 174 countries have ratified. This means that only 10% of countries have not

ratified, and this proportion is so low that a regression analysis of this variable would not be appropriate.

A better approach is to analyze factors affecting how quickly a country ratified the treaty. I decided to generate several different dependent variables related to this concept. The first is a simple time variable: once the treaty was available for ratification, how many months later did each country ratify? The first ratifier was Norway, on June 16, 2003, which was immediately after the treaty was available for ratification. Next we find Malta ratified the treaty on September 24, 2003, which was three months after the treaty was available for ratification. Another example of an early ratifier was Hungary, which ratified the treaty on April 7, 2004, 10 months after it was made available. Two states that were late to ratify the treaty were Côte d'Ivoire and Turkmenistan. Côte d'Ivoire ratified the treaty on August 13, 2010, which was 86 months after the treaty was made available. Turkmenistan ratified the treaty on May 13, 2011, 95 months after it was made available. For countries that have not ratified as of the period of data collection (March 2012), I excluded them from the analysis to reduce the skew they caused. The number of months was then subtracted from 100. This procedure simply inverts the variable, so countries that ratified earlier have higher values than countries that ratified later. This inverted variable is easier to interpret in the regression analyses that follow.

The second dependent variable was created through a grouping process. I chose to use a grouping process because the variable showing the number of months is only quasi-continuous variable and needed to also be treated as a categorical variable. I created this categorical variable in two versions, the first of which was created by dividing the countries into three equal groups of 58 countries: early ratifiers, mid-ratifiers, and late ratifiers. I

divided the countries into three groups of 58 to insure that each group would have enough cases to have significant results in the cross-tabulation tables. The first group contained all countries that ratified from June 2003, until February 2005, when Egypt ratified the treaty. The second group began with Oman's ratification in March 2005, and continued until November 2005. The last group began with the Lebanon's ratification of the treaty in December 2005, and continued until Saint Kitts and Nevis ratified the treaty in June 2011.

However, an equal division of the countries does not account for "natural" breaks in the data. Natural breaks are significant lengths of time that are observed between two successive states' ratification of the treaty. A good example of a natural break is the full month between Djibouti's ratification and Israel's ratification (see the list of ratification dates in Appendix 1). This break provides a natural separation between ratification groups but is overlooked when the variable is simple divided into 3 equal groups. That is why I created the second version of the variable, which is based on natural break points. The first group of early ratifiers in this version includes all states that ratified from June 2003, until September 2004. The second group begins with France in October 2004, and includes all states until Djibouti's ratification in July 2005. The third group includes all states that ratified between Israel in August 2005, and Georgia in February 2006. The final group begins with São Tomé's ratification in March 2006, and includes the rest of the states that ratified after this date. Separating the states into four groups allowed me to create divisions at significant breaks while maintaining a similar number of states in each group (32, 45, 49 and 48) and keep enough cases per group to still have meaningful analyses. These dependent variables were then analyzed using cross-tabulations.

Independent variables

For my analysis, I used three types of independent variables to test the different theories. The first type includes variables that test world-systems theory, the second type includes variables that test world-polity theory, and the third type consists of control variables that are not directly theorized. I collected data from 2000 to 2009. But for the analysis I only used data from 2005 because it was roughly the mid-point of the crucial time period for the FCTC including the preparatory phase before 2003, when it became available for signature and ratification, through Saint Kitts and Nevis' ratification in June 2011.

World-Systems Variables

World-Systems theory predicts that core countries and countries with large tobacco industries will ratify the treaty more slowly than peripheral countries and countries with smaller tobacco industries. In order to test this theory I collected data on countries' world-systems position as well as several tobacco variables relevant to each country, including the retail value of tobacco, the amount of tobacco farm production, the amount of tobacco products produced, and consumer expenditure on tobacco products. These variables were chosen because each one covered a different section of the tobacco market. This data was collected from Passport Global Market Information Database (GMID) (Euromonitor International, 2011).

(1) World-systems position: This variable categorizes countries into core, semi-periphery, and periphery. The ranking breaks down the cases into 42 core, 21 semi-peripheral, and 77 peripheral countries. The data was collected from Clark and Beckfield's study (2009). This study is a re-examination and expansion of Snyder

and Kick's 1979 study, in which they include trade in their measure of world-systems position.

(2) World Trade: This variable measures the proportion of world trade, both import and export. I calculated the data by dividing each country's by the total world trade. This data provides another measure for ranking all the countries economically. This variable provides rankings that are similar to world-systems position, but since it is a continuous variable it can be used for linear regression analysis. To account for the small cases in the variable I multiplied each case by one million in order for the variable readable. The data was collected from the World Trade Organization's international trade and tariff database (2012).

(3) Retail value of tobacco: The first tobacco variable I collected was the retail value of tobacco products, which is measured by current market prices. Due to the skewed distribution, I took the log base-10 of the variable. It was collected from the GMID (2011).

(4) Tobacco farm production: Tobacco farm production is the amount of tobacco that is produced in each country, measured in tons. This variable was a good measure for examining the effect of the farming industry on states' eagerness to ratify the treaty. This variable was also logged due to its skewed distribution. The data was collected from the GMID (2011).

(5) Tobacco products production: This variable measures the amount of tobacco products that a country produces in a year, including cigarettes, cigars and cigarillos, and smoking tobacco. This variable was measured with both fixed current prices and as a proportion of total GDP. The purpose of measuring production as a proportion

of total GDP was to capture the size of the industry relevant to the entire economy. Due to the proportion being such a small variable, I multiplied it by one million so that the variable was readable. To further even out the distribution, I took the log of each measurement. The data was collected from GMID (2011).

(6) Consumer Expenditure: The last tobacco variable I collected was consumer expenditure, or the amount spent on tobacco products. This variable provided another measure of the size of the tobacco industry. As with the previous variables, I took the log of consumer expenditure to get rid of the skew in the distribution. The data was collected from the GMID (2011).

World-Polity Variables

World-polity theory predicts that more integration into world culture leads to faster ratification of the treaty. In order to test this theory, I needed to collect data on integration into world-culture, which is indicated by INGO involvement, human rights treaty ratifications, and involvement with world trade.

(1) INGO involvement: I first collected data on INGO involvement in each country. This variable looks at the number of INGOs that have members in each country. It is often used as an indicator of how exposed the citizens are to world culture (Beck et al., 2009). Therefore it is expected that as INGO membership increases, so does a country's level of integration into world culture. Due to the skewed distribution of the data, I took the log of the variable. This data was collected Tsutsui and Wotipka's study (2004).

(2) Human rights treaty ratifications: The number of human rights treaties each country has ratified is a good measure for involvement in world culture because

human rights are one of the bases of world culture. As a result, more human rights treaty ratifications usually indicate more involvement in world culture. Additionally, this variable is also a measure of commitment to human rights. Since the FCTC clearly reflects important human rights principles more committed countries should ratify more quickly. I collected this data from Elliot's study of human rights (2008).

(3) Trade as a proportion of GDP: This variable measures a state's openness to trade. Involvement in world trade indicates a general involvement with world society and world culture. This data was collected from a study by Heston et al. (2011).

Control Variables

The variables that I controlled for were national wealth, democracy, and dominant religion.

(1) National wealth: This control variable was measured by GDP per capita. In order to reduce the skew caused by countries such as the United States, I took the log to give the data a normal distribution for analysis. This variable was used as a control because presumably richer countries are less dependent on their tobacco industries and therefore are able to easily implement tobacco control policies. The data for GDP was collected from United States Department of Agriculture's International Microeconomics Data Set (2011).

(2) Democracy: This control was measured using the Polity score collected from the Polity IV Project data set (Marshall et al., 2010). The Polity score is calculated from both the Autocratic and Democratic scores. Both the Autocratic and Democratic scores are based on additive scales ranging from 0-10. The Polity score is

calculated by subtracting the Autocratic score from the Democratic score. The resulting scale ranges from -10 (strongly Autocratic) to 10 (strongly Democratic). This calculation ranks states on a scale ranging from strongly democratic to strongly autocratic. Controlling for level of democracy is relevant because a higher level of democracy should result in faster ratification, given that most people in the world recognize the harmful effects of tobacco use and second-hand smoke.

(3) Dominant religion: The data for this control was collected from the World Christian Database (2004). The dominant religions measured were Catholic, Protestant, Muslim, and other. The variable was then coded with dummy variables so that, for example, the Muslim variable was coded 1 if the dominant religion of the country was Islam. Additionally, the religions were coded for a combined variable, for the cross-tabulations, in which countries were assigned 1 through 4 depending on their dominant religion (Protestants: 1, Catholic: 2, Muslim: 3, and Other: 4). The measures for each dominant religion are 39 Protestant, 72 Catholic, 46 Muslim, and 34 other. I controlled for religion since more individualistic countries should be more concerned about protecting the individual. Therefore Protestant countries should ratify the treaty sooner, followed by Catholic countries given the general individualism of Christianity. Then Muslim countries should be later because they are more collectivist societies.

Table 1 depicts the basic statistics for all the continuous variables, including mean, median, standard deviation, minimum values, and maximum values. The variables are not in the logged forms that I used for analysis.

Table 1: Basic Statistics for Variables Used in Analysis

Dependent Variables	Mean	Median	Std. Deviation	Min	Max
Ratification Score	62.4	71	27.8	4	100
Independent Variables					
World Trade	4209.2	373.8	13864.7	>0	123397.1
Retail Value of Tobacco	6235.7	1474.1	14331.7	59.2	83908.7
Farm Production	53.2	4.3	225.1	0	2685.7
Tobacco Products Production	5397.7	1092.4	10719.7	0.3	54250.5
Tobacco Products Production as a Proportion of GDP	973.5	637.7	1243.6	0.1	8317.2
Consumer Expenditure	4933.1	950.5	10263.7	12.5	71055.5
INGO Involvement	920.7	527	992	40	4184
Human Rights Treaty Ratification	23.8	23	11	1	47
Trade/GDP	93.19	85.4	48.54	2	442.5
National Wealth (GDP/capita)	8632.9	2861.9	13561.4	35.7	75229.9
Democracy	3.5	6	6.5	-10	10
*These are the unlogged versions of the variables that were not used in analysis.					

Data Analysis

For my data analysis, I utilized two different methods. The first method was linear regression in which I used the ratification score as my dependent variable. The second

method was cross-tabulations. For the cross-tabulations I used simplified versions of the dependent and independent variables produced by grouping them into three or four groups ranked from high to low, as explained above. The first version has 58 countries in each group, which I call the early, mid, and late ratifiers. The second version, based on natural breaks in the ratification process, has 32 states in the first group, 45 states in the second group, 49 states in the third group, and 48 states in the final group.

Linear Regression

For my regressions, I regressed the ratification score (months to ratify subtracted from 100) for my dependent variable on world-systems and world-polity variables. I used several combinations of these independent variables as well as the control variables in different models, examining the coefficients for the independent variables to determine what combination of variables produced significant results. I also examined the bivariate correlations among all the variables to check for collinearity among the independent variables. This allowed me to further examine the relationships between variables and understand the patterns of effects and check for any spurious results.

Grouping the Variables

For the cross-tabulations, I initially grouped the independent variables into three groups with equal numbers of cases, based on the cases ranked from high to low. This ensured that each group would have enough cases to make cross-tabulation analyses meaningful. However, this method also over looked large natural breaks in the variables. To resolve this issue, I created a second set of groups in which I adjusted the groups to reflect these breaks (see Tables 2 and 3). I used three groups when creating the adjusted groups, keeping in mind the necessity of having a substantial number of cases within each

group. This method worked well for all the variables except trade as a proportion of GDP and human rights treaty ratifications. For the trade variable, I could not create roughly equal group sizes based on natural breaks. However, I realized that the variable is evenly enough distributed that the original groups did not need to be adjusted. As for the human rights treaty variable, I could not create roughly equal group sizes because too many states had the same numbers of treaty ratifications.

Table 2: Groupings of World-Systems Variables for Cross-Tabulations

Variable	Equal Groupings	Adjusted
Retail Value of Tobacco (US$ mn)	0-888 (26)	0-888 (26)
	1082-2893 (26)	1,082-2973 (27)
	2973-83910 (26)	3115-83910 (25)
Tobacco Farm Production ('000 tons)	0-1.7 (42)	0-1.9 (45)
	1.8-15 (42)	2.1-17.7 (43)
	15.6-2685 (43)	20-2,685 (39)
Tobacco Products Production (US$ mn)	0-600 (17)	0-472 (16)
	612-2334 (17)	599-1877 (17)
	2362-54251 (18)	2333-54251 (18)
Tobacco Products Production as a Proportion of GDP (US$ mn)	0-378 (17)	0-378 (17)
	429-984 (17)	429-829 (16)
	988-8317 (17)	984-8317 (18)

Table 3: Groupings of World-Polity Variables for Cross-tabulations

INGO Involvement	0-302 (63)	0-329 (66)
	314-783 (63)	347-886 (65)
	794-4184 (65)	930-4184 (60)
Human Rights Treaty Ratification	-	0-19 (62)
	-	20-27 (63)
	-	28-47 (66)
Trade as Proportion of GDP (2005 constant prices %)	0-69.6 (60)	-
	70.2-102.5 (60)	-
	104-442.5 (61)	-

Tables 4 and 5 depict sample cross-tabulation tables for both ratification groupings, showing the outcomes based on my hypotheses. Table 4 shows a possible pattern consistent with the world-systems theory predictions: the majority of peripheral states are early ratifiers, whereas the majority of core states are late ratifiers. Table 5 shows a possible pattern consistent with world-polity theory: more INGO memberships (more involvement with world culture) is strongly related to faster ratification of the treaty.

Table 4: Example of Predicted Results of World-Systems Theory

	Speed of ratification			
World-system position	Early Ratifiers	Mid-Ratifiers	Later Ratifiers	Total
Core	10%	25%	65%	100%
Semi-Periphery	40%	35%	25%	100%
Periphery	65%	25%	10%	100%

Table 5: Example of Predicted Results of World-Polity Theory

	Speed of ratification				
INGO memberships	1 (early)	2	3	4 (late)	Total
Low	10%	15%	35%	40%	100%
Mid	10%	40%	40%	10%	100%
High	40%	35%	15%	10%	100%

Results

Linear Regression

For the regression analysis, I generated a series of models that use different combinations of independent variables to attempt to explain variation in the dependent variable, the ratification score (speed of ratification). Table 6 presents six models. The table's statistics include the unstandardized coefficient followed by the standard of error in parentheses. The number of cases per model as well as the R-square are included.

The first linear regression, model 1, examines the relationship between ratification score and the main world-systems variable, proportion of world trade (indicating degree of importance in the world economy), and a world-polity variable, trade as a proportion of GDP (indicating involvement in the world economy as a proxy for involvement in world society and world culture more generally). The regression model shows that there is a statistically significant effect of the proportion of world trade on the ratification score. Model 2 adds the variable of INGO memberships, another indicator of involvement in world culture. This model shows that only trade as proportion of GDP has a statistically significant relationship. The addition of INGO memberships in the regression causes world trade to lose its significance.

The next regression, model 3, includes three control variables: democracy, national wealth (logged GDP per capita), and farm production (logged). The model shows that the only variable with a significant effect on time to ratify is the democracy measure. However, this relationship loses its significance in model 4 when INGOs and Trade as a proportion of GDP are removed.

Models 5 and 6 show significant effects of both democracy and human rights treaty ratifications. However, as with the other variables, the regressions show that these variables are not consistently significant. Overall, the regressions show that none of the independent variables has a strong and consistent effect on the speed of ratification. Therefore, particular characteristics of countries do not help predict how quickly a given state ratifies the treaty. In these analyses, then, neither hypothesis 1, for world-polity theory, nor hypothesis 2, for world-systems theory appear to be supported.

Table 6:
Linear Regression Models of Factors Related to Speed of Ratification of the FCTC

Independent Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
World Trade (proportion)	4.69* (1.4)	2.09 (2.32)	1.48 (4.1)	2.09 (2.25)	2.84 (2.19)	-
Trade/GDP (proportion)	.04 (.03)	.04* (.03)	.02 (.04)	.02 (.04)	.004 (.04)	-.005 (.04)
INGOs	-	.001 (.003)	-.001 (.005)	-	-	13.15 (7.83)
Democracy	-	-	.45* (.43)	.26 (.42)	.70* (.45)	.43* (.49)
National Wealth (GDP/capita)	-	-	3.14 (6.05)	-	-	-
Farm Production	-	-	-.15 (3.15)	-.29 (2.82)	-.94 (2.78)	-1.74 (2.74)
Muslim	-	-	-	-1.02 (6.02)	-2.42 (5.93)	-.9 (5.94)
Protestant	-	-	-	12.87 (6.36)	8.51 (6.52)	9.11 (6.51)
Other Religion	-	-	-	4.84 (5.55)	2.44 (5.54)	3.2 (5.51)
HR Treaty	-	-	-	-	-.6* (.26)	-.71* (.27)
N	162	160	103	103	103	104
R-Square	0.07	0.08	0.11	0.14	0.21	0.21

*p<.05
Note: The following variables were logged: INGOs, GDP/capita, and Farm Production.

Bivariate Correlations

To understand better the lack of significant effects in Table 6, I examined the bivariate correlations among the dependent variable and the independent and control variables. Table 7 shows that the dependent variable, ratification score, has no correlations above .34 with any of the independent variables. The table also shows that several of the independent variables are highly correlated, including the two main variables of theoretical interest, proportion of world trade and INGO memberships (.78).

Table 7: Correlations Between Dependent, Independent, and Control Variables

Variables	Ratification Score	World Trade	Retail Tobacco	Farm Production	Tobacco Products (prop.)	Consumer Expend.	INGOs	HR Treaty Rat.	Trade/ GDP	National Wealth
Ratification Score	-	-	-	-	-	-	-	-	-	-
World Trade	0.18	-	-	-	-	-	-	-	-	-
Retail Tobacco	0.15	0.84	-	-	-	-	-	-	-	-
Farm Production	0.07	0.42	0.47	-	-	-	-	-	-	-
Tobacco Products (prop.)	0.06	-0.08	0.18	0.15	-	-	-	-	-	-
Consumer Expend.	0.34	0.81	0.94	0.47	0.02	-	-	-	-	-
INGOs	0.2	0.78	0.72	0.29	-0.2	0.8	-	-	-	-
HR Treaty Rat.	-0.05	0.47	-0.05	-0.01	-0.21	0.17	0.58	-	-	-
Trade/GDP	0.1	-0.01	-0.22	-0.26	0.16	-0.21	-0.11	-0.09	-	-
National Wealth	0.23	0.58	0.44	-0.03	-0.27	0.44	0.64	0.32	0.24	-
Democracy	0.2	0.26	0.22	0.008	-0.15	0.5	0.52	0.56	-0.09	0.36
signif. P<.05										
Note: the following variables are in the logged form: world trade, retail tobacco, farm production, tobacco products as a proportion, consumer expenditure, and national wealth.										

The absence of significant effects in the regression models is not surprising given the low correlations of the independent variables with the speed of ratification, in Table 7. The high correlation coefficients between several of the independent variables indicate, at the same time, that world-systems and world-polity effects are hard to disentangle. This problem is most

evident in the high correlation between INGO memberships and proportion of world trade (.78), which means that including my main indicators for world-polity and world-systems theory in the same regression model is unlikely to produce interpretable results.

Cross-Tab Tables

The cross-tabulations provide a simpler form of analysis that can be used to see whether there is any indication of support for my hypotheses. The cross-tabulations use the ratification groupings as the dependent variable as well as the world-systems and world-polity variables (Tables 2 and 3) for the independent variables. The only two variables showing significant results from the cross-tabulations are INGO memberships and world-system position (as measured by Clark and Beckfield, 2009).

The first cross-tabulation, Table 8, shows a strong the relationship between world-system position and ratification group, with core countries more likely to ratify quickly than others, which goes against my original hypothesis. The pattern in Table 8 demonstrates this relationship by the fact that 65% of core countries are within the two early ratification groupings whereas 66% of peripheral countries are in the two late ratification groupings. This relationship holds for both ratification groupings.

When relating INGO memberships (both equal-sized groups and natural-break groups) to both ratification groupings, the cross-tabulations produced significant results. Only the natural-break groups are shown but the equal-sized grouping version looks substantially the same. The pattern in Table 9 shows that there is a definite relationship between INGO memberships and ratification date: 65% of the high INGO memberships cases are found in the two early groups, whereas over 67% of the low INGO memberships cases are in the two late groups.

Table 10 shows the lack of relationship between ratification groupings and tobacco farm production. Unlike Tables 8 and 9, which have a distinct pattern, Table 10 does not have a discernable pattern. The majority of low (67%) and mid (71%) farm production are within the two late ratification groupings, whereas the majority of high (61%) farm production is within the two middle groups. These distributions have no strong relationships to draw conclusions from. The distribution in this table is very similar to the distributions of the other cross-tabulations that do not have statistical significance. The cross-tabulations that do not have significant results are the ones comparing ratification groupings with retail value of tobacco, consumer expenditure on tobacco, production of tobacco products, human rights treaty ratifications, and trade as a proportion of GDP. These cross-tabulations are omitted because they show weak and insignificant effects.

Table 11 is the last cross-tabulation. It compares INGO memberships with world-system position. Table 11 demonstrates the difficulty in untangling world-systems and world-polity effects because they are so highly correlated. The table depicts a strong relationship between the variables, with core countries having more INGO memberships than others. Table 11 shows that 95% of core countries have high INGO memberships whereas only 3% of peripheral countries have high INGO memberships and 44 % are have low INGO memberships.

Table 8: World-system position related to Ratification Groups

World-system position	Ratification Groups				
	1	2	3	4	Total
Core	7 (19%)	17 (46%)	11 (30%)	2 (5%)	37
Semi-	5 (25%)	4 (20%)	5 (25%)	6 (30%)	20

Periphery					
Periphery	13 (19%)	10 (15%)	21 (30%)	25 (36%)	69
p<.05 (Kendall-Tau test)					

Table 9: INGO Memberships related to Ratification Groupings

Ratification Groupings					
INGO memberships	1	2	3	4	Total
Low	11 (18%)	9 (15%)	18 (31%)	21 (36%)	59
~~Groupings~~					
~~Farm~~	~~1~~	~~2~~	~~3~~	~~4~~	~~Total~~
Mid	11 (19%)	10 (17%)	17 (29%)	20 (35%)	58
High	10 (19%)	25 (46%)	13 (24%)	6 (11%)	54
p<.05 (Kendall-Tau test)					
Note: INGO memberships is the natural-break version of the variable					

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Table 10: Farm Production related to Ratification Groupings

~~Production~~					
~~Low~~	~~9 (23%)~~	~~4 (10%)~~	~~17 (44%)~~	~~9 (23%)~~	~~39~~
~~Mid~~	~~6 (15%)~~	~~6 (15%)~~	~~12 (29%)~~	~~17 (42%)~~	~~41~~
~~High~~	~~5 (16%)~~	~~13 (42%)~~	~~6 (19%)~~	~~7 (23%)~~	~~31~~
~~signif. P<.05~~					
~~*Farm Production is adjusted variable~~					

	Ratification Groupings				
Farm Production	1	2	3	4	Total
Low	9 (23%)	4 (10%)	17 (44%)	9 (23%)	39
Mid	6 (15%)	6 (15%)	12 (29%)	17 (42%)	41
High	5 (16%)	13 (42%)	6 (19%)	7 (23%)	31
Note: Farm Production is the natural-break version of the variable					

Table 11: INGO Membership related to World-system position

	INGO memberships			
World-system position	Low	Mid	High	Total
Core	0	2 (5%)	40 (95%)	42
Semi-Periphery	0	12 (57%)	9 (43%)	21
Periphery	34 (44%)	41 (53%)	2 (3%)	77
p<.05 (Kendall-Tau test)				
Note: INGO membership is the natural-break version of the variable.				

The cross-tabulations help to shed some light on the issue of the insignificant effects in the regression models. Only two cross-tabulations reveal significant results: ratification groupings related to world-system position and ratification groupings related to INGO memberships (Tables 8 and 9). In the first case, core countries are much more likely to ratify sooner than other countries. In fact, 65% of core states were in the first two groups

to ratify the treaty. Conversely, peripheral states were more likely to ratify the treaty later than others, which is demonstrated by the fact that 66% of peripheral states were in the third and fourth ratification groups. The relationship observed in this table actually refutes my second hypothesis, that core states will be less likely to ratify the treaty than others.

In the second case, Table 9 shows that countries with a high level of INGO memberships are more likely to ratify the treaty than other countries: 65% of states with high INGO memberships were in the first two ratification groups but 67% of states with low INGO memberships were in the third and fourth ratification groups. This relationship supports my first hypothesis, that states with higher levels of integration into world culture will ratify the treaty sooner than others.

In light of the relationships in Tables 8 and 9, the cross-tabulation comparing world-system position and INGO memberships (Table 11) yields expected results: when using grouped variables, INGO membership and world-system position are strongly related, which means that the majority of states with high INGO memberships are core states and the majority of states with low to mid-level INGO memberships are in the periphery. Therefore, the effects of my main variables for world-polity and world-systems theories are very difficult to separate.

Discussion

World-Polity Theory

Even though the linear regression models did not reveal statistically significant results, interpretations can still be drawn from them. As shown in Table 1, the median ratification score is 71, which means that half of the states ratified the treaty in less than 30 months. However, the low effects on ratification score of the independent variables implies

that there is no one factor, or even a set of factors, that drives the ratification process. This means that all kinds of states, in highly diverse countries, were adopting the FCTC at much the same rate. The fact that states with vastly different social, political, and economical characteristics were ratifying the treaty at the same rate is still a classic finding of world-polity theory.

Even though these findings do not support my first hypothesis, another interpretation of world-polity theory is consistent with the data. World-polity theory holds that once a belief, idea, or movement becomes a strongly legitimated world model, all states are inclined to follow suit and adopt it. This interpretation takes a more holistic approach to the theory, implying that specific characteristics of states become unrelated to the adoption of world-cultural principles. In other words, all kinds of states become likely adopters and they will adopt rather quickly (as in the case of the ratification of the FCTC). Since the data analyses do not show any relationships between states' characteristics and ratification speed, this holistic approach to world-polity theory is a reasonable secondary interpretation of the findings.

This type of finding emerged, for example, in a study by Benavot et al. (1991), which examined primary school curricula. The study found that, despite national variation in many types of characteristics, school curricula were quite similar around the world. This finding goes against the traditional belief that a state's curriculum is based on its political and economic characteristics. The study shows that political and economic development indicators are poor predictors of the spread of a standard educational curriculum model. Instead, they found that the spread of the standard curriculum was linked to the

"expansion of the nation-state system and the increasing demand of standardized models" (Benavot et al., 1991, 1).

Another example of this type of world-polity finding appeared in a study by Meyer et al. (1992) that looked at the spread of primary schooling. The study asserts that primary schooling has become successful because it has become part of the Western-originated but now global model of the nation state. Since primary schooling became a central feature of the nation-state, it was universally adopted with the rest of the nation-state model. Therefore, countries that are more linked to elements of the nation-state or more dependent on world society are more likely to adopt the educational part of the model (1992). These findings support the world-polity view that states that are more involved with world culture are more likely to adopt its principles, while also reinforcing the idea that variable characteristics of countries and states only weakly affect the adoption of world-cultural models.

These findings about mass education appear to be at work with regard to the speed of ratification of the FCTC. Since the treaty was widely supported from the onset, it quickly became part of world culture and a standard characteristic of the nation-state model. States thus felt compelled to ratify the treaty in order to continue to adhere to world models. This theory explains why the treaty was ratified by so many states so quickly despite their diverse economic, social, and political conditions.

World-Systems Theory

World-systems theory asserts that economics is the driving force behind globalization. The theory holds that powerful actors act out of self-interest and exploit weaker states. My hypothesis predicted that this would lead to core countries ratifying the

treaty later than peripheral countries. However, the data shows otherwise, which means that something else is going on.

Unlike the linear regressions, the cross-tabulations reveal significant results. Table 8 shows that, as predicted by world-polity theory and my first hypothesis, states with high INGO memberships ratified the treaty quicker than states with low INGO memberships. However, Table 9 shows that core countries were more likely to ratify the treaty sooner than others, which refutes my world-systems hypothesis. These relationships are confounded by the high correlation, seen in Table 10, between the two independent variables, which revealed that statistically there is little difference between my world-systems and world-polity measures.

However, the cross-tabulations can still give insight into the applicability of world-systems theory to the issue of how quickly states ratified the treaty. Although these findings refute my hypothesis, the fact that core countries are likely to ratify the treaty before others is consistent with the work of Minhas and Bettcher (2010), who explain that, as higher income states began implementing tobacco control policies, the tobacco companies began to shift their focus toward weaker countries. The tobacco companies concentrated their energies on stopping control policies from spreading into new markets (in the semi-periphery and periphery). Some of the methods used by the companies include "interfering with FCTC ratification, litigious actions directed at governments, subverting legislation and finding loopholes, and bribing politicians" (Minhas and Bettcher, 2010, 709).

This line of argument is further supported by Collin et al (2004), who quote a review of the activities of Phillip Morris International that discusses the company's successful

attempts to block and subvert tobacco policies in countries such as Ecuador, Peru, Venezuela, and Senegal. Collin et al. also discusses other methods the tobacco companies use, such as presenting the FCTC as a threat to the individual sovereignty of middle and low-income countries.

Although these findings do not support my second hypothesis, they do support a world-systems theory explanation. I predicted that the tobacco companies' interests would be reflected in the actions of the core countries in which they are located. However, because the core countries had already started to move towards tobacco control, the tobacco companies' focus shifted. This shift in focus resulted in tobacco companies using their power to exploit the weaker countries to keep them from adopting the same control policies.

Conclusion

In this study, I explore the factors behind the ratification speed of the WHO FCTC. I use linear regressions and cross-tabulations to analyze data which are indicators for world-systems and world-polity theories, plus several control variables that may affect the speed of ratification.

The linear regression models show essentially no effects, despite creating several models. The lack of effects is demonstrated in the zero-order correlations between the dependent variable (ratification speed) and the independent variables (Table 7). Additionally, the high correlation between the independent variables makes it difficult to disentangle the variables reflecting world-polity and world-systems theory (Table 7). However, the cross tabulations help to disentangle these variables to some extent and they indicate some effects consistent with both theories.

The fact that the treaty was ratified so quickly by so many countries reflects the strong and broad legitimacy of the FCTC due to its embodiment of important world-cultural principles. Since the treaty had become a legitimate part of the world model, states were eager to join in and ratify it (Benavot et al., 1991). World-polity theory is further supported by the strong correlation between a state's level of INGO membership and ratification speed. As indicated by Table 7, states with higher levels of INGO memberships are more likely to ratify the treaty than other states. These findings support world-polity theory, which holds that states that are more integrated into world culture will adopt world-cultural principles faster than others.

However, the world is full of complex relationships and interactions. As a result of these complexities, world-polity theory alone cannot explain the factors influencing the ratification speed of the FCTC. The cross-tabulations show that core countries are more likely to ratify the treaty early than peripheral or semi-peripheral countries. This finding is supported by Minhas and Bettcher (2010), who find that tobacco companies target weaker states because these powerful TNCs are able to deflect and delay tobacco control policies in these states.

Future research should explore the processes and events that preceded the creation of the FCTC. The drafting of the FCTC was an intense process involving several diverse actors. Not only were states with extensive tobacco regulation involved, but this process also included many INGOs and experts who targeted individual states as well as the United Nations to gain support. Before the treaty was opened for ratification, the intergovernmental negotiating body spent several years working with these states and

INGOs to write the treaty. Studying how the ground was prepared for the treaty could explain the quick ratification of the treaty by so many states.

Additionally, future research should study the relationship between state legislation and ratification speed. As stated above, Minhas and Bettcher (2010) argue that, as stronger states began to adopt tobacco control policies, tobacco companies shifted their focus to markets in weaker states. This relationship should be tested by collecting data on states' levels of tobacco control before the ratification of the FCTC. These levels could then be compared to ratification speed to test for a relationship.

A third direction further studies could explore is the relationship between a state's health system and ratification speed. This relationship could be explored using variables such as overall health system performance, level of responsiveness to health issues, and health expenditure. Exploring the relationship between these health variables and ratification speed would provide a different approach to examining the factors that influence the ratification speed of the FCTC.

Appendix 1: List of States by Ratification Date and Groupings

Participant	Ratification Date	Groupings of 3	Groupings of 4
Norway	6/16/03	1	1
Malta	9/24/03	1	1
Fiji	10/3/03	1	1
Sri Lanka	11/11/03	1	1
Seychelles	11/12/03	1	1
New Zealand	1/27/04	1	1
Mongolia	1/27/04	1	1
India	2/5/04	1	1
Palau	2/12/04	1	1
Hungary	4/7/04	1	1
Myanmar	4/21/04	1	1
Slovakia	5/4/04	1	1
Cook Islands	5/14/04	1	1
Singapore	5/14/04	1	1
Mauritus	5/17/04	1	1
Maldives	5/20/04	1	1
Mexico	5/28/04	1	1
Brunei Darussalam	6/3/04	1	1
Japan	6/8/04	1	1
Iceland	6/14/04	1	1

Bangladesh	6/14/04	1	1
Kenya	6/25/04	1	1
Nauru	6/29/04	1	1
San Marino	7/7/04	1	1
Qatar	7/23/04	1	1
Solomon Islands	8/10/04	1	1
Panama	8/16/04	1	1
Jordan	8/19/04	1	1
Trinidad and Tobago	8/19/04	1	1
Bhutan	8/23/04	1	1
Uruguay	9/9/04	1	1
Madagascar	9/22/04	1	1
France	10/19/04	1	1
Australia	10/27/04	1	2
Pakistan	11/3/04	1	2
Thailand	11/8/04	1	2
Syrian Arab Republic	11/22/04	1	2
Canada	11/26/04	1	2
Ghana	11/29/04	1	2
Armenia	11/29/04	1	2
Peru	11/30/04	1	2
Marshall Islands	12/8/04	1	2
Denmark	12/16/04	1	2
United Kingdom and N. Ireland	12/16/04	1	2
Germany	12/16/04	1	2
Lithuania	12/16/04	1	2
Viet Nam	12/17/04	1	2
Timor-Leste	12/22/04	1	2
Turkey	12/31/04	1	2
Spain	1/11/05	1	2
Lesotho	1/14/05	1	2
Finland	1/24/05	1	2
Netherlands	1/27/05	1	2
Senegal	1/27/05	1	2
Botswana	1/31/05	1	2
Latvia	2/10/05	1	2
Honduras	2/16/05	1	2
Egypt	2/25/05	1	2
Oman	3/9/05	2	2
Slovenia	3/15/05	2	2

Micronesia	3/18/05	2	2
Tonga	4/8/05	2	2
South Africa	4/19/05	2	2
Dem. People's Republic of Korea	4/27/05	2	2
Saudi Arabia	5/9/05	2	2
Republic of Korea	5/16/05	2	2
Niue	6/3/05	2	2
Poland	6/6/05	2	2
Phillipines	6/6/05	2	2
Libyan Arab Jamahiriya	6/7/05	2	2
Chile	6/13/05	2	2
European Community	6/30/05	2	2
Luxembourg	6/30/05	2	2
Sweden	7/7/05	2	2
Jamaica	7/7/05	2	2
Estonia	7/27/05	2	2
Djibouti	7/31/05	2	2
Israel	8/24/05	2	3
Niger	8/25/05	2	3
Belarus	9/8/05	2	3
Austria	9/15/05	2	3
Bolivia	9/15/05	2	3
Kiribati	9/15/05	2	3
Malaysia	9/16/05	2	3
Vanuatu	9/16/05	2	3
Equitorial Guinea	9/17/05	2	3
Guyana	9/20/05	2	3
Tuvalu	9/26/05	2	3
Cape Verde	10/4/05	2	3
China	10/11/05	2	3
Mali	10/19/05	2	3
Rwanda	10/19/05	2	3
Nigeria	10/20/05	2	3
Cyprus	10/26/05	2	3
Mauritania	10/28/05	2	3
Dem. Republic of the Congo	10/28/05	2	3
Sudan	10/31/05	2	3
Belgium	11/1/05	2	3

Brazil	11/3/05	2	3
Benin	11/3/05	2	3
Barbados	11/3/05	2	3
Samoa	11/3/05	2	3
Iran (Islamic Republic of)	11/6/05	2	3
Iraq	11/6/05	2	3
Azerbaijan	11/6/05	2	3
Bulgaria	11/7/05	2	3
Ireland	11/7/05	2	3
United Arab Emirates	11/7/05	2	3
Central African Republic	11/7/05	2	3
Namibia	11/7/05	2	3
Saint Lucia	11/7/05	2	3
Portugal	11/8/05	2	3
Cambodia	11/15/05	2	3
Togo	11/15/05	2	3
Guatemala	11/16/05	2	3
Burundi	11/22/05	2	3
Lebanon	12/7/05	3	3
Belize	12/15/05	3	3
Swaziland	1/13/06	3	3
Comoros	1/24/06	3	3
Greece	1/27/06	3	3
Romania	1/27/06	3	3
Chad	1/30/06	3	3
Cameroon	2/3/06	3	3
Serbia	2/8/06	3	3
Georgia	2/14/06	3	3
Sao Tome and Principe	4/12/06	3	4
Albania	4/26/06	3	4
Kuwait	5/12/06	3	4
Kyrgyzstan	5/25/06	3	4
Papua New Guinea	5/25/06	3	4
Antigua and Barbuda	6/5/06	3	4
Ukraine	6/6/06	3	4
Venezuela	6/27/06	3	4
Algeria	6/30/06	3	4
TFYR of Macedonia	6/30/06	3	4

Dominica	7/24/06	3	4
Ecuador	7/25/06	3	4
Burkin Faso	7/31/06	3	4
Lao People's Dem. Republic	9/6/06	3	4
Paraguay	9/26/06	3	4
Montenegro	10/23/06	3	4
Nepal	11/7/06	3	4
Kazakhstan	1/22/07	3	4
Congo	2/6/07	3	4
Yemen	2/22/07	3	4
Bahrain	3/25/07	3	4
United Republic of Tanzania	4/30/07	3	4
Uganda	6/20/07	3	4
Grenada	8/14/07	3	4
Gambia	9/18/07	3	4
Angola	9/20/07	3	4
Guinea	11/7/07	3	4
Nicaragua	4/9/08	3	4
Colombia	4/15/08	3	4
Zambia	5/23/08	3	4
Russian Federation	6/3/08	3	4
Italy	7/2/08	3	4
Croatia	7/14/08	3	4
Costa Rica	8/21/08	3	4
Guinea-Bissau	11/12/08	3	4
Suriname	12/16/08	3	4
Republic of Moldova	2/3/09	3	4
Gabon	2/20/09	3	4
Sierra Leone	5/22/09	3	4
Bosnia and Herzegovina	7/15/09	3	4
Liberia	9/15/09	3	4
Bahamas	11/3/09	3	4
Tunisia	6/7/10	3	4
Cote d'Ivoire	8/13/10	3	4
Afghanistan	8/13/10	3	4
Saint Vincent and the Grenadines	10/29/10	3	4
Turkmenistan	5/13/11	3	4

Saint Kitts and Nevis	6/21/11	3	4

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