

The Cigarette Commodity Chain and National Tobacco Control in China and Brazil

by

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B.A., University of Victoria, 2007

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Supervisory Committee

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Abstract

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The Framework Convention for Tobacco Control (FCTC) designates the nation-state as the agent for tobacco control, and it defines its target as an industry composed of manufacturers, wholesalers, and importers. This target fails to include the farmers, tobacco leaf exporters, and retailers profiting from cigarette consumption. Commodity chain analysis uncovers a more comprehensive roster of industry actors, a methodology that can improve tobacco control monitoring efforts, and uncover weaknesses in the industry. A comparative historical analysis of the cigarette commodity chain in Brazil and China exposes four categories of social forces that counter national tobacco control: the actors in the industry, local governments and trade treaty organizations as external actors, the conflicting activities of different units within the nation-state itself, and social norms embedded with 400 years of tobacco use. In conclusion, the author suggests that the FCTC provisions be redirected to local and international levels.

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Chapter One: Effective Tobacco Control

Nine hundred and three million smokers consumed 5,680.8 billion cigarettes in 2009 (Euromonitor, 2010f). The prevalence of smoking in the world's population over age 14 is 29.1% (Euromonitor, 2009f). The global tobacco epidemic claims over 5.4 million lives a year and causes serious illness in millions more according to the most recent estimates available (World Health Organization [WHO], 2008a). In response, the World Health Organization (WHO) created a treaty, the Framework Convention for Tobacco Control (FCTC), which entered into force in 2005 (Framework Convention Alliance, 2010). One hundred and sixty-nine countries have made treaty obligations to establish FCTC tobacco control measures. Unfortunately, the intention of the nations-states to be effective actors for tobacco control is countered by numerous social forces. This thesis has two purposes. The first is to examine the inability of the nation-state to be an effective actor for tobacco control. The second is to provide a fuller picture of the actors involved in the cigarette industry, and to uncover areas of industry weakness. The pragmatic goal is to support the development of more effective tobacco control actions.

The Tobacco Industry

Nicotine addiction is a corporate-induced disease (Jahiel, 2008) or industrial epidemic (Holden & Lee, 2009) which generated US \$599 billion in retail cigarette sales for the global tobacco industry in 2009 (Euromonitor, 2010f), and US \$181.7 billion for the cigarette manufacturers in 2008 (Physicians for a Smoke-Free Canada, 2009, p. 3). The FCTC defines the tobacco industry as "tobacco manufacturers, wholesale distributors and importers" (FCTC, Article 1[e]). However, this is a limited definition. Where are the tobacco farmers? Where are cigarette

retailers who took profits from that \$599 billion? What firms supply the filter tips, printed boxes, and cigarette manufacturing machines, and how do they fit into the tobacco industry? As I demonstrate in the Literature Review, tobacco control research displays a narrow gaze directed almost exclusively upon the transnational cigarette manufacturers and the consumers of their products. The field of tobacco control neglects the activities of retailers and other firms directly profiting from cigarette consumption.

The FCTC has the goal of monitoring the tobacco industry (FCTC Article 20.4[c]) which could benefit from a more inclusive roster of its corporate profiteers. What does a more comprehensive picture of the tobacco industry look like? To obtain this broader view, research can trace a product back from the consumer to its primary materials, a method utilized by consumer activists for promoting fair trade coffee and exposing sweat shop garments (Bair, 2009; Barndt, 2008; Leslie & Reimer, 1999; Levy, 2008). This methodology for critical research (Bair, 2009; Carroll, 2004) originates in commodity chain analysis, a middle range theory derived from world systems analysis (Bair, 2009; Hughes & Reimer, 2004).

Using commodity chain analysis, this study offers a fuller description of the tobacco industry, modeling for the first time a *cigarette commodity chain*. It is constructed with global value chain analysis, a framework which links all the processes and actors involved in producing a product from the extraction of raw materials through to the consumption of the finished product. Chain analysis creates a thick-description model of the cigarette commodity chain.

My use of the term *cigarette commodity chain* and not *tobacco commodity chain* has three purposes. First, cigarettes account for 94% - 98% of tobacco consumption in all but a few countries (Euromonitor, 2009g). Second, the term denotes that a cigarette is not simply composed of tobacco, the image of a raw, natural product promoted by the industry, but it is a

manufactured product containing less than 0.8 grams of tobacco (United Nations Food and Agriculture Organization [UNFAO], 2003a), and containing 10% additives by weight (Geist, Chang, Etges, & Abdallah, 2009). Third, the term cigarette commodity chain encourages the field of tobacco control to expand its current limited view of the tobacco industry. A cigarette is a far more complex product than tobacco in a paper tube, and the actors involved in the cigarette commodity chain include many more firms than the FCTC's "manufacturers, wholesale distributors, and importers."

I am advocating for a improved monitoring of the tobacco industry with the cigarette commodity chain model as part of my action agenda (Alford, 1998) for this thesis. I offer this new conceptual model, in short, for two goals. One goal is to expose all the actors profiting from cigarette consumption so that the industry is effectively monitored. My other goal is to uncover the cigarette commodity chain's weakest areas so that tobacco control actions can be directed to these points with the best possible chance to disrupt the industry. I hope this macro-sociological investigation achieves the high purpose of producing new knowledge that "contributes to human emancipation" (Carroll, 2004, pg. 4) by helping free millions from the burden of corporate-induced nicotine addiction, thereby supporting the human right to health.

The Nation-State and Tobacco Control

To address the global tobacco epidemic, the FCTC mandates a set of demand and supply reduction measures. Almost all of them are conducted by national governments: taxation of tobacco products, regulation of cigarette contents, standards for product disclosures, requirements for packaging, restrictions on advertising, support for tobacco crop alternatives, prosecution of the illicit cigarette trade, and litigation against corporations for civil and criminal

liability. National governments are almost always the authority in the remaining FCTC provisions: conducting educational campaigns, legislating smoking bans, and enforcing regulations against underage smoking. The FCTC designates the nation-state as the agent of tobacco control, and the treaty is enacted by countries. The FCTC is “a template outlining the ingredients for a comprehensive *national* campaign” (Davis, Wakefield, Amos, & Gupta, 2007, p. 187, emphasis added). The designation of the nation-states as the proper agents of tobacco control is a social fact.

But is the nation-state an effective actor for tobacco control? A dozen years ago, Leslie Sklair (1998) researched the three largest multinational tobacco manufacturers, and he speculated that their activities would be “a key test of the capacity of national polities to curb the powers of globalizing corporations” (p. 3). Have the nation-states passed the test of curbing the transnational cigarette manufacturers with tobacco control? This is part of what my thesis examines: the limited ability of the nation-states to enforce tobacco control measures on the transnational tobacco corporations.

Yet this study goes further and presents four categories of social forces that counter national tobacco control measures. These social forces are uncovered with a comparative historical analysis of the cigarette commodity chain. As would be expected, the first category of social forces opposed to tobacco control are the firms of the cigarette commodity chain, *chain actors*. The second category is made up of organizations which impact the chain, but are not part of production, termed *external actors*. This thesis points out two external actors, local governments and trade treaty organizations, which assist chain actors. The third category of social forces are the *conflicting activities of the nation-state* itself that unintentionally, and even intentionally, benefit chain actors. And in the fourth category are the 400 year old *social norms*

of tobacco use that undermine national regulations and sustain cigarette use. I assert that the sum of these actions from multiple social forces prevent the nation-state from being an effective actor for tobacco control.

Effective Tobacco Control

This study uncovers two flaws in the FCTC: one, it monitors only a limited segment of the tobacco industry; and two, it incorrectly assumes that national governments, the nation-states, can be effective agents of tobacco control. This thesis addresses these flaws by answering two questions: what does a more comprehensive picture of the tobacco industry look like, and why is the nation-state an ineffective agent for tobacco control?

To examine the tobacco control efforts of all the 169 countries that are parties to the FCTC is too lengthy for this study. However, individual case studies can describe a cigarette commodity chain, and provide examples that illustrate the ineffectiveness of the nation-state in tobacco control. For this thesis, I have used extreme sampling to select two case examples: China, the world's largest producer of tobacco leaf and largest manufacturer of cigarettes, and Brazil, the world's largest exporter of tobacco leaf. By constructing a commodity chain model for each country, and examining its historical development and current structure, I demonstrate how its national tobacco control measures have been countered by numerous social forces. An analysis of these case models also exposes potential weaknesses in the cigarette commodity chain to target for tobacco control actions in these countries.

This thesis argues that the nation-state is countered by so many social forces that it cannot be an effective actor for tobacco control, and my research offers a more comprehensive model of the industry with the cigarette commodity chain. My argument starts with a review of

the literature on the tobacco industry, and proceeds with a discussion of the theory of commodity chain analysis which provides the typology for building the commodity chain model for cigarettes. Data for the two cases, Brazil and China, are presented with a comparative historical methodology. Drawing from the cases, I construct models of the cigarette commodity chain for each country, and identify the social forces acting against national tobacco control. I close this thesis with radical recommendations for restructuring the delivery of national tobacco control actions to local and international levels.

I have undertaken this thesis with the greatest urgency as the global tobacco epidemic claims the lives, health, and cash of millions every year. It is challenging for me, one lone voice, to point out serious flaws in the FCTC, a standard formulated by hundreds of dedicated tobacco control advocates, and signed by nearly every United Nations country. I hope that the cigarette commodity chain model will, over time, be adopted because it has great potential to improve FCTC monitoring efforts.

But my conclusion that the nation-state is an ineffective actor for tobacco control will most likely fall on deaf ears. The nation-states are the treaty signatories to the FCTC, and its tobacco control measures are structurally dependent on national governments. The FCTC reinforces the naturalized role of the nation as the agent of tobacco control. I will have an uphill battle to convince the FCTC participants to redirect their efforts through local and international organizations. Nevertheless, I present this thesis to support this radical (to the root) recommendation, and to offer the cigarette commodity chain model for a wider view of the propagators of the tobacco epidemic.

Chapter 2: Literature Review

This literature review accomplishes two tasks. The first one is to display the limited view of the tobacco industry in tobacco control research and policy, and point out the lack of tobacco industry models. This task demonstrates why tobacco control needs this new model of the cigarette commodity chain. My second task is survey the scant literature on the social forces countering tobacco control, gathering what information is available.

A Myopic View of the Tobacco Industry

The literature on tobacco control displays the same limited view of the tobacco industry as the FCTC. When major publications and research articles in the field reference the tobacco industry, almost without exception the subject is the transnational cigarette manufacturers. Little has been published on the tobacco industry in the field of tobacco control, public health, commerce, or elsewhere.

Public health and tobacco control literature.

In tobacco control, the WHO's primary publication on the industry is *Tobacco Industry Interference with Tobacco Control* (2008). This major policy document labels retailers and distributors as "strong allies" (p. 8) of the tobacco industry, and classifies retailers and growers as "allied and third-party industries" (p. 8), along with firms that supply advertising, packaging, transportation, and chemicals. Yet retailers and growers are not simply "allied" to the tobacco industry because cigarette production and sales cannot occur without them. Transnational cigarette manufacturers do not sell directly to consumers, so they absolutely require retail outlets

to do business (Holden & Lee, 2009). Retailers and growers are key actors in the cigarette commodity chain.

A major overview article on the tobacco epidemic, Davis, Wakefield, Amos, and Gupta (2007), has the broadest view of the tobacco industry in the literature. Its description of the tobacco industry includes tobacco leaf production, smuggling, and multinational cigarette manufacturers. As in almost all the research, the article overlooks retailers, and makes no mention of the transnational tobacco exporters.

Physicians for a Smoke-Free Canada, a non-profit organization, conducts research on the tobacco epidemic, and its recent publication, *The Global Tobacco Economy* (2009), details the financial flows of the world's cigarette manufacturers. Yet including the two transnational leaf exporters would have added over US \$5 billion to their global economic model. What about the billions in retailers' profits? Then there is the black market money to consider. Physicians for a Smoke-Free Canada is to be congratulated for authoring this important original research on the economic activity of the cigarette manufacturers. Nonetheless, effective monitoring requires the observation of the economic activities of all entities that are profiting from the tobacco epidemic.

Only three public health articles have provided an epidemiological model of the tobacco epidemic, which is astounding considering the morbidity and mortality of the tobacco epidemic. Two articles (Cruz, 2009; Giovino, 2002) use the standard epidemiological triangle model of agent-vector-host. The tobacco industry is the vector, a transporter of disease. Yet the manufacturers do not simply bring tobacco (agent) to the consumer (host) because the manufacturers fabricate the agent by adding a substantial number of materials that increase its toxicity. Tobacco is only part of the agent, and, in this case, the vector produces the actual agent, the cigarette. The epidemiological triangle model is inadequate because cigarette manufacturers

confound the functions of agent and vector. In these models, as in other tobacco control research, the transnational cigarette manufacturers are the sole actors in the tobacco industry.

The third public health article (Jahiel, 2008) is a unique application of the epidemiological cascade model on corporate-induced diseases, and the tobacco epidemic is among its examples. The epidemiological cascade model traces causality, and the author identifies the initial cause for corporate-induced diseases as the government, not the corporations, because the government has the “final authority” for the right to produce and sell harmful products. Unfortunately, this positioning does not fit into a process-based commodity chain model. Unlike any other studies, this model includes retailers, and the researcher asserts that these businesses need to be monitored in order to effectively address corporate-induced epidemics. This thesis also identifies retailers as contributors to the tobacco epidemic, and as key actors in the cigarette commodity chain.

Tobacco industry = transnational tobacco manufacturers.

During my past five years of extensive academic and professional reading in tobacco control, I developed the strong impression that the term “tobacco industry” was simply a proxy for one or more of the transnational cigarette manufacturers. Yet this anecdotal observation is hardly proof, so I conducted a systematic literature review to demonstrate the field’s research bias: tobacco industry = transnational cigarette manufacturers.

For this systematic review, I searched all the articles published prior to July 2010 in the two major tobacco control journals, *Tobacco Control* and *Nicotine and Tobacco Research*, and in the premier medical database CINAHL. The search terms were “tobacco industry” and “cigarette industry.” After deleting the duplicates in the CINAHL results, I reviewed the

abstracts and introductions of the articles for 1. actual company names (i.e. BAT, Philip Morris), 2. rhetorical use (i.e. “the industry”), and 3. any references to growers, exporters, distributors, or retailers. The result was an astounding 98% of 556 published articles defined the tobacco industry solely as the transnational cigarette manufacturers.

Table 1: Research Article Definitions of “Tobacco (OR Cigarette) Industry”

Journal or Database	<i>Tobacco Control</i>	<i>Nicotine & Tobacco Research</i>	CINAHL	Total
First Year of Search	1992	1999	1995	
Total unique articles	291	36	229	556
Solely manufacturers	287	35	223	545

Nor is the tobacco industry itself a common topic in tobacco control research. For example, *Tobacco Control* has published over 2,500 articles since 1992, and 11% of them studied the tobacco industry. The Ontario Tobacco Research Unit reviewed 930 citations on tobacco in 28 major journals published in 2005, and calculated that the combined category of agent (tobacco products) and vector (tobacco industry) accounted for only 13% of the articles (Cohen, J., 2006). And again, these articles almost without exception examine only the transnational cigarette manufacturers.

Tobacco industry studies outside of tobacco control.

Since the field of tobacco control has such a narrow focus on the transnational cigarette manufacturers, what studies have been undertaken on the tobacco industry in other disciplines? Surprisingly little has been published. The only academic publication from the industry itself in the last 15 years is a technical reference manual, *Tobacco Production, Chemistry and*

Technology (Davis & Nielson, 1999), which is an overview from agriculture to manufacturing. Elsewise, the industry appears to keep its processes secret. Agricultural research supplies dozens of studies on the tobacco plant, but only one article (Geist et al., 2009) discusses the business aspects of growing tobacco, and which farmers may or may not continue to grow it.

Even academic commerce journals have almost completely overlooked the cigarette industry. Six commerce studies take up some aspect of the tobacco industry, but not the entire cigarette commodity chain. The most pertinent article is by Marco Antonio Vargas (2001); it builds a commodity chain model of tobacco leaf production in Brazil from grower to leaf exporter. This article's data on the chain actors is out of date due to mergers, but it has valuable information on chain history for my Brazil case (the article is discussed further in the Methods chapter). A second article by Juttner, Godsell, and Christopher (2006) lists the intra-company process steps for a new product launch by an unnamed major tobacco company (which is more than likely British American Tobacco). The study explains how the manufacturer links product demand creation with its supply chain. Two articles are case studies on very small parts of the cigarette commodity chain: processed leaf inventory management (Riezaboz, 2006), and wholesale distribution transportation rerouting in a Chinese city (Hu, Z., Ding, & Shao, 2009). A fifth article (Polonsky, Carlson, & Fry, 2003) considers how marketing exchanges create a "harm chain," with tobacco manufacturers as its major example. Each of these five commerce articles describes only a segment of the cigarette commodity chain.

The last article from commerce is by Anderson & Dunn (2006), a theoretical study that offers key insights on cigarette marketing based on John Kenneth Galbraith's theory of "the management of specific demand." Cigarette marketing directly manipulates consumers, promoting the fulfilment of psychological needs and fantasies (subjective needs) which are often

based on "the psychology of entitlement" (p. 283), and not objective (product supplied) needs. Cigarette manufacturers delink the consequences of cigarette consumption from the product, even with anti-factual content. Corporate-generated subjective psychological needs, and the social meanings attributed to cigarettes from decades of marketing are social symbols that drive the demand for cigarettes. What the authors have identified here are social norms.

In looking over the research on the tobacco industry, I remain amazed that not one single article provides a broad picture of the firms profiting from cigarette use considering the hundreds of billions of dollars it generates in commerce, and the millions dying in the tobacco epidemic. To effectively monitor all the actors involved in the tobacco epidemic requires a more comprehensive view not available in the literature - this is why I have constructed the cigarette commodity chain model.

The Social Forces Countering National Tobacco Control

Once the cigarette commodity chain comes into focus, then the social forces that counter national tobacco control measures become visible. Some of these social forces have received study, while others are examined for the first time in this thesis. Continuing with my categorization of the social forces, I look at what research has been published on the anti-tobacco control actions of chain actors, external actors, the conflicted nation-state, and social norms.

Chain actors: transnational cigarette manufacturers and smugglers.

While the field of tobacco control has neglected other chain actors, limited research has been done on two areas of the cigarette commodity chain, with most of it on the transnational cigarette manufacturers, and some studies on the black market.

Chain actors: transnational cigarette manufacturers.

While it would be expected that many articles would discuss the interactions between the transnational cigarette manufacturers and the nation-state, actually the number is not high. Only two articles directly address the power of the transnational cigarette manufacturers in relation to the nation-state: Holden and Lee (2009), a theoretical discussion of structural vs. agency power, and Sklair (1998), a research study on the three top cigarette manufacturers at that time. Looking at the literature on manufacturers and tobacco control, next I return to *Tobacco Industry Interference* (WHO, 2008) as a primary policy document, and the research study used in developing it. These are the only general discussions on the subject. The last thirteen articles on transnational cigarette manufacturers are all case studies analyzing individual historical instances of their activities to prevent or side-step national tobacco control legislation.

The power of transnational cigarette manufacturers over the nation-state.

Sklair (1998) is the first researcher to examine the power relations between the transnational cigarette manufacturers and the nation-state. His research data on the corporation's boards of directors is out of date, but his examination of their membership reveals how the cigarette manufacturers cultivate connections with major corporations and high-ranking politicians - I am sorry this thesis did not have the capacity to include interlocking directorates. His observation of a trend to diversification within the three cigarette manufacturers is dated, as now they have jettisoned non-tobacco units, and instead engage in multiple mergers and acquisitions of other firms in the tobacco industry (Physicians for a Smoke-Free Canada, 2009). Still pertinent is his analysis of the social presence of the "cigarette promotional culture." Finally, he notes in passing the need of state and local government for tobacco tax revenues.

He quite clearly sees the struggle between the interests of the transnational cigarette manufacturers and national public health. As quoted in the first chapter, his question remains: can the nation-state curb the transnational cigarette manufacturers?

Holden and Lee (2009) provide the only other theoretical perspective on the transnational cigarette manufacturers vs. the nation-states. They find that the corporations have declining structural power since the adoption of the FCTC, because they have few options to find better business conditions in different countries. The authors claim that the FCTC is “an unprecedented threat” (p. 341) to the tobacco industry.

Transnational cigarette manufacturers have forced open national markets and nullified national regulations through the supranational institutions of the International Monetary Fund and the World Trade Organization, which the authors define as agency power. Transnational tobacco companies use these international organizations “to strengthen their positions in ways that will be difficult to reverse” (pg. 335). This thesis identifies the transnational trade organizations as an external actor that assists chain actors, because the trade organizations hold the enforcement power over nation-states, not the transnational tobacco manufacturers. Trade treaty organizations constitute a separate social force that counters nation-state tobacco control measures.

The authors claim that transnational tobacco companies hold the balance of power over the nation-state in part because they can withdraw from a country to buy tobacco leaf elsewhere. My research does not support their argument. Almost all tobacco growers are under contract to either the major tobacco leaf exporters, the transnational cigarette manufacturers, or the state-run monopolies. This makes tobacco leaf almost impossible to obtain in quantity outside of the few established suppliers. The transnational cigarette manufacturers cannot exit a country and find

tobacco supply elsewhere without considerable investment, so they cannot threaten a nation-state with the economic loss of its business.

Yet I do agree in part with the authors' recommendation that tobacco regulation must be developed at the global as well as national levels. I reach the more radical conclusion that tobacco regulation needs to be enacted at the global level, but not by the nation-states.

Transnational cigarette manufacturers and tobacco control.

The major policy document that addresses the anti-tobacco control activities of the transnational cigarette manufacturers is the WHO's *Tobacco Industry Interference with Tobacco Control* (2008). It lists 17 tactics, and all of them reference transnational cigarette manufacturers: intelligence gathering, public relations, political funding, lobbying, consultancy, funding research, smokers rights groups, creating alliances and front groups, intimidation, philanthropy, corporate social responsibility, slanted youth smoking prevention, litigation, smuggling, international trade treaties, joint manufacturing agreements, and pre-emption (pp. 12-13). What is interesting is that all but 3 of the 17 tactics (slanted prevention programs, smuggling, and joint ventures) have the purpose of proactively preventing or influencing pending legislation. The case studies on the transnational cigarette manufacturers discussed below share the same focus on pending regulation. What activities do the cigarette commodity chain actors undertake once legislation is in place?

The WHO list itself has three shortcomings. First, many of these tactics are not unique to the transnational cigarette manufacturers, but are simply common business practices. All major corporations engage in intelligence, political funding, lobbying, public relations, and corporate philanthropy. Companies pursue litigation when they believe it will improve their bottom line.

Using front groups is business strategy used by transnational corporations, not only the tobacco industry (Sklair, 1998). Second, the list omits the routine business process of intra-corporate trade, a practice that allows a transnational corporation to bypass national regulations (Robinson, 2004; Wallerstein, 2004), including ones for tobacco control. Third, although legislative loopholes are mentioned briefly in the text, they are not included in its list. Exploiting regulatory loopholes is one of the anti-tobacco control tactics that comes up in the case studies of China and Brazil. And again, this list purports to address the tobacco industry, when it applies almost exclusively to the cigarette manufacturers.

The list in *Tobacco Industry Interference* is based in part on a study by Trochim, Stillman, Clark, and Schmitt (2003), a research project involving 34 US tobacco control professionals. It features a concept map with an overwhelming 88 distinct items of industry interference with tobacco control measures. Smoker's rights groups are in the number one position, and the top 10 actions include industry price reductions and smuggling. While *Tobacco Industry Interference* mentions legislative loopholes only in passing, this study ranks it 8th in importance.

The list has its quirks, including a couple in the top ten. The number three tactic is the infiltration of tobacco control groups by the tobacco industry, but I have heard of only one report of this in the last five years. The number five tactic is puzzling because no articles or reports provide evidence for it: paying journal editors for industry favourable editorials. There are other such instances among the other 88 items, but for the sake of brevity I will stop here. The study's long list has one glaring omission: it fails to include trade treaties.

Case studies of transnational tobacco manufacturers and national tobacco control.

Thirteen case studies from tobacco control research describe the transnational cigarette manufacturers' anti-tobacco control actions. Many of the articles study British American Tobacco (BAT). Three studies scrutinize BAT's activities in conjunction with the privatization of Uzbekistan's state owned tobacco company. BAT obtained a 50% tax reduction during the privatization (Gilmore, Collin, & Townsend, 2007), shut competition out of the country (Gilmore, McKee, & Collins, 2007), and obtained a voluntary ban on advertising instead of mandatory restrictions (Gilmore, Collin, & McKee, 2007). In Thailand BAT avoided product disclosures by appealing to the WTO (MacKenzie, Collin, Sriwongcharoen, & Muggli, 2004). BAT set up joint ventures in Cambodia, and circumvented national government advertising restrictions through legislation loopholes (McKenzie, Collin, Sopharo, & Sopheap, 2004).

Several of the studies examine BAT's activities in China. BAT influenced China's second hand smoke policies with a series of "trainings" to the Chinese National Tobacco Company from 1997-2000 (Muggli, Lee, Gan, Ebbert, & Hurt, 2008). BAT has engaged in smuggling in China (Lee & Collin, 2006; Lee, Gilmore, & Collin, 2004). Two articles detail BAT's strategies to gain entry into the Chinese cigarette market during the country's negotiations to join the WTO (Holden, Lee, Gilmore, Fooks, & Wander, 2010; Zhong & Yano, 2007). These articles contribute valuable data for the case study of China.

Other case studies examine the actions of different manufacturers. Philip Morris (PM) influenced the drafting of pesticide regulations in the European Union and Malaysia (McDaniel, Solomon, & Malone, 2005), and provided false figures to the Czech Republic on the country's economic burden of tobacco use (Ross, 2004). One article describes how BAT, PM, and other

cigarette manufacturers worked to prevent national second hand smoke regulations in Argentina (Sebrié, Barnoya, Pérez-Stable, & Glantz, 2005).

The field of tobacco control is monitoring the transnational cigarette manufacturers, although the low number of studies is disappointing considering the enormous health burden of smoking. One would hope for a more coherent picture of the activities of the transnational cigarette manufacturers, but it is clear that tobacco control advocates have the transnational cigarette manufacturers on their radar. Unfortunately, none of the articles report tobacco control success stories.

Chain actors: the black market.

The only other cigarette commodity chain component that has received some attention in tobacco control research is the black market for cigarettes. Some academics claim that very little work has been done on cigarette smuggling (Goel & Nelson, 2008; Shen, Antonopoulos, & Von Lampe, 2010). The World Customs Organization publishes a brief annual report on the interdiction of illegal cigarettes (World Customs Organization, 2009). Recently an overview examines the global illicit cigarette market (Joosens, Merriman, Ross, & Martin, 2010), and China ranks first with 214 billion black market cigarettes, and Brazil is number five with 38 billion sticks. The illicit cigarette market in China has been the subject of a detailed study by Shen, Antonopoulos, and Von Lampe (2010), and two case studies report on smuggling by BAT in China (Lee & Collin, 2006; Lee, Gilmore, & Collin, 2004). Brazil's black market has been referenced a couple of short academic articles (Ramos, 2009; Shafey, Cokkinides, & Cavalcante, 2002).

The Center for Public Integrity has published reports on the black market in China (Chen, T.-P., 2009) and on cigarette smuggling from Argentina to Brazil (Guevara, Rehnfeldt, & Soares, 2009). While these reports are considered grey literature, their source is a non-profit organization that publishes in-depth journalism on public issues, and the reports are part of the Tobacco Underground series funded by the Johns Hopkins School of Public Health and other major foundations. These sources, along with other grey literature, provide enough information to include them in my cigarette commodity chain models.

Based on 2006 figures, the global illicit cigarette trade accounted for 10.7% of all cigarettes sold, about 600 billion sticks (Framework Convention Alliance, 2007). The WHO states that smuggling interferes with tobacco control (WHO, 2008). Holden and Lee (2009) cite the nation-states' inability to curb smuggling as evidence of the power of the tobacco industry.

The black market cigarette trade involves the intertwining of legal and illegal processes (Shen et al., 2010). It acts as "a parallel supply chain" (Vander Beken, Janssens, Verpoest, Balcaen, & Vander Laenen, 2008, p. 60). In this study, these actors are classified as part of the cigarette commodity chain, as will be explained in the following chapter. Joosens and Raw (2008) expose the involvement of legitimate chain actors in the black market, including tobacco growers, machinery distributors, and transportation companies, along with the transnational cigarette manufacturers. Manufacturers appear to exert considerable control over the black market supply chain (Joosens et al., 2010). These actors participate in the black markets of Brazil and China.

So despite the gloomy assessments, some tobacco control research examines the black marketers. It is interesting to note that the academic literature examines mainly the processes of smuggling, while the journalism reports focus on the actors.

External actors: local governments and trade treaties.

Next I look over the literature on the external actors that counter national tobacco control measures: local governments and trade treaty organizations.

External actors: local governments.

My research uncovers how some local level governments in Brazil and China are heavily dependent on tobacco taxes. Ma, Hoang, Samet, Wang, Mei, Xu, and Stillman (2008) state that effective tobacco control must “offer realistic options for local [Chinese] governments dependent on tobacco farming” (p. 664), but the study examines the social norms of cigarette use and not local government revenues. Sklair (1998) remarks on the need of national and local governments for tobacco taxes, especially when other sources of revenue are down during poor economic times. O’Connor (1973) theorizes on how the escalating demand for social services puts pressure on national governments to acquire the revenue for these expenditures. These forces appear to be at work at the local level as well. This study observes several instances where local governments have helped cigarette commodity chain actors circumvent national regulations and taxes, and provided them with economic benefits. Unfortunately, local government interference in national tobacco control has gone unstudied.

External actors: trade treaty organizations.

Trade treaty organizations, the World Trade Organization (WTO) being a prime example, can nullify nation-state regulations (Beder, 2007; Robinson, 2004), including tobacco control legislation. Although the WTO (2008) classifies trade treaties as a strategy, in reality it is the trade organizations that wield power with their ability to apply substantial punitive sanctions

against countries that fail to comply with its rulings (Beder, 2007). The enforcement power of trade treaties organizations is so strong that even a firm's threat to file a complaint can derail pending legislation (Beder, 2007) – witness how in 2004 Canada withdrew its proposed plain paper packing regulations for cigarette packs when Philip Morris said it would file a free trade complaint (Shaffer, Brenner, & Houston, 2005).

The field of tobacco control is aware of the power of the WTO and other trade treaty organizations to override national tobacco control regulations. The FCTC states in its Foreword that trade liberalization has contributed to the tobacco epidemic. In 1999 the World Bank publication *Curbing the Epidemic* (Jha & Chaloupka) made the first reference to how free trade had opened new markets to cigarette sales. The following year the World Bank published studies on trade liberalization and the rise in cigarette consumption in *Tobacco Control in Developing Countries* (Taylor, Chaloupka, Guiadon, & Corbett, 2000). The WTO itself sponsored a study that examined the situation with *Confronting the Tobacco Epidemic in an Era of Trade Liberalization* (Bettcher et al., 2001). Its authors flatly state, “the entire package of WTO agreements has facilitated the expansion of global trade in tobacco products” (p. 43). The trade treaty organizations are key external actors that support the cigarette commodity chain actors by overriding nation-state tobacco control regulations.

Shaffer, Brenner, and Houston (2005) provide several case examples of where transnational cigarette companies have made successful challenges against national tobacco control regulations in several trade treaty organizations. For the China case, China's entry into the WTO and its voiding of China's tobacco import taxes has been evaluated in six articles (Holden et al., 2010; Hu, T.-W., Mao, Ong, et al., 2006; O'Sullivan & Chapman, 2000; Tong, Tao, Xue, & Hu, 2008; Wong, J., 2009; Zhong & Yano, 2007). Some information on

MERCOSUR (Mercado Común del Sur) voiding Brazil's anti-smuggling export taxes is referenced in Ramos (2009). The impact of the WTO on China's tobacco control measures and MERCOSUR on Brazil's anti-smuggling legislation are included in their case studies.

The FCTC does not take priority over trade agreements (Shaffer, Brenner, & Houston, 2005). Under the WTO "governments may protect public health and morals only in so far as this does not interfere with corporate rights to free trade and investment" (Beder, 2007, p. 222). The solution recommended by Shaffer, Brenner, and Houston (2005) is to exclude tobacco from trade treaties – to denormalize it and exceptionalize it. This thesis offers a different solution: give enforcement power to the FCTC, a proposal I explore in the Conclusion.

The conflicted nation-state.

While we colloquially refer to a country by its name, it creates a false picture of a single actor. A nation-state is not the state or society, nor is it a unified whole: "*nation-states* are geographical and juridical units" (Robinson, 2004, p. 94). The nation-state is "always embodied in sets of political institutions" (p. 99). If we reify the state as a single "thing" (Robinson, 2004), then we miss seeing the conflicting actions of the different departments and units of the nation-state.

One major role of the nation-state is facilitating commerce (Fuchs, 2005; Robinson, 2004), and this function can conflict with the state's duty to protect its citizens (Fuchs, 2005), a function that legitimizes the state (O'Connor, 1973). Fuchs identifies the conflict of interest in the roles of the nation-states

to set up economic and political frameworks, to produce social capital, and provide legal and commercial institutions...and facilitate the achievement of a secure place in the global value chain based on comparative advantage. At the

same time, it has to provide public goods and foster both environmental protection and health and safety. (2005, p. 168)

Some government departments support commerce, while others are tasked with public health, so nation-state activities can work at cross-purposes in regards to cigarettes. This conflict of interest occurs within the United Nations as well, as Sklair (1998) observes how the Food and Agriculture Organization supports tobacco agriculture while the World Health Organization works against cigarette consumption.

Nowhere are these conflicts of interests between the commercial and public health functions of national governments clearer than in the countries with a state-owned tobacco monopoly. China is one of them. Other countries with state run tobacco companies are Egypt, Bulgaria, Taiwan, and Vietnam (Physicians for a Smoke-Free Canada, 2009). Before the 1990s, many more countries had state-owned tobacco companies, until the International Monetary Fund forced them to privatize the companies as a requirement for its loans (Gilmore, Fooks, & McKee, 2009). China's conflict of interest between cigarette profits and public health is discussed in five articles (Chen, M. H., 2007; Geist et al., 2009; Hu, Mao, Ong. et al. , 2006; H. Wang, 2006; and Wright & Katz, 2007). China's state-owned tobacco industry is a case in point on how the nation-state is a conflicted social force that on numerous occasions undermines its own tobacco control legislation.

Two additional nation-state actions provide examples of its conflicted activities. First, state-corporate joint ventures assist the government with financial and technological backing that increases cigarette production (WHO, 2008), but the activity externalizes the health costs back to the state. China in particular has signed contracts for dozens of joint ventures. The second example is loopholes in legislation that nullify its intended purpose (*ibid.*). Both Brazilian and

Chinese legislation have loopholes that permit cigarette manufacturers to bypass tobacco control regulations. Although the literature mentions both joint ventures and legislative loopholes, they have not been the subjects of specific studies

The conflicted actions of the nation-state have received some attention from the field of tobacco control. Yet these conflicting nation-state activities appear time and time again in this study, and they constitute a major barrier to the effectiveness of the nation-state as an actor for tobacco control.

Social norms.

The final category of social forces opposing national tobacco control are the local social norms that guide behaviour. They seem to be almost invisible to tobacco control researchers. Ma and co-authors (2008) assert that tobacco control must “persuasively address and counter prevailing misconceptions and *social norms* surrounding smoking” (p. 654, emphasis added). References to social norms are scattered in the literature on smoking prevalence, but they almost never addressed directly, particularly in terms of how they counter tobacco control regulations.

For the cases presented here, social norms supporting cigarette use in Brazil have not been directly studied. For China, Kohrman (2007, 2008) provides qualitative research (mostly interviews) that highlights male social norms of shared smoking. Ma and co-authors (2008) conduct a survey of Chinese social attitudes on tobacco use because “the progress in tobacco control in China has been slow and hindered by the deeply entrenched culture of smoking” (p. 655). These are the only studies available on social norms for my case study countries.

One social norm on cigarette smoking that is frequently noted in the literature is that cigarette use is an individual right and a free choice (see Jahiel, 2008; Ma et al., 2008; Sklair,

1998). From a social ethics perspective, Hooper and Agule (2009) argue that many smokers have a desire not to smoke, but are unable to act because of their overpowering desire to smoke. For the addicted smoker, the free choice to smoke is overridden by addiction as, “real autonomy is already being subverted by the addictive nature of nicotine” (p. 367). The authors raise the same point made by Anderson & Dunn (2006) about tobacco industry marketing: cigarette advertising undermines rational choice. But rational or irrational, cigarette smoking is supported by social norms.

The omission of social norms from tobacco control research is startling. Laws on tobacco use can be legislated, but public compliance with them is based on prevailing social behaviour. Reporter Washburn (2008) observes how in China “No Smoking” signs are put up with a wink - a wink that says it is OK to smoke here. Social norms that accept cigarette smoking trump regulations that ban it, and this social force countering tobacco control has received almost no study.

So the literature is a mixed bag when it comes to the social forces countering tobacco control. The transnational cigarette manufacturers and trade treaties are being researched, though not with extensive numbers of studies. Smuggling and some of the conflicts of interest within China are getting a little notice in the field of tobacco control, while local government actions and social norms have been almost completely overlooked. Not one publication discusses the full range of social forces countering national tobacco control. The tobacco epidemic continues to mount while tobacco control advocates promulgate more and more national regulations. The literature does not question the appropriateness of the nation-state as the agent of tobacco control. I am the first to argue that it is an ineffective agent due the multiple social forces working against it.

The major social forces countering national tobacco control are the firms profiting from cigarette consumption. Unfortunately, tobacco control research has focused almost exclusively on the transnational cigarette manufacturers. To create a broader picture of the cigarette industry, I turn next to the theory and methods of commodity chain analysis. This analysis also facilitates the discovery of the external actors that support the cigarette industry. Exploring the history of the cigarette commodity chain in China and Brazil provides examples of the conflicted actions of the nation-state, and shows the development of social norms that undergird the social acceptance of smoking. This reckoning of the social forces countering national tobacco control starts with the creation of the cigarette commodity chain with global value chain analysis, the subject of the next chapter.

Chapter Three: Commodity Chain Analysis

Commodity chain theory is a fairly recent invention. It describes the network of process and actors that produce and profit from commodity production and distribution. To grasp this theory, I begin by tracing its origins and epistemology, and then explain the two major variables in chain structure, processes and actors. The state as an external actor receives additional scrutiny. This is followed by a discussion of commodity chain models, highlighting the two I have selected for my study. The chapter closes with a critique of commodity chain analysis.

Commodity Chain Concept Origins and Epistemologies

The commodity chain is the defining object of study in the paradigms of commodity chain analysis, global production networks, global production chains, systems of provisioning, and global value chain analysis. A commodity chain displays “the entire trajectory of a product from its conception and design, through production, retailing and final consumption” (Leslie & Reimer, 1999, p. 404). Hopkins and Wallerstein’s widely quoted definition of a commodity chain is “a network of labour and production processes whose end is a finished product” (2000/1986, p. 223). Even more simply, it is “linked production processes” (*ibid.*, p. 221). The commodity chain is “one of the most pervasive metaphors for thinking about the links between production, distribution and consumption of goods” (Hughes & Reimer, 2004, p. 2). Note in this last definition how consumption is part of the chain, a process not included in Hopkins and Wallerstein’s definition, where the final product is the endpoint of the commodity chain. Contemporary definitions of commodity chains foreground firms, presenting them as a network of contractual relationships between buyers and suppliers that produces a commodity (Bair, 2009, Gibbon & Ponte, 2005; Sturgeon, 2009).

The commodity chain construct is a heuristic tool for analyzing complex relationships between corporations (Bair, 2008; Sturgeon, 2009). It fulfills that function in this study where I seek to uncover the actors profiting from cigarette consumption and their relative economic power, not the processes of cigarette production in and of themselves.

Most scholars designate world-system theorists Terrance Hopkins and Immanuel Wallerstein as the originators of the commodity chain concept in 1977 (Bair, 2009; Hughes & Reimer, 2004), although the first world-systems studies to employ it were not published until 1986 (Global Value Chains Initiatives, Publications [n.d.]). A few sociologists (Ciccantell & Smith, 2009; Hamilton, 2009;) consider agriculture sociologist William H. Friedland as the author of the commodity chain concept in a 1984 article, and his work appears to have been done independently of Hopkins and Wallerstein (Ciccantell & Smith, 2009). In the business world, supply chain management strategies were developed in 1982 by Keith Oliver of Booz Allen Hamilton (Bair, 2009), based on transportation logistics drawn from military operations (Memedovic et al., 2008). Michael Porter's 1985 *Competitive Advantage* advanced intra-firm distribution management techniques, strategies that remain widely popular (Bair, 2009). Chain theories were "in the air" in the 1980s.

Hundreds of case studies have been made of commodity chains (Global Value Chains Initiative, Publications). The term global value chain was propagated in 2000 by the Global Value Chains Initiative (funded by the Rockefeller Foundation) (Bair, 2008; Gereffi, Humphrey, & Sturgeon, 2005; Talbot, 2009), in part to convey the discipline's research focus on economic upgrading for business (Sturgeon, 2009). Global value chain analysis "has moved away from its world-systems origins" argue Gibbon, Bair, and Ponte (2008, p. 316), and Bair (2009) asserts that global value chain analysis is distinct from prior chain theories because it applies transaction

cost analysis. On the other hand, some scholars (Friedland, 2001; Gibbon & Ponte, 2005; for additional researchers see also Bair, 2009) believe the only difference as one of terminology, not substance, resulting from a “lack of coherence within the field” (Hamilton, 2009, p. 24).

Sturgeon claims that global value chain analysis is not a grand theory, but a “more modest theory of linkages” (2009, p. 123). He argues that overarching theories for describing entire chains are almost impossible to formulate due to the complexity of economic systems. He identifies global value chain analysis as a “nascent theory-building project” (ibid., p. 134).

The epistemological foundation of commodity chain analysis is that inter-firm networks (chains) are the dominant economic structures in the functioning of a global economic system (Sturgeon, 2009). Production is described as disintegrated or fragmented, yet tightly coordinated by large corporations (Gibbon, Bair, & Ponte, 2008; Robinson, 2004; Sturgeon, 2008). This breaking up of production processes makes international production possible, and the process locations are spreading globally (Hamilton & Gereffi, 2009). Globalization is central; commodity chains represent the “internationalization of network forms” (Bair, 2008, p. 340). Commodity chain analysis asserts that these economic connections, while shaped by political and social forces, are controlled by firms, not by governments (Hamilton & Gereffi, 2009). In light of this epistemological assertion, I bracket out this assumption as I analyze the relative power of commodity chain actors against the nation-states.

Other researchers (Ciccantell & Smith, 2009; Levy, 2008) and I observe a valorization and naturalization of the capitalism in much of the contemporary chain research. Hamilton (2009) labels it a teleological assumption. As I will discuss below, many current studies in global value chain analysis have the purpose of improving the current capitalist system of production. Even the word “value” in the name global value chain analysis is ideologically

loaded, connoting collaboration for profit-making, while obscuring the conflicts over the distribution of surplus value in the chain (Levy, 2008), and ignoring labour-capital relations within processes (Ciccantell & Smith, 2009). Cozy relationships are pictured in commodity chain analysis, not conflicts (Hess, 2008). Bair (2008) acknowledges that global value chain theory has a bias towards functional and positive effects.

What is fascinating about commodity chain analysis is how it has two distinct applications. Global value chain analysis is utilized by economists and businesses for *upgrading* (Smith & Mahutga, 2009; Talbot, 2009; Vargas, 2001). The objective is to improve a firm's position in the global economy (Talbot, 2009), to “move up the value chain” with new production capacities and new markets (Gibbon & Ponte, 2005, p. 87) and to reduce transaction costs (Bair, 2009). In these studies, the chain is researched to improve profitability.

Yet the same analytical framework also serves activists (Bair, 2009; Barndt, 2008; Leslie & Reimer, 1999; Levy, 2008; Talbot, 2009). The goal is to “locate the consequences of our consumer choices and to forge a politics of consumption” (Leslie & Reimer, 1999, p. 402). What a dichotomy! One group of researchers seeks to improve business processes for increased profits, while the other undertakes studies to expose exploitative business processes. Both groups are utilizing the same commodity chain model.

I now turn to the conceptual constructs of commodity chain analysis: its variables of processes and actors.

Modeling the Commodity Chain: Processes and Actors

Jennifer Bair states that the purpose of the commodity chain metaphor is to show “the relationship between actors and activities” (2009, p. 2). Actors and activities (or processes) are

the core variables that compose a commodity chain, although they are rarely presented explicitly as such in the chain theory literature. *Actors* are the actual persons, groups, firms, and institutions involved in the production of the commodity, or who impact that production. What Bair names “activities” are actually *processes*, which are all the activities involved in producing, distributing, and consuming a commodity. The examination of the commodity processes uncovers the entire cast of actors and their interconnections, modeled as a commodity chain.

Processes.

I am using the processes of the commodity chain to reveal the full roster of the actors profiting from the consumption of cigarettes, so I will not go into detail on physical processes in the cigarette commodity chain. Processes such as transplanting tobacco seedlings and the functions of nicotine addiction may elicit one’s curiosity, but the knowledge contributes nothing to my research action agenda. Nevertheless, a basic understanding of the categorizations of processes is necessary to understand the cigarette commodity chain.

The major theoretical construct for diagramming processes is *process nodes*. Other conditions that shape processes come from the commodity materials, location, and equipment. Process support activities make chain processes possible. Materials move forward into different production processes that produce different commodities. Finally, commodity chains have their histories, and knowing those circumstances is indispensable for understanding chain structure.

Processes are divided into *process nodes* that represent a discrete, specific production process in the commodity chain (Gibbon & Ponte, 2005). They are “pivot points in transformation sequences” (Smith & Mahutga, 2009, p. 66). A process node is usually a cluster of processes performed by an individual or a group of actors, based on how the actor(s)

transform the inputs (Wallerstein, 2009). The processes are aligned to each other by contractual relationships between the actors; these relationships are termed *links*. The full set of linked nodes is the commodity chain, *processes linked by actors*. Process nodes are the central feature in commodity chain models.

Other factors shape the commodity chain. The commodity itself structures the chain (Talbot, 2009). The materials used in its production process (Hughes & Reimer, 2004), and the requirements of specific processing steps can functionally limit the chain (Gereffi, Humphrey, & Sturgeon, 2005). Agriculture in particular can take place only in “particular ecological niches” (Talbot, 2009, p. 94), and weather has an impact on agricultural production. Some materials require highly specialized equipment that produces only a single type of product, termed *asset specificity* (Bair, 2009; Sturgeon, 2009). This locks the actors providing these processes into relationships with a limited number of buyers (Bair, 2009). Processes are not open-ended, but are bound to the limitations of materials, location, and equipment.

Commodity chains require transportation, storage, and communication infrastructure to link its fragmented processes (Bair, 2009; Ciccantell & Smith, 2009; Memedovic, Ojala, Rodrigue, & Naula, 2008; Rabach & Kim, 1994; Smith & Mahutga, 2009). Third parties are routinely contracted to supply transportation and other services such as inventory control, warehousing, packaging, and custom brokerage, and these services comprise 10% - 17% of business costs (Memedovic et al, 2008). Without transportation, storage, and communication infrastructure, the actors in the commodity chain would be unable to link its dispersed processes.

Production processes do not always proceed in a single sequence. Chains exhibit a split when some portion of the commodity output proceeds to one process node, while other outputs continue to a different process node. For example, once tobacco leaf is harvested, it may be sold

to an exporter that processes it for cigarette manufacturing by a third party, or purchased directly by a transnational cigarette manufacturer, or siphoned off by a counterfeiter. These are divergent process paths. Talbot (2009) labels these diverging processes as *strands*. Strands are crucial to this study's models because they display the black market links to legitimate commerce. The black market is a significant channel through which smokers obtain cigarettes: 30% in Brazil and 8% in China (Framework Convention Alliance, 2007).

Finally, history shapes chains (Gereffi, Humphrey, & Sturgeon, 2005), and global commodity chain analysis does not give enough weight to their historical development (Hamilton & Gereffi, 2009). In world-systems analysis, commodity chains originate with the formation of the capitalist world economy in the mid-16th century (Wallerstein, 2009). In global value chain analysis, they are considered to be a contemporary phenomenon, arising from the globalization of production and the fragmentation of production processes (Gereffi, et al., 2005). One unusual interpretation of the historical beginnings of commodity chains is from Memdovic et al. (2008): "simply a transition phase permitted by cheap oil" (p. 372), an observation that may well prove true. Save for world-systems theorists, chains are held up as a modern phenomenon without a substantive history. This makes it all the more imperative for my application of comparative historical methodology to my cases, for tobacco use and commerce begins over 400 years ago.

To sum up, chain theories provide concepts to further represent the processes of commodity chain as a linked set of process nodes with divergent process strands. The chain structure is historically situated. It is constrained by the intrinsic properties of its commodity materials and the availability of support functions. Identifying the chain processes helps me answer the question that is far more germane to this study: "Who profits?"

Chain actors and external actors.

Actors are classified as *chain actors* and *external actors*. The most important chain actor is designated as the *lead firm*. The contractual relationships between the chain actors are conceptualized as five ideal types of *governance*. I begin this discussion with the concepts of the lead firm and governance, and then focus on the external actor, the nation-state.

Chain actors and lead firms.

Chain actors are all the entities involved in the production and consumption of a commodity. Identifying powerful actors is central to global value chain analysis (Sturgeon, 2009). These corporations are designated as *lead firms*, which are almost always transnational corporations (Bair, 2009; Talbot, 2009), and they are the subject of most of the research (Folds & Larson, 2008). Lead firms play the major role in controlling the contractual (monetary) relationships with suppliers, and managing the production processes (Bair, 2009; Talbot, 2009). These firms usually exercise control over the final product market (Talbot, 2009).

Lead firms hold purchasing power (Sturgeon, 2009). This power is visible when a firm sets the terms for the quality standards, timing, and production methods of their suppliers (Gibbon & Ponte, 2005). Lead firms leverage their power when they offload unwanted functions onto their suppliers (*ibid.*). Lead firms seek to lock in and monopolize suppliers (Gereffi, Humphrey, & Sturgeon, 2005).

But it is critical not to see power as an “all or nothing” condition (Gibbon & Ponte, 2005). Supplier firms are not necessarily cooperative, and they may contest standards or press for higher profits (Talbot, 2009). Suppliers may have competence power through providing scarce or highly technical production services (Sturgeon, 2009). Suppliers of rare materials may

also exploit their position (Ciccantell & Smith, 2009). Nevertheless, the lead firm's ability to exclude suppliers (Gibbon & Ponte, 2005) or change firms undermines suppliers' ability to utilize their power, even where there are as few as two competing suppliers (Sturgeon, 2009).

Lead firms increase their power through *vertical integration*, which involves taking over suppliers through mergers and acquisitions. The result is that several processes of the chain are owned by one corporation, a “quasi-monopoly” that permits it to corner a large part of the chain’s profits (Wallerstein, 2009). Highly vertically integrated companies may have a disproportionate amount of power in the chain (Talbot, 2009). Vertical integration is critical, and this study shows it at work as both an historical and a contemporary process for the monopoly actors in the cigarette commodity chains of China and Brazil.

Governance: the relationships between chain actors.

The lead firms are not the only actors with power relations in the commodity chain. All chain actors are linked by contractual obligations, and *governance* is the concept of power relationships between contractual chain actors. It is the most frequently employed concept in commodity chain analysis (Bair, 2009). Governance describes the “power relations between actors that shape the flow of tasks and the distribution of costs and profits along the chain” (*ibid.*, p. 26). Which actors specify process functions, and which ones determine the distribution of profits is not all one sided, and power relations can be disputed. Determining the governance interactions between the chain actors gives the commodity chain model the ability to reveal weaknesses in the chain, one of the goals of this study.

The typology of governance is presented in a seminal article, “The Governance of Global Value Chains” (Gereffi, Humphrey, & Sturgeon, 2005) which classifies the governance form in

the buyer-seller dyad. The typology of governance is determined by a high or low rating for three variables: the complexity of transactions in the dyad, the ability of the dyad to codify transactions, and the capabilities of the supplier. These variables result in five ideal types of buyer-seller relationships.

The five types of governance are ranked by the power of the buyer, from the lowest to the highest. Type one is *market* where companies bid in spot-markets for materials. Generally, both the seller and buyer have equal power. Type two is *modular* where sellers make products that conform to buyer's requirements in a "turn key" process. The seller exercises control over the production process, while the buyer has the power to determine product specifications. Type three is *relational* where ties between buyer and seller are rooted in historic, family, ethnic, or local relationships. The buyer has power over sellers who are trapped in relationship dependency. Type four is *captive* where asset specific suppliers have no alternative than to capitulate to the demands of buyers. The fifth and final type is *hierarchy* where a single firm encompasses many of the production processes; this is a firm with high levels of vertical integration.

The type of governance can vary in discrete parts of chain (Bair, 2009; Gereffi, Humphrey, & Sturgeon, 2005; Sturgeon, 2009). No one governance form encompasses the entire chain (Talbot, 2009). Sturgeon (2009) claims that the contractual type of governance between lead firms and major suppliers influence patterns of power along the entire chain, and Bair (2008) believes that the governance form of one segment may have impacts on adjacent segments. The concepts of the lead firm and governance provide a framework for understanding chain actors and the power relations between them. Unfortunately, the commodity chain conceptualization of external actors is far sketchier.

External actors.

External actors are defined as those who impact the chain, but are not connected to its processes. Sturgeon (2009) categorizes three types of external actors. The first category is *institutions*, which are government agencies. The second is *groups*, which are NGO's, industry trade organizations, unions, and advocacy organizations, to which Talbot (2009) adds social movements. Finally there are *rules*, which encompass laws, regulations, and social norms.

Social norms shape chains (Gereffi, Humphrey, & Sturgeon, 2005), and in commodity chain analysis they are modeled as external actors. This thesis instead categorizes them as a separate social force. Nonetheless, both classifications highlight how social norms effect commodity chains. A strictly economic interpretation of commodity chains loses the complexity of its interactions with political and social contexts (Levy, 2008).

The nation-state as external actor.

The nation-state is defined as an external actor in commodity chain analysis. Hess (2008) observes a dichotomy in the commodity chain literature on the role of the state. On the one hand, the nation-state is viewed as a passive regulatory environment, while in other studies the state is considered an active part of the chain. Yet most academics view the nation-state as playing active role in commodity chain functioning. States have a “profound impact” on the commodity chain with “the evolving rules of the game” (Gereffi, Humphrey, & Sturgeon, 2005, p. 98; see also Bair, 2008). The state can both “enable and limit” the actors in the chain (Sturgeon, 2009, p. 128). This is the essence of the conflicted nation-state in regards to tobacco control: some units of the nation-state enable the cigarette commodity chain at the same time other government agencies seek to limit cigarette consumption.

Wallerstein (2009) discusses a number of tactics that corporations utilize in response to state regulation, and how the commodity chain restructures as a result. Firms can set up offices in the country of final sale to avoid import/export duties and customs regulations. They can relocate their production processes to circumvent environmental regulations. They can bypass government regulations through intra-corporate trade, especially for those firms that have extensive vertical integration. Chains can be relocated to engage in currency manipulation. Wallerstein's short chapter is one of the few references to the relationship between the nation-state and commodity chains.

Chain theories have little to say about the state and its interactions with chain actors and processes. The state disappeared from commodity chain research after the 1990s with the development of global value chain analysis (Folds & Larson, 2008). For a better theoretical lens on the state, I again turn to Wallerstein, and his perspectives on the nation-state in world-systems theory.

Wallerstein (2004) defines the modern state as the sovereign state. States maintain their existence as part of an interstate system where all countries reciprocally recognize each other's territorial boundaries and internal autonomy. The interstate (or nation-state) system is an historical outcome (Robinson, 2004) that Wallerstein (2004) traces back to the Treaty of Westphalia (1648) as the foundation of international law. He asserts that power of the states grew with their ability to collect taxes, and, interestingly enough, governments have been taxing tobacco since before the Treaty of Westphalia.

How do nation-states impact firms? Wallerstein (2004) identifies seven state activities that impact business operations: 1) laws for import and export, and foreign workers; 2) property rights; 3) workplace regulations; 4) support to externalize costs; 5) laws on monopolies; 6)

taxation; and 7) diplomatic pressure. Capitalist firms thrive in the multi-state world-system because they can relocate between countries, taking advantage of differing laws, regulations, and tax rates while continuing to make profits within the world-system (Ciccantell & Smith, 2009; Levy, 2008; Wallerstein, 2004). But do not let the sheer number of factors blind us to the major reasons why firms chose locations. While corporations do business in a particular location for state supplied advantages such as tax differentials, tax reduced ports, a stable currency, and low regulatory pressures, the primary considerations for a corporation operating in a specific place are based on labour and raw materials (Myers, Borghesi, & Russo, 2007).

Monopolies are of special interest for researching the cigarette industry. Laws on monopolies are highly leveraged by firms to increase profits (Wallerstein, 2009). Brazil's domestic cigarette market is dominated by BAT, and of course China's state-run tobacco industry is *per force* a monopoly. This pattern of monopolies is reflected clearly in my case studies.

Commodity Chain Models

The first two commodity chain models were developed by Hopkins and Wallerstein (2000/1986) and Gereffi (1994). Hopkins and Wallerstein observe the operations of the chain at the level of individual links: the processes before and after each node, the relations of production within node, the organization of production, and its location. Gereffi (1994) breaks down the chain structure into four components: its input-output structure, territoriality, governance structure, and institutional context. Both frameworks include input-output and location. Gereffi foregrounds actors, with governance and institutions, while Hopkins and Wallerstein underline processes with

labour and production organization. These foundational models are incorporated in the next generation models of Timothy Sturgeon and John Talbot.

Sturgeon (2009) formulates “three pillars” of global value chain analysis from Gereffi’s structure. These are governance links, power distribution, and the influence of institutions. The third pillar, the role of institutions, is the heart of this study, how the nation-state impacts the commodity chain. Sturgeon’s model highlights the relationships of actors.

On the other hand, Talbot’s construction of a commodity chain basically considers processes. His commodity chain structure is simple: “conceptually, we can think of commodities as flowing from the extractive end to the consumption end of the chain, and money as flowing back in the opposite direction” (2009, p. 103). This model represents two sets of flows, one process flow from the extraction of raw materials to the consumption of the final product, and the other a monetary flow of profits. While he traces money flows “back” from consumption to extraction, in reality money is exchanged between actors at each process node. Monetary flows through money laundering are central in the black market (Wilson & Zambrano, 1994). Monetary flows are part of my cigarette commodity chain models, and the conflicts between chain actors over money reveals weakness in the cigarette commodity chain.

Talbot does not neglect actors. He states, “one of the most important questions in commodity chain analysis is, who benefits?” (2009, p. 103). My question is almost the same: Who profits? Only actors receive profits, not processes. “Follow the money” has always been my investigative methodology.

For my study, I combine the measure of input-output with Sturgeon’s governance links and the role of the institution, and Talbot’s process and money flows to construct my model of

the cigarette commodity chain. These models are not particularly complex, but together they encompass the processes and actors that I examine.

Critiques of Commodity Chain Analysis

To start with, some researchers suggest other theories may be more fruitful than commodity chain analysis. Several academics (Bair, 2009; Hughes & Reimer, 2004; Levy, 2008) suggest that actor-network theory might better capture the phenomena of global commodity production because commodity chain analysis overlooks the agency of individual actors (Bair, 2009). Actor-network theory is better established and conceptualizes the agency of actors, but it does not represent the links between actors and processes more effectively than the commodity chain model. Social network analysis is another discipline for modeling networks (Bair, 2009), but here again, it is the linkage between processes and actors that distinguishes commodity chain analysis from other network theories.

As for the theoretical concepts themselves, Talbot (2009) states that global value chain analysis lacks a classification schema for variables, and it has no typology of governing agents. Sturgeon complains that the chain concept “[has] few generic reference points, no industry-neutral explanatory variables or descriptive terms that allow for easy comparability” (2009, p. 125). My position is that the chain metaphor is an heuristic device, and it should not be overloaded with conceptual duties.

Three criticisms of commodity chain analysis cannot be remedied in this thesis. First, although I agree with Leslie and Reimer (1999) that chain models fail to represent the discourses and tacit knowledges that shape chains, I have no means of capturing this insider information with research drawn from public sources. Second, Bair (2009) rightly points out that commodity

chain research rarely includes gender-based analysis. Although I report gender smoking prevalence and gender-specific social norms, I have not made a systematic GBA of the cigarette commodity chain. The third criticism is that environmental impacts are rarely part of commodity chain research (Talbot, 2009), and these damages are not addressed in tobacco control either. Without data, I cannot include these externalized costs to society.

Still I am able to address many critiques of commodity chain analysis with my study design. To start with, the easiest weakness to correct is that commodity chain models can be over-focused on processes and materials (Bair, 2009; Hughes & Reimer, 2004). The simple solution is that my model includes both actors and processes, even focusing on actors to fulfill my action agenda.

Other critiques point out omissions in commodity chain models, and this study fills four of these holes: regulation, transportation, consumption, and retailing. Gibson and Ponte (2005) report that the impact of regulation on commodity chains is an understudied area, and this study examines nation-state tobacco control legislation. Transportation is another process infrequently represented in commodity chain models (Smith & Mahutga, 2009), and I do find a few oblique but significant references to transportation processes, although I have not been able to identify any transportation firms involved in cigarette distribution. Consumption is often overlooked in commodity chain research (Hughes & Reimer, 2004), but it is included in mine. Hughes and Reimer comment on how chain analysis lacks details on retail activities, but I do assess what little data is available on retail processes and actors. Finally, models may obscure location (Bair, 2009), yet this study offers a local history of the country's tobacco industry, and descriptions of regional cultural norms regarding smoking.

One strand of processes and actors almost completely missing from commodity chain research is the black market. Most studies look for common features and routine processes in commodity chains (Bair, 2009), and as a result, non-normative processes and illegal actors, although linked to the commodity chain, are not part of commodity chain models. Local resistance to chain actors, idiosyncratic process changes, and exceptions to models need to be studied (Hamilton, 2009). Considering the quantity of counterfeit products of all kinds, this omission in commodity chain research is a significant shortcoming. A realistic model of the cigarette commodity chain must include the processes for counterfeit products and the actors who bypass nation-state taxes by distributing contraband cigarettes.

As a nascent theory, commodity chain analysis has its weaknesses. The commodity chain metaphor has its limits as an heuristic device. Commodity chain models omit factors in chain functioning, including individual tacit knowledges and systemic sexism. Critiques point out omissions in several areas, including regulation, environment, transportation, consumption, locality, and the black market. By incorporating as many of possible of these excluded areas, I produce a more robust commodity chain model.

The chain metaphor is of great value to my study because it has the capability to locate the numerous actors of the cigarette industry, many of them overlooked or mislabeled as industry “allies” in the tobacco control literature. Global value chain analysis offers an integrated model, albeit one often biased towards capitalism, that can expose the entire set of actors profiting from tobacco, plus their relationships with each other and their interactions with other external actors. How I build a cigarette commodity chain model for China and Brazil is the subject of the next chapter, Study Methodology.

Chapter Four: Study Methodology

The methodology works to answer the two research questions: what does a more comprehensive picture of the tobacco industry look like, and why is the nation-state an ineffective actor for tobacco control? The methods construct a cigarette commodity chain model, and uncover its structural weaknesses. The comparative historical analysis for each case reveals the many social forces that counter nation-state tobacco control legislation.

This chapter describes the methods of comparative-historical analysis and the utility of case studies. I explain why I selected Brazil and China as my cases, and how I searched for my data and what sources I found for this study. Next I present how I built the commodity chain models, and how the case histories were composed. I close with a few notes regarding my modes of analysis.

Comparative-Historical Analysis and Case Studies

Comparative-historical analysis has been part of sociology since the works of Marx and Weber (Alford, 1998). A practical definition of the method is “the systematic comparison and analysis of processes over time to explain large-scale outcomes” (Mahoney, 2004, p. 81). History is viewed through the lens of theory, which in this study is commodity chain analysis. Many sociologists (myself included) consider comparative-historical analysis a methodology, not a theory. Alford says, “one searches in vain for a unifying epistemological basis for the practice of historical sociology” (1998, p. 48). Yet I can hardly imagine good sociology without history, as Wallerstein insists, “all useful descriptions of social reality are necessarily simultaneously ‘historical’ . . . and ‘social scientific’” (2000, p. 35).

To employ comparative-historical analysis, the researcher needs both a sound theory and a deep understanding of actual cases (Mahoney, 2004). There are hundreds of global value chain studies (Global Value Chains Initiative, Publications, [n.d.]), and many of them are rich case studies (Levy, 2009). Ragin explains the utility of case studies

Case oriented methods stimulate a rich dialogue between ideas and evidence.

Because these methods are flexible in their approach to the evidence - few simplifying assumptions are made - they do not restrict or constrain the examination of evidence. They do not force investigators to view causal conditions as opponents in the struggle to explain variation. Rather, they provide a basis for examining how conditions combine in different ways and in different contexts to produce different outcomes. (1987, p. 52).

Case methodology allows me to apply the concepts of commodity chain analysis with data on how an industry works in real time. Commodity chain analysis as a middle-range theory burdens me with few assumptions - particularly since I have scoffed at its capitalist bias, and bracketed out its assumption that firms control economic power. And most importantly, the local historic conditions of the cigarette commodity chain convey the depth of the embeddedness of cigarette use and the tobacco industry within a society.

Sampling Criteria

So which countries should I select for my case studies? I have chosen my two case countries with extreme sampling, as the table below indicates the top ranking of China in tobacco production and cigarette manufacturing, and Brazil's position as the world's largest exporter of tobacco leaf, and the second largest producer of tobacco.

Table 2. Global Cigarette Production, and Tobacco Leaf Production and Export, 2008

Top 10 Tobacco Leaf Producers in tonnes		Top 10 Cigarette Manufacturers in millions of sticks		10 Top Tobacco Leaf Exporters in tonnes	
China	2,044,310	China	2,752,000	Brazil	681,480
Brazil	747,688	India	461,350	India	230,000
India	743,830	USA	437,770	China	152,000
USA	392,780	Russia	281,920	USA	125,000
Malawi	161,530	Netherlands	193,200	Italy	124,000
Indonesia	152,170	Indonesia	160,380	Turkey	111,000
Argentina	138,080	Germany	153,120	Greece	94,000
Italy	111,220	Japan	140,820	Malawi	69,000
Greece	109,760	Brazil	117,290	Zimbabwe	65,000
Paraguay	90,630	Turkey	116,250	Argentina	53,000
World	6,017,730			World	2,280,250

Data presented in *Brazilian Tobacco Yearbook*, 2009 (pp. 149, 151).

So China produces as much tobacco leaf as the next four leading countries combined, and manufactures substantially more cigarettes than the next nine countries together. Brazil exports more tobacco leaf than the next four leading export countries combined. These figures are just one of the indicators of the monopoly positions at work in the global cigarette economy.

Extreme sampling is easy to justify because I can assume that the major actors are involved in these prime locations in the worldwide cigarette industry. In addition, the selection of Brazil and China permits me to make a unique comparison of a capitalist commodity chain and a state-run system.

Data Searches and Data Sources

Data Sources. To gather my study data, I conducted a broad search for literature, and then reviewed the references in relevant articles and books for additional sources.

Table 3. Data Search Terms and Sources

Search Terms	Year	Journals or Databases
[Brazil OR China] AND [tobacco OR cigarettes] + regulation [tobacco OR cigarettes] + government [tobacco OR cigarettes] + “tax revenues” cigarettes + retail [tobacco OR cigarettes] + [transportation OR distribution] [tobacco OR cigarettes] + [import OR export] WTO + [tobacco OR cigarettes] smuggling + [cigarettes OR tobacco]	2000	Academic Search Complete Web of Science WorldCat Medline
tobacco OR cigarettes	2000	<i>Globalization and Health</i> <i>Global Crime</i> <i>Review of International Political Economy</i> <i>Journal of World-Systems Research</i> <i>Social Science and Medicine</i>
China + [tobacco OR cigarettes] Brazil + [tobacco OR cigarettes]	2005	AgEcon Search Business Source Complete Google Scholar
Brazil OR China	2000	<i>Tobacco Control</i> <i>Nicotine and Tobacco Research</i>
smuggling OR regulation OR FCTC OR WTO OR trade OR economics	2005	<i>Tobacco Control</i> <i>Nicotine and Tobacco Research</i>

Trade publications were located with a web search and purchased for review. The data sources utilized in the case studies are described below.

These data searches were made twice, once in September 2009, and the second time in June 2010. The Euromonitor Global Information Database was rechecked for the most current data in September 2010.

Data sources.

General references.

A number of sources provide data for the case studies in addition to the academic research. Specialized encyclopedias, commerce databases, WHO reports, trade publications and other grey literature supply worthwhile data.

Book references on the industry are in short supply. Two specialized tobacco encyclopedias provide entries with historical information: Goodman's *Tobacco in History and Culture* (2005) and Gilman and Xun's *Smoke: A Global History of Smoking* (2004). Initial tobacco commercial history comes from Oropeza (2005). Two books include China and Brazil in their scope, and the most valuable one is Cox's *The Global Cigarette: Origins and Evolution of British American Tobacco 1880-1945* that has some information on Brazil, but is a treasure trove for China. Duke and Jordan (1995) detail the history of Universal Leaf, the world's largest tobacco leaf exporting corporation.

Commercial databases have been critical for hard numbers on tobacco leaf and cigarette commerce. I have made extensive use of Euromonitor International (Global Market Information Database), with tobacco industry reports at global, country, and company levels. Datamonitor provides some useful data, in particular its rating of the relative strength of suppliers that applies

to governance relationships. Unfortunately, the United Nations Food and Agriculture Organization case studies on tobacco agriculture (2003) are dated, but the publication does offer historical background.

For examining nation-state compliance with FCTC tobacco control measures, I have relied primarily on the WHO's annual reports on the global tobacco epidemic (2008, 2009), also known as the *MPOWER Reports*. Other reports of social compliance with tobacco control regulations, particularly smoking bans, come from scattered references.

I utilize grey literature sparingly. I obtained articles from the newswires Reuters (1 article), Tobacco China Online (5 articles), and Xinhua (1 article). Trade publications have been useful: *Tobacco Reporter* (2 articles), *Tobacco Journal* (1 article), and *Tobacco Asia* (3 articles). The annual trade reference, *Global Tobacco Industry Guide 2009*, publishes lists of suppliers by country, and is an excellent source for identifying chain suppliers and chain actors. Company websites and annual reports yielded relevant data, and some sites had information on the company's history. Of the seven sites I examined, Alliance One, Universal Leaf, and Souza Cruz provided significant data.

Data sources: Brazil.

For Brazil's colonial history on the tobacco trade, Barickman (1998) is the primary source. Souza Cruz, Brazil's dominant cigarette manufacture, has an English language website that includes tobacco industry history, especially as it relates to regulation and taxation. Poppino (1973) is one of few Brazilian histories to include tobacco - contemporary sources omit the industry. Norton (2008) includes some references to Brazil in the Atlantic history of tobacco.

Very little has been published about tobacco in Brazil (at least in English). For the cigarette commodity chain, Vargas (2001) traces a regional Brazilian tobacco industry from seed through to initial processing and its first tier buyers of exporters and manufacturers. But the chain model ends at the sale of tobacco leaf, plus the industry information is dated. Still the article has unique and valuable information of the development and monopoly of foreign ownership in the Brazilian tobacco leaf industry. Geist and co-authors (2009) include Brazil as one its cases on tobacco growers and crop diversification as a FCTC tobacco control measure, and is helpful on the cigarette commodity chain's impact on farmers.

Tobacco control references are limited. The World Bank in 2007 published a report on tobacco control in Brazil that offers a good overview of the government institutions involved in tobacco control, and a complete list of regulations (Iglesias et al. 2007). A brief news item in *Tobacco Control* (Bialous, 2004) reports on the grower's lobby attempts to stall Brazil's ratification of the FCTC. Cohen's (2005) history of Souza Cruz references an incident of intra-trade activity that bypassed nation-state tobacco control regulations, an event confirmed by Shafey et al. (2002). Finally, Monteiro et al. (2007) provides updated smoking prevalence statistics.

Publications addressing the Brazilian black market are sparse. Ramos (2009) has a short section on Brazil. An older article, Shafey and co-authors (2002) is still useful. The best available source is the 2009 report on cigarette smuggling from Argentina published by The Center for Public Integrity (Guevara et al.).

Trade publications are important references for the cigarette commodity chain in Brazil. The *Brazilian Tobacco Yearbooks* provide most of the current data, with information on chain activities in the 2009, 2008, and 2007 editions. A trade article on the Brazilian leaf market

(Mullen, 2009) adds to the examination of the grower-buyer relationship. An examination of the annual reports of Souza Cruz, Alliance One, and Universal Corp also yielded data on tobacco leaf sales and cigarette production.

A new book on the history of tobacco growing in Brazil was released in 2009, *Organização e Funcionamento do Mercado de Tabaco no Sul do Brasil (Organization and Operation of the Tobacco Market in the South of Brazil)* by economists Felipe Cauê Serigati and Leonardo Luís Calixto. The *Brazilian Tobacco Yearbook 2009* includes a translated quote from the book that indicates it explores

conflicts result[ing] from asymmetric relations between the processing companies, seemingly well organized and strong, and a huge number of rural producers, many of them very poor and entirely dependent on the production of an agricultural raw material as a source of income. (p. 71)

Sadly, I could not obtain a copy of the book.

Data sources: China.

I did not expect to find so much literature on BAT's pre-WWII operations in China. Cox (2000) devotes an entire chapter to this history, and Cochran (2000) also has a full chapter on it. Information on the historical period of cigarette commodity chain development is supplemented with many advertizing details from Liang (2004), Tsai (2006), and Cochran (1999), and additional commercial history from Gerth (2003). Recently, Japan Tobacco has published its history written by two academics (Suzuki & Miwa, 2009) supplying a few references, which are unavailable elsewhere, to its operations in China prior to WWII. The availability of so much

historical information made it possible to examine China's cigarette commodity chain processes since the start of the industry.

Several publications discuss the structure of China's state-run cigarette industry. An edited volume, *Tobacco Control Policy Analysis in China* (Hu, 2008) references the government monopoly, but it is mostly focused on smoking related illnesses. Junmin Wang (2009) is a key article on the current structure of China's tobacco industry, and it also evaluates the impact of China's entry into the WTO on the industry. Information on the consequences of China's ascension to the WTO on tobacco control regulations is presented Zhong and Yano (2007) and Holden, Lee, Gilmore, Fooks, and Wander, (2010). A brief history of the industry since 1980 is available in Huizhong Zhou (2000). Li and Sun (2004) look at issues of competition and monopoly in the Chinese cigarette market, but the information is out of date. Hu, Z. Mao, Jiang, Tao, & Yurekli (2008) discuss leaf agriculture, and T.-W. Hu, Mao, and Shi (2008) detail Chinese tax structure.

As mentioned in the Literature Review, China's government is a prime example of the inherent conflict of interest between tobacco profits and public health. The Chinese government's conflicting activities is the subject in a short report in *The Lancet* (Chen, 2007) and a "perspective" article in the *New England Journal of Medicine* (Wright & Katz, 2007). Wang (2006) considers crop production and the role of the state in taxation, harm reduction, and warning labels. Hu et al. (2006) tabulates the economic returns of tobacco farming since China's entry into the World Trade Organization, and argues for an additional tax on cigarettes to reduce cigarette consumption.

For most of my references to the social dimensions smoking I am indebted to Kohrman (2007, 2008). Ma. et al. (2008), and a newspaper article (Washburn, 2008) also discuss social

norms. Peto, Chen, and Boreham (2009) provide the most current statistics on smoking prevalence.

As I stated in the Literature Review, I have tracked down sufficient sources to include the black market in my case models. My best source for information on the black market in China is a criminology article “The Dragon Breathes Smoke: Cigarette Counterfeiting in the People’s Republic of China,” (Shen et al., 2010). Three studies describe smuggling in China: Lee and Collin (2006), Lee, Gilmore, and Collin (2004), and O’Sullivan and Chapman (2000). One study shows China as a major location for the smuggling of black market cigarettes (Vander Becken et al., 2008). The Center for Public Integrity’s report by Te-Ping Chen (2009), “China’s Marlboro Country” is a particularly rich source for information Chinese counterfeiting.

The search yielded more data for China than for Brazil; consequently China’s case study is longer. The literature provides more history for China than for Brazil, while there is more current industry data available in English for Brazil than for China. Fortunately, I have turned up enough resources to construct my cigarette commodity chain models. The histories of the cigarette industry in China and Brazil are stories that, for the most part, are pieced together from scattered references in multiple sources. These histories, although incomplete, provide many examples of the social forces countering nation-state tobacco control.

Building the Commodity Chain Model

The most common method in commodity chain analysis is the inductive or grounded case study (Bair, 2009; Smith & Mahutga, 2009). My research design is a comparative case study of the cigarette commodity chain in two countries, using comparative-historical analysis as an inductive method.

The researcher.

Before I describe the model building steps, it is common practice for researchers to situate themselves in the research, and I bring my strengths and weaknesses to this thesis.

I am very well versed in tobacco control research. It has been my field of study for over five years, plus I have spent two years as a public health researcher at the Nursing and Health Behaviour Unit at the University of British Columbia and the British Columbia Centre for Excellence in Womens' Health. I am a co-author of an expert opinion report on tobacco cessation for the National Institutes for Clinical Excellence (Hemsing et al., 2010).

I understand the structures and processes of large corporations and manufacturers from my prior 18 year career in business sales and marketing.

I am familiar with some of the social mores of my case countries from 40 years of personal study of the folk religions of Brazil, and I have become conversant with Chinese Taoist folkways over the past 20 years. I have a rudimentary reading knowledge of Portuguese, but this skill was of no use because I could not obtain Brazilian publications.

My major weakness as a researcher is my activist stance that I rarely drop, so I may well have overlooked mundane chain functions in my search for opportunities to disrupt the cigarette commodity chain. Another significant weakness I have as a researcher is my endless curiosity about everything, so I read a massive amount of literature that proved to be of secondary interest.

And one more statement about my position as a researcher: I declare no competing interests. This is standard practice in tobacco control research publications. In effect this certifies that one has not received commercial compensation, neither from any cigarette industry firm, nor from any pharmaceutical corporations that treat nicotine dependence.

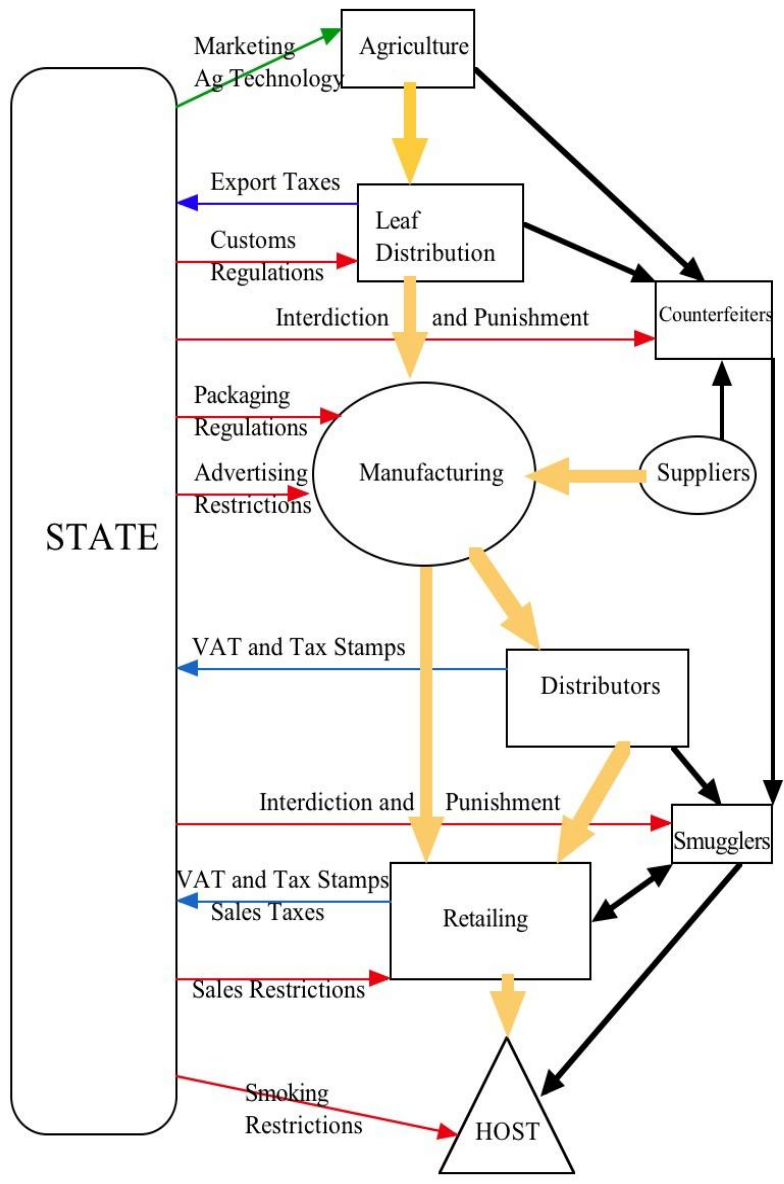
The construction of the cigarette commodity chain model.

I now move forward to the starting point of my research process. I began by using an inductive methodology to design a preliminary “template” model based on process descriptions from *Tobacco Production, Chemistry and Technology* (Davis & Nielson, 1999), and Munro and Schurman’s process model (2009) for agricultural-biotech supply chains. The initial model was part of my thesis proposal. It is Figure 1 on page 62. In grounded methodology, as data collection progresses, each piece of data on processes or actors is located on the model, or the model expanded to include it. These iterations continue until, ideally, no more additions are found.

Bair asks, “how should a chain be defined and made manageable for study?” (2009, p. 15). Like the old children’s song “the cat ate the rat, the rat ate the cheese,” or Hamlet’s loam, just how far back or forward do I trace chain processes? One means of operationalizing the chain is to give it boundaries; this is accomplished with end points (Folds & Larson, 2008). I have set these chain boundaries with one end point being tobacco seed agriculture, and the other is the consumption of the cigarette.

Within these chain boundaries, I customize the template model by adding, subtracting, and/or reparsing process nodes. The main features that define a process node are its input/output structure (Gereffi, 1994; Sturgeon, 2009), labour (Hopkins & Wallerstein, 2000/1986), and ownership (Hopkins and Wallerstein, 2000/1986).

Figure 1. Initial Model: Tobacco Commodity Chain and State Actions



Sturgeon (2009) offers three questions for determining process nodes: (1) what activities are grouped together or split apart? (2) how are materials/information passed from one node to the next? and (3) what is the location of the node? Looking at patterns of input/out, labour, and ownership, along with Sturgeon's questions, I determine, to the best of my judgment, the specific process nodes, and which processes are performed outside of the country.

Once the process nodes are represented, I diagram the process flow and alternate flow strands. These process nodes are then populated with its actors, and the links between them labeled by their type of governance, along with any financial information available. The completed models are presented in the Analysis chapter.

Cigarette commodity chain history.

Writing the histories of the cigarette commodity chain was straightforward. I read and noted all the sources found in the data search, and arranged the information into a chronological narrative based on commodity chain processes. The concepts of commodity chain analysis acted as a sensitizing frame that highlighted instances of social forces opposing nation-state tobacco control. I undertook additional research on the colonial origins of the tobacco trade and the mechanization of cigarette production to complete the historical picture.

Iterative process stages.

The iterative process to create this model progressed in the following stages. First, I created an initial model for the thesis proposal in September 2009, then further researched the theory and methods of commodity chain analysis, and then drafted the theory chapter that December.

The second phase of the construction of the commodity model followed the initial reading of the case materials obtained in the data search, allowing me to identify broad outlines of production. The readings for Brazil revealed the tobacco leaf exporters as key chain actors. I collected data on the tax structures for tobacco and cigarettes in each country, but the details were meaningless as national governments did not appear to be dependent on these revenues. At this time I drafted the history sections from January through March.

The third stage involved a detailed questioning of the processes to determine the process nodes. This stage brought out the importance of leaf curing processes which are performed by different actors in Brazil and China. At this point I created a concept map, and an initial outline for the thesis.

The next iteration searched for the actors involved in the process nodes, and the monetary flows and the governance relations between them. At this juncture, the current structure of the cigarette commodity chain was described in separate sections for processes and actors. This presentation proved awkward and repetitive, so the two sections were merged. I discovered that the processes acted heuristically to reveal the actors. I eliminated many process details from the thesis draft, and diagrammed another concept map.

In what I thought would be the last step, I constructed trial models of the cigarette commodity chains that required an evaluation of the relevance of the data for inclusion. I finished writing the full first draft. During this time I was able to share my research with my friends and family, and these lay explanations resulted in a simplification of my argument for the nation-state as an ineffective actor for tobacco control.

The actual last revision of the models and histories occurred during the “final” editing and review. I constructed a final concept map, and from it I formulated four categories of social

forces, which before had been represented simply as a list of anti-tobacco control actors plus social norms. This new classification schema necessitated extensive revisions of the thesis. I trust this extra iteration has resulted in substantial improvements in clarity in describing the social forces that counter national tobacco control regulations.

During the final two iterations, an addition 23 pages of information were set aside on both historical and contemporary production processes, including for the black market, a list of individual companies within the Chinese state run system, more details on BAT's history in China, and a history of tobacco control in each country. For theory I omitted a lengthy debate on Bair's position on global value chain analysis, more on the theory and its history, and a brief consideration of the smoker as Agamben's *homo sacer* as suggested by Kohrman.

Methods of Analysis

My analysis of the cigarette commodity chain models and the case histories is what Tilly (1984) defines as an encompassing comparison. "Encompassing comparisons begin with a large structure or process. They select locations within the structure or process and explain similarities or differences among those locations as consequences of their relationship to the whole" (1984, p. 125). This analysis requires "a mental map of the whole system and a theory of its operation" (*ibid.*, p. 125) and voilà - I have the commodity chain theory and model.

The analysis has two steps. The first is the construction of the cigarette commodity chain model for each case, that are then described individually and with cross-case comparisons. Categories for analysis are drawn from commodity chain theory: nodes, governance, monopolies, and vertical integration are critical to uncovering structural weaknesses in the chain. The second step is to evaluate the case histories to identify the social forces countering national tobacco

control legislation, and to compare the forces at work in the two countries. The cigarette commodity chain models and the results of the analysis of case histories are presented in the Discussion and Analysis chapter.

Since the beginning of this research, I have leaned on this guidance from the originator of the commodity chain concept, Immanuel Wallerstein:

We are measuring indirectly and imperfectly a total phenomena that we cannot see directly no matter what we do. The point however is to figure out how this total phenomena operates, what are its rules, what are its trends, what are its coming and inevitable disequilibria and bifurcations. It requires imagination and audacity along with rigor and patience. The only thing we have to fear is looking too narrowly. (2009, p. 89).

I have no fear – my thesis casts a broad net over the cigarette industry. But before I can start with the cases of China and Brazil, a little history on the colonial tobacco trade, and the 19th century industrial mechanization of cigarette production are needed to understand the origins of the cigarette commodity chain.

Chapter Five : The Tobacco Plant and the Cigarette Machine

Before I can proceed with my case countries, I need to outline the colonial origins of the tobacco trade, and introduce the mechanization of cigarette production by the cigarette-rolling machine.

The plant *nicotiana* has been cultivated and consumed in indigenous societies in the Americas for at least 1,500 years, with 72 different genera, all with very different flavours (Oropeza, 2005). The word tobacco comes from the Caribbean Aboriginal language Guarani or Tainos verb *tobago*, meaning smoking, not the plant name (*ibid.*). The term nicotine was composed from the name of the French Ambassador to Portugal, Jean Nicot (1560), who popularized tobacco use (Poppino, 1973). The Vikings probably smoked tobacco at their North American outposts (Oropeza, 2005). Columbus informed his king about tobacco, and how the Aboriginals had offered it to him (*ibid.*).

Other Spanish and Portuguese explorers to the Americas reported - and presumably experimented with - tobacco smoking (Oropeza, 2005). Tobacco was first dispatched to the Lisbon court in 1535, and soon all social classes were smoking pipes of this “medicinal” herb (*ibid.*). Spanish and Portuguese settlers in Trinidad were the first Europeans to cultivate tobacco, sometime between 1588 and 1591, utilizing both free and slave labour (Norton, 2008).

The first reference I find to tobacco taxes is for King James I of Britain - he used them to finance the 30 Years War (1618-1648), while his troops spread tobacco use among soldiers in Austria, Hungary, and Bohemia (Oropeza, 2005). His war funding with tobacco taxes is rather ironic since he had authored the first English publication against tobacco use in 1604 (Suzuki & Miwa, 2009).

Many nation-states took advantage of tobacco revenues. The first tobacco monopoly was enacted by an Italian state in 1627, the *Nicolo Tornabuoni* (Oropeza, 2005). By 1675 Castilla,

Léon, Lombardi, Portugal, Venice, France, and Bavaria had instituted state tobacco monopolies (Suzuki & Miwa, 2009).

The other major political power in Europe, the Catholic Church, held two positions on tobacco: most of the hierarchy strongly disapproved of it, while its use was widespread among the rank-and-file clergy (Poppino, 1973). In 1640, the Catholic Church persuaded the Portuguese Crown to adopt a “sin tax” on tobacco (*ibid.*), an item of interest for Portugal’s colony of Brazil. Inquisition officials inspected anyone transporting tobacco for a church permit that gave the bearer a special dispensation to do so (Norton, 2008). This is an example of another external actor in the historical development of the cigarette commodity chain.

References to smuggling appear in the records of late 1500s, with Venezuela the major site of *rescatar* (smuggling), usually with “the collusion of local authorities” (Norton, 2008, p. 151). Tobacco smuggling from Spain and Holland to England occurred as early as 1575 (Oropeza, 2005). The Spanish Crown in 1806, in response to widespread smuggling, forbid tobacco cultivation in its colonies for 10 years, a decision it rescinded in 1612 when the settlers protested that their livelihoods were being destroyed, and that the colonies’ local economy would fail (Norton, 2008). Nothing is new under the sun: see how the tobacco commodity producers have cried “foul” and have claimed serious economic consequences for almost 400 years.

The Spanish Crown tried other anti-smuggling tactics. It required all tobacco shipments to be processed in Seville, and outlawed any direct sales from the colonies to individuals (Oropeza, 2005). But these measures were to no avail, and by 1660 tobacco *rescates* (illegal shipments) from the colonies were received at ports in Lisbon, Basque country, France, and the Netherlands (Norton, 2008). The state and smugglers have been major actors in the cigarette commodity chain since its tobacco trade beginnings.

Now I fast-forward in time to the second half of the 1800s, to the invention of the cigarette-rolling machine that is the enabling technology of the cigarette industry. During the mid-19th century, the Crimean War had spread a different product for tobacco use, the hand-rolled cigarette (Suzuki & Miwa, 2009). Hand rolling was very labour intensive, and labour costs dug into profits. In 1875, Allen & Ginter of Virginia, a US cigarette manufacturer offered a \$75,000 prize for inventing a cigarette-rolling machine (Cox, 2000). Virginia mechanic James A. Bonsack filed the first patent for a cigarette-rolling machine in 1881. He offered the machine to Allen & Ginter, but after one year of testing the company declined to take it, concerned that consumers would not accept machine-rolled cigarettes (*ibid.*). No matter, in 1883 Bonsack made his first major sale to a British cigarette company, and gave them five years of exclusive rights to the machine in England (*ibid.*). Bonsack's contract of exclusive rights to the use of the equipment will surface again in China.

The machine reduced production costs by an astounding 54% (Cox, 2000). The best hand-roller could fabricate 3,000 cigarettes in 10 hours, while Bonsack's original cigarette rolling machine produced 200 a minute (*ibid.*). Today, top of the line rolling machines manufacture 14,000 cigarettes a minute, and cigarette factories are so highly automated that little labour is required (UNFAO, 2003a).

So with a bit of background on the history of the tobacco trade, and the introduction of the cigarette-rolling machine, I examine the first case, Brazil, where we have already learned of its role as an exporter of tobacco leaf, and as a harbour for the black market.

Chapter 6: Brazil

I chose to present Brazil's case first for the simple fact that tobacco is native to Brazil, not China. Brazil is the world's largest exporter of tobacco, and has been since 1993 (*Brazilian Tobacco Yearbook*, 2009). The country is also the world's second leading producer of tobacco. A tobacco leaf is inscribed on the Brazilian Coat of Arms.

The Federative Republic of Brazil is the world's fifth largest country by population, 199,132,000 people (Hanley, 2010) on 8,512,000 square kilometers (Stalker, 2007). The 1494 Treaty of Tordesillas deeded the territory of Brazil to Portugal that was originally inhabited by 2 - 5 million Aborigines (Hanley, 2010). Brazil became an independent nation in 1822, and formed into a republic in 1889 (World Encyclopedia, 2008). It is a federal republic with a federal government structured with a President, Chamber of Deputies, and Senate (Hanley, 2010), decentralized with 26 states that control 40% of tax revenues (Stalker, 2007), with the states further divided into districts called *municipios* (Hanley, 2010).

The History of the Cigarette Commodity Chain in Brazil

The establishment of the tobacco trade begins in Brazil, and this case history progresses from the colonial leaf trade to the establishment of commercial cigarette manufacturing in 1904. Foreign owners took over Brazilian tobacco leaf companies in the 1980s, and the black market acquired its significant market share during the 1990s. I bring the chain history up to date before describing its current structure.

The colonial leaf trade.

Tobacco use and cultivation had been part of Brazilian Aboriginal cultures for over 1,000 years before the arrival of Europeans (Oropeza, 2005). In 1518 a Spanish missionary sent tobacco to the Lisbon court, and in 1530 an expedition in Brazil sent back news of a mysterious curative: tobacco, the “holy herb” or “herb of the indies” (Souza Cruz, 2009e), while European settlement began in the northeast (World Encyclopedia, 2007). In 1555 a friar in Northeastern Brazil observed both Tupinanba Aboriginals and European missionaries smoking cigars, and by the late 1500s many Portuguese settlers were smoking tobacco (Norton, 2008), and Catholic missionaries too (Poppino, 1973).

At first the colonizers obtained tobacco by barter with the Aboriginals (Souza Cruz, 2009e). Dutch colonists seized control of the northeastern region in 1630, and they established an export trade in tobacco conducted by the Dutch West India Company (Poppino, 1973). The company initiated the contract practice of paying for African slaves with tobacco (*ibid.*). The Dutch were expelled by the Portuguese in 1654, who took over the tobacco trade (*ibid.*). Colonists began commercial tobacco cultivation in Northeastern Brazil sometime before 1640 (Barickman, 1998). Tobacco exports were substantial even before the advent of European cultivation, with over 1,250 tonnes every year starting in 1610 (Poppino, 1973).

Tobacco use was well established in European courts by 1600 (Poppino, 1973). Tobacco became a key commodity for Portugal in the 17th and 18th centuries (Baud, 2005). Beginning in 1640, the Portuguese Crown auctioned off yearly rights to the Brazilian tobacco monopoly (Barickman, 1998). Northeastern Brazil provided 90% to 100% of Portugal's tobacco imports from the 1600s until 1811 (*ibid.*). Tobacco comprised almost 25% of northern Brazil's exports from 1796 to 1807, and fewer than 15% until 1860 (*ibid.*). Leaf export in 1710 was 3,500

tonnes, and remained at that level for almost 100 years (Poppino, 1973). The illegal trade of tobacco leaf was in action by the 1660s with *rescates* (illegal shipments) from Brazil landing in ports in Lisbon, Basque country, France, and the Netherlands (Norton, 2008).

To protect its profits in the tobacco trade, the Portuguese monarchy in 1674 established a tobacco monopoly for all Portuguese colonies, the Tobacco Administration Board, and instituted heavy taxes of tobacco tithes, customs duties, levees, and local rights (Souza Cruz, 2009e). Government intrusion was extensive as it “surrounded the tobacco trade with an unwieldy mass of controls and restrictions” (Barickman, 1998, p. 28). From 1690 leaf export shipments were tightly controlled (Souza Cruz, 2009e) originating from one single government warehouse (Barickman, 1998). This warehouse, along with a few more built after 1808, were supervised by a Board of Inspection (*ibid.*) which was created in 1751 (Souza Cruz, 2009e). A Crown regulation in 1761 aimed at decreasing the black market by capping tobacco shipments to 150 tonnes per slave ship (Poppino, 1973). The Portuguese Crown was taking measures calculated to keep control of its monopoly on tobacco, and to exclude both private businesses and smugglers.

Tobacco was grown mainly on small farms, *fazendas*, in northeastern Brazil (Barickman, 1998). Farmers could rent equipment, so very little capital was needed for start-ups (*ibid.*), allowing an “underclass” of “independent farmers, sharecroppers, and squatters” (Poppino, 1973, p. 126) to engage in tobacco farming. The indispensable input to tobacco farming was cattle dung, which became a commodity in its own right (Barickman, 1998). Labour came primarily from family members, neighbors, and slaves, plus occasionally from hired hands. All family members worked, with young children picking caterpillars off the leaves (*ibid.*). Neighbors would help with seedling transplantation, and after the task was done the farmer rewarded them with a festive meal of “ox in the pot” (*ibid.*). Harvesting was “more painstaking than

backbreaking” (*ibid.*, p. 180). The farmer’s final leaf commodity, 250 pound leaf bales, were transported by water (Poppino, 1973).

Not all farmers made equal use of slave labour. Barickman (1998) supplies the historic picture for colonial northeastern Brazil. Slave holdings were concentrated in the hands of four major landholding families. In one tobacco growing district, 10% of the owners held 36% of the slaves, with some owners working as many as 90 slaves, while half of the farmers owned less than 4 persons. Slavery was a gruesome inheritance, with slave children born as property, and over 80% of the slaves working in tobacco in 1835 were Brazilian born. Yet that same year, 64% of farms did not own any slaves. Slavery was finally abolished in Brazil in 1888, the last nation-state to do so (Barickman, 1998).

As much as 75% of leaf exports were used as payment for slaves (Poppino, 1973). A specialized tobacco product, the twist tie, was the *de facto* currency for purchasing West African slaves until the 1830s (Barickman, 1998). Low quality tobacco was available because Crown inspectors would reject as much as half of the leaf brought in for sale (*ibid.*). This rejected leaf would be processed into twist ties with a machine, *banco de engenho*, requiring 3-5 workers to operate it. Slaves often worked the machines - a cruel irony that Brazilian born slaves produced the product that purchased more slaves (Baud, 2005). Sometimes *enroladores* (“rollers”) were paid to do this labour (Barickman, 1998). The ties required 30 days of production, and were coated with tobacco processing extrusions, molasses, anise, herbs, and sometimes lard (*ibid.*).

Quality leaf sold for export was processed entirely differently. Leaves were cured by wilting one day in the sun, and strung up to dry for a week in a tobacco barn, after which the leaves were destemmed by hand (Barickman, 1998) by women *destaladeiras*, who, like many other labourers, sang while working (*Brazilian Tobacco Yearbook*, 2008). Farmers transported

the prepared leaves to a city warehouse where a merchant, *enfardadore*, would select, repackage, and label the leaf for sale to the European market (Baud, 2005), and Goa India (Barickman, 1998), with Germany a major buyer in the later half of the 1800s (Poppino, 1973). The exported top quality leaves were manufactured abroad into snuff (Barickman, 1998).

The establishment of cigarette manufacturing.

Before 1808, Portuguese law prohibited the establishment of factories in Brazil, and as a result the first Brazilian snuff factories were not established until 1817 (Barickman, 1998). Two Brazilian snuff factories in 1818 produced 347,000 pounds of their products with 110 workers, 98 of whom were slaves (Souza Cruz, 2009e). The first Brazilian cigar factory began production in 1842, and in the 1880s two cigar companies were founded by German immigrants, a community that had a strong presence in Brazil's tobacco trade (Baud, 2005).

Cigarettes do not appear in Brazil until the middle of the 1800s; until that time almost all tobacco was consumed by smoking molasses flavoured leaf in a pipe (Cox, 2000). Poppino (1973) mentions how in 1876 Brazil's largest hand-rolled cigarette factory employed orphans who laboured in virtual indentured servitude. The Brazilian government began taxing cigarettes in 1891, even before the advent of machine-made cigarettes with the *Imposto sobre Productos Industrializado*, IPI Tax on Industrialized Products (Souza Cruz, 2009e), and that tax is still in place today.

The first machine-made cigarette manufacturer was Souza Cruz. It was founded in 1903 with 16 employees, and the company produced Brazil's first machine-rolled cigarettes that same year (Cohen, 2005). They bought out competitor Imperial Fabrica in 1910, and imported German machinery (*ibid.*). British American Tobacco (BAT) bought out a major Brazilian

manufacturer in 1913, and then took control of Souza Cruz in 1914 (Cox, 2000). To accurately designate the ownership of the company, I refer to the entity as Souza Cruz/BAT.

Souza Cruz/BAT ran a tight ship. For its first head manager, BAT assigned a man who acquired the nickname “Napoleon,” and the company recruited hard-nosed bank managers for management positions (Cox, 2000). This tight management control was applied to its leaf suppliers, the farmers, in 1918 with a contract named *Sistema Integrado de Produção de Tabaco* (Integrated Production System) (*Brazilian Tobacco Yearbook*, 2008). The use of this contract was re-established in the 1970s (Vargas & Campos, 2005). It offers the farmer technical support, financial assistance to purchase inputs (seeds, fertilizers, and agricultural chemicals), referrals for property purchases, and a guarantee of complete crop purchase with transportation from farm to plant (Souza Cruz, 2008).

With an assured supply of tobacco, Souza Cruz/BAT’s pre-WWII expansion was exponential. The company added four more factories in the 1920s, and acquired a printing company (Cohen, 2005). Sales increased from 2 billion cigarettes in 1921 to 5 billion in 1929 (Cox, 2000). In 1933 BAT bought a paper company, Pira, “purchased as a means of consolidating profits which could not be remitted from the country” (*ibid.*, p. 309) - a testament to how much money Souza Cruz/BAT was generating, and how it circumvented Brazil’s currency restrictions. In 1935 the firm bought out its major competitor, and added two more factories in the following two years (Cohen, 2005). Immediately after WWII, Souza Cruz/BAT opened two leaf processing plants (*ibid.*).

Little information is available on other actors and processes of the cigarette commodity chain before WWII. Export taxes on tobacco brought in 20% - 30% of the Brazilian government revenues between 1900 and 1910 (Baud, 2005). Annual tobacco exports between 1909 and 1929

fluctuated between 26,000 tonnes and 38,000 tonnes a year, and in 1930 Brazil exported approximately 25% of its tobacco production (Poppino, 1973). Cigarette distribution by Souza Cruz/BAT utilized a “peddler” system to small-scale retailers, conducting direct sales for cash (Cox, 2000). Cigarettes were sold in general stores and cafes; there were no tobacconists (*ibid.*).

In leaf agriculture, about 1920 new Germans immigrants took up tobacco farming in southern Brazil, transporting their crop to market on the new road and railway infrastructures (Baud, 2005). The first leaf processing plant in Southern Brazil was founded in 1924 by a German immigrant (Vargas, 2001). Leaf production in 1939 was 90,000 tonnes (Baud, 2005). The Brazilian national government took control of German businesses during WWII, and BAT sent in American agricultural technicians to recruit the farmers who had lost their German buyers (*ibid.*).

As for the history of other chain actors, I have the equivalent of birth and death dates. Exportadora Henning S/A was founded in 1890 but gone before 1965; Kliemann, in business since 1915, was subsumed in a merger in 1991; Tabacos Tatsch was founded in 1932 and out of business in 1975; and Cigarros Sinibu established in 1948 was out of business sometime before 1965 (Vargas, 2001). Philip Morris entered the Brazilian market in 1973, and today still operates only one factory in the country (Europomonitor, 2009d).

Foreign ownership and the expansion of the Brazilian leaf trade.

Fate intervened in the Brazilian leaf market in 1965 when tobacco producer Rhodesia was put under trade sanctions (Vargas, 2001) by the UK and by the United Nations a year later. The transnational tobacco companies saw an unanticipated profit opportunity in procuring tobacco, so they took over local Brazilian companies by purchasing total or majority shares of their stock

(*ibid.*). One major actor, Universal Leaf (US), entered the Brazilian market in 1969 by signing a partnership deal with a Dutch multinational corporation that owned a Brazilian tobacco subsidiary (Duke & Jordon, 1995). The following year Universal Leaf bought a 50% interest in two Brazilian tobacco companies, and in 1974 it constructed a threshing plant to service Philip Morris' recently constructed factory (*ibid.*). Of note, Universal Leaf purchased its Dutch partner in 1986 (*ibid.*).

The transition from a predominantly Brazilian-owned tobacco leaf export industry to a foreign-owned one took less than 10 years, and by 1990 the market was completely dominated by foreign corporations. At the start of the Rhodesian boycott, there were seven national tobacco leaf exporters plus Souza Cruz/BAT, but no foreign-owned firms, and by 1977 the mix was three national firms and eight foreign-owned firms (Vargas, 2001). In 1990 only one national firm remained along with Souza Cruz/BAT, and the four other tobacco companies were American owned (*ibid.*).

These foreign-owned corporations, with their deep pockets, then went on to modernize (i.e. mechanize) their Brazilian facilities in the early 1990s to reduce labour costs and increase production (Vargas, 2001). This benefited local machinery firms (Thor, [n.d.]) but was a disaster for the local communities from the "drastic reduction in employment" (Vargas, 2001, p. 13). Yet the regional-states were supporting this "development." In 1990 Rio Grande do Sul issued over US \$900 million in tax breaks to Souza Cruz/BAT for plant construction (Vargas & Campos, 2005).

Mechanization expanded production capacity, and tobacco production increased dramatically. Before mechanization and foreign-ownership, in 1980 leaf production was 373,000 tonnes, and in 2000 it had climbed to 577,000 (UNFAO, 2003a). Since 1961, Brazilian

tobacco production has increased 439%, and the amount of land used for tobacco cultivation has more than doubled (Geist et al., 2009). Leaf exports went from 128,00 tonnes worth US \$284 million in 1980 to 410,000 tonnes worth US \$921 million in 2000 (UNFAO, 2003a). This is phenomenal growth by any measure. In the expanding leaf market, in 1995 the tobacco growers formed AFUBRA, Associação dos Fumicultores do Brasil, to act as a leaf price mediator with the exporters and manufacturers (Vargas & Campos, 2005).

Souza Cruz/BAT responded to the Rhodesian boycott opportunity by exporting tobacco starting in 1969 (Cohen, M.L. 2005), but it was not until a decade later when its tobacco exports became critical to BAT operations. These special tobacco exports came about sometime in the 1980s when BAT U.S. subsidiary Brown & Williamson created a genetically modified plant with faster growth and twice the nicotine (*ibid.*). The U.S. refused to patent the plant, so BAT smuggled the seeds to Souza Cruz/BAT and distributed them to farmers (*ibid.*), who were required to use them as a term of their contract. By 1994 Souza Cruz/BAT had shipped more than 8 million pounds of high nicotine leaf to its parent company in the UK, that in turn manufactured it into cigarettes that BAT exported to the U.S. and elsewhere (*ibid.*). The Souza Cruz/BAT export of this “illegal” leaf spurred rapid expansion of tobacco leaf exports (Shafey et al., 2002). The “jig was up” in January 1998 when the Associated Press reported the high nicotine tobacco, and in response the Brazilian Ministry of Agriculture had all leaf nicotine levels officially certified by the University of Santa Cruz (UNFAO, 2003a).

The rise of the black market.

While Brazilian tobacco leaf has been a major export for centuries, in 1988 less than 1% of Brazilian cigarette production was exported. In 1998 cigarette production for export was up over

50%, rocketing up in ten years from 11 tonnes to 87,000 tonnes, most it exported to Belgium and Paraguay (Shafey et al., 2002). While acknowledging that in 1991 the MERCOSUR free trade agreement had opened the South American market to Brazilian cigarettes (Baud, 2005), it hardly accounts for this logarithmic rise in cigarette exports.

This new export of cigarettes was being diverted to the black market. During the 1990s BAT and PM legally exported cigarettes to Paraguay, and smuggled them back into the Brazilian black market (Guevara et al., 2009). These circular exports were also transported through Uruguay (Iglesias, Jha, Pinto, da Costa e Silva, & Godinho, 2007). Souza Cruz/BAT profited from this “triangular trade” for most of the 1990s (Ramos, 2009). From 1992 to 1998 there was a large increase in illegal cigarettes consumed in Brazil, which in 1999 was 30% of total cigarette consumption (Iglesias et al., 2007). Smuggling trade expansion was particularly strong from 1994 to 1998 (*ibid.*). Estimates for 1998 put Brazilian black market consumption at 58 billion cigarettes (Goldfarb, 2003).

During the late 1990s, black marketers shipped entire factories complete with technical personnel from Brazil to Paraguay (Ramos, 2009). Within three years over 30 manufacturing plants had been set up in Paraguay (Guevara et al., 2009). In 2000 there were 10 illegal factories operating in Brazil, and 17 just across its borders (Iglesias et al., 2007). Iglesias et al. (2007) claim that currency fluctuations in the late 1990s caused illegal production to level off, but the true cause may be the Brazilian government’s 1999 cigarette export tax.

In 1999 Brazil declared a 150% cigarette export tax to stop black market, resulting in a 89% drop in exports (Shafey et al., 2002). Then in 2000 Brazil put a 150% export tax on tobacco leaf to Paraguay and Uruguay, but not on tobacco exported to other South American countries

(Ramos, 2009). In response, cigarette manufacturers in Paraguay and Uruguay switched to leaf suppliers in Argentina and other countries (*ibid.*).

Cigarette manufacturer Monte Paz S.A. in Uruguay took another tact. The firm appealed to MERCOSUR, the South American trade organization, for a ruling of a breach of free trade (Shafey et al., 2002). Monte Paz won its complaint, and Brazil was forced to repeal the export tax in 2003 (Ramos, 2009). Ramos (2009) states this tax was responsible for terminating the triangular trade. But the black market continued to distribute large numbers of cigarettes, an estimated 39 billion sticks with over 360 illegal brands in 2005 (Souza Cruz, 2009d).

Recent chain developments.

During the past 10 years tobacco leaf exports have continued to grow, increasing 140% from 1998 to 2008 (*Brazilian Tobacco Yearbook*, 2009). Two new Brazilian leaf export companies have formed: Continental Tobaccos Alliance S/A in 1994 and Associated Tobacco Company in 1997. A major new leaf exporter, Alliance One, appeared in 2005 formed from the mergers of several leaf export companies. Also of note: Souza Cruz/BAT constructed a new factory that went on line in 2003 with a capacity of 45 billion sticks per year (Souza Cruz, 2009b).

These leaf exporters and cigarette manufacturers have flexed their political muscle on taxes and tobacco control with what Vargas & Campos (2005) call “the political weight of tobacco.” The IPI tax for tobacco was 40% in 1993 (Iglesias et al., 2007), and after it was increased in 1998, some tobacco companies took the Revenue Agency to court over the IPI, and others lodged administrative actions (Ramos, 2009). This pressure was apparently successful as the IPI was cut in half to 20% in 2004 (Iglesias et al., 2007).

SindiTabaco, the manufacturer's legal representative and lobbying organization founded in 1942 (Mullen, 2009), grew powerful during the 1980s (Vargas & Campos, 2005). It had enough political sway to delay Brazil's ratification of the FCTC. While Brazil was the second country to sign the treaty, during the ratification process in May 2004, SindiTobaco persuaded a senator of a tobacco growing state to delay ratification (Bialous, 2004). During the delay, SindiTabaco conducted a major public relations campaign in the news media, claiming that ratification would bring substantial economic losses and social upheaval (*ibid.*). SindiTobaco may have also given undisclosed political donations (Jurberg, 2009). The fight went 18 months, and the Senate finally ratified the FCTC on November 3, 2005. In perhaps another case of political influence, a proposed federal smoking ban in 2008 was postponed in 2009 (Euromonitor, 2009b), but no information is available on the influence of the cigarette industry on that legislation.

Business has not been all smooth for the leaf export firms in the past few years. The export firms lost their battle with the Ministry of Agriculture, Livestock and Food Supply (MAPA) in 2007 when the government reduced the number of tobacco leaf grades from 48 to 41. This is critical because leaf price is based on its grade (*Brazilian Tobacco Yearbook*, 2007). The farmers had requested a reduction to 32 grades, while the industry was asking for an increase to 60 grades (*ibid.*) - the reduction in the number of leaf grades a clear gain for the farmers. At the close of 2007 the Public Prosecutors of Santa Catarina and Paraná filed suit claiming that an employer-employee relationship exists between the farmers and the leaf exporters, and as of 2009 the tobacco exporters were trying to have the suits moved to the National Labor Court (Alliance One, 2009b). Finally, the 2009 credit crunch hurt the leaf exporters and Souza Cruz/BAT because they pay in advance for the farmer's agricultural inputs, and several

corporations provided additional financial support for their leaf suppliers (Mullen, 2009). The situation in 2010 has probably not changed that much.

Cigarette manufacturers have had some small troubles. They must deal with lawsuits, as have cigarette manufacturers in other Western countries, and the first loss for Souza Cruz/BAT and Philip Morris was in 2004, a state level class action lawsuit for failing to warn customers of risks and for deceptive advertising (Euromonitor, 2009b; see also Cohen, M. L., 2005). Otherwise, the manufacturers have won the great majority of the lawsuits against them, as I explain further in the nation-state section. Another bit of bad news for Souza Cruz/BAT in 2009 was Banco do Brazil's employee retirement fund divesting itself of US\$200 million in Souza Cruz stock ("Brazil Fund Previ," 2009).

The history of the cigarette commodity chain goes back over 400 years, and manufactured cigarettes have been produced since 1904. The Rhodesian boycott of the late 1960s turned Brazil's tobacco leaf industry into a prize for transnational corporations, and before long they had developed Brazil into the world's premier source of tobacco leaf. What is the configuration of its cigarette commodity chain today, and, critical for my action agenda, who are the actors in it?

The Cigarette Commodity Chain in Brazil

In 2009 Brazil produced 793,000 tonnes of leaf tobacco (Souza Cruz, 2009a) and exported 675,000 tonnes with a value of \$US 3.1 billion (Ministry of Agriculture figures reported in Souza Cruz, 2009a). Official Federal Revenue numbers for 2008 cigarette manufacturing production is over 108 billion sticks (5.4 billion packs of 20 sticks) (*Brazilian Tobacco Yearbook*, 2009), with 82 million sticks imported and 2.5 billion sticks exported

(Euromonitor, 2009b). The black market in 2008 obtained about 14% of leaf production (Souza Cruz, 2009a) and supplied 28% of the cigarettes consumed, over 35.8 billion sticks (Euromonitor 2009b). Brazil has an estimated 24.6 million smokers (“Brazilian Smokers,” 2009), with adult prevalence rates of 19% male and 12% female (International Tobacco Control, 2009c). For an easier way to piece together these facts, see the Brazil Cigarette Commodity Chain diagram in the following chapter.

The total revenue generated by tobacco in 2008 was R\$ 16,805,529,000 (USD\$ 8.0 billion), which breaks down into approximately two thirds from domestic cigarette consumption and one third from export taxes (*Brazilian Tobacco Yearbook*, 2009). The revenue distribution was 24% for farmers and leaf exporters, 19% for manufacturers, and 6% for retailers - the other 51% went to taxes (*ibid.*).

Farmers.

Brazil produced 793,000 tonnes of leaf in 2009 (Euromonitor, 2010g). Southern Brazil produced 95% of the leaf crop: 50% from Rio Grande do Sul, 32% from Santa Catarina, and 17% from Paraná (*Brazilian Tobacco Yearbook*, 2009). Tobacco agriculture covered 411,000 hectares (*ibid.*).

There are 234,000 farm families who grow tobacco (*Brazilian Tobacco Yearbook*, 2009), of which 22.6% are tenant farmers, not farm owners (*ibid.*), a small fraction of Brazil’s three million small farmers (Stalker, 2007). Souza Cruz/BAT has approximately 40,000 farmers under contract (Souza Cruz, 2008). The average farm size is 16.3 hectares, with 2.6 planted in tobacco and 4.1 with other crops (*Brazilian Tobacco Yearbook*, 2009). Leaf export companies claim the average farm income from tobacco in 2008 was R\$29,543 (*ibid.*). Tobacco supplies about 50%

of household income, and 20% of a small sample of farmers stated that it was not sufficient (Geist et al., 2009).

Farmer contracts are individually negotiated (Mullen, 2009), based on the *Sistema Integrado de Produção de Tabaco*, the Integrated Tobacco Production System (*Brazilian Tobacco Yearbook*, 2009). Farmers lack power in contracts because of the small size of their operations (Datamonitor, 2009a). Some believe that they cannot change crops because they need the contract's financial supports (Geist et al., 2009) because obtaining credit is a problem for many farmers (Euromonitor, 2009b). The cheap crop and curing barn insurance is another inducement that keeps farmers in the contract system (UNFAO, 2003a). Contemporary tobacco exporters credit their success in Brazil to this contract system (*Brazilian Tobacco Yearbook*, 2009), while others observe that the farmer is the weaker party in the deal because "the small farmers' autonomy was subverted . . . allowing the large tobacco companies to assume complete control" (Vargas & Campos, 2005, p. 8).

Yet farmers have held back from selling their crop to demand better prices - they did so in 2008 (Mullen, 2009). This tension over price negotiations between farmers and buyers in Brazil was observed in the 2003 Food and Agriculture Organization report on tobacco. This antagonism was exposed during the farmer-leaf exporter confrontations over the grade-price structure (as related earlier).

Farmers and their family members supply 90% of the labour involved in growing tobacco, with seasonal workers and neighbors providing the rest (Geist et al., 2009). Temporary workers are employed mostly for harvesting activities (Mullen, 2009). Child labour is a part of tobacco agriculture (Geist et al., 2009), but leaf exporters claim that Brazil has a well funded and

community supported anti-child labour program, O Futuro é Agora! (The Future is Now) (*Brazilian Tobacco Yearbook*, 2009), as well as having laws against child labour in tobacco.

The contract system supplies almost all agricultural inputs, and the fertilizers and agricultural chemicals are sourced almost entirely from suppliers outside the country (Mullen, 2009). The seed supply in the cigarette commodity chain changed in 2008 when Altria (owner of Philip Morris US) purchased UST, the parent company of ProfiGen, the seed producer that supplies almost all the tobacco seeds planted in Brazil (*Brazilian Tobacco Yearbook*, 2009).

Brazilian farmers cure their own leaf crops. Curing barn processing takes 5-7 days for light leaf (82% of the total leaf crop grown), and burley takes 40 days in a shed (16% of the crop) (*Brazilian Tobacco Yearbook*, 2009). There are 223,786 curing units in operation, and Bertha Eletronica (Brazil) is a major manufacturer of barn curing equipment and supplies (*ibid.*). Automated curing stoves were a technological improvement introduced before 2000 (Vargas, 2001).

Leaf exporters.

In 2009, 674,000 tonnes of tobacco leaf was exported, 85% of the total crop (Euromonitor, 2010g), and a value of US \$3.1 billion (reported in Souza Cruz, 2009a). Brazilian tobacco leaf is purchased by over 100 countries, with 40% going to the European Union, 16% to the Far East, 14% to Eastern European countries, 13% to North America, 7% to the Middle East and Africa combined, and 5% to Latin America (*Brazilian Tobacco Yearbook*, 2009). Yet tobacco leaf represents only 1.4% of the value of all Brazilian exports, although it is the third leading agricultural export (*ibid.*).

Leaf exporters further process the tobacco leaf, either themselves or through contract with leaf processing firms. Leaf processing is an active arena in Brazil with both new companies and acquisitions. Brasfumo (Brazil) provides leaf processing and storage, as does the new company CTS - Brazil Tobaccos which formed in 2007, and Tabacum Interamerican, founded in 2003 (*Brazilian Tobacco Yearbook*, 2008). Transnational cigarette manufacturer Japan Tobacco International acquired two Brazilian leaf processing companies in 2008, Kannenberg & Cia. Ltda and KBH&C Tabacos Ltda (*Brazilian Tobacco Yearbook*, 2009), in addition to its recent purchase of Brazilian leaf company Tribac (“JT Acquiring,” 2009). These companies are managed by the Japan Tobacco Inc Global Leaf Procurement Group headquartered in Geneva (*ibid.*).

For processing the leaf for export, the tobacco leaf stem is detached from the leaf, and both are separately conditioned, dried, and packed in cardboard boxes and then shipped to the cigarette manufacturer (Souza Cruz, 2009b). Customers normally send in their own supervisory committees for monitoring and inspection of the leaf (Vargas, 2001) as well as sending observers to oversee leaf processing (Alliance One, 2009b). Leaf orders are placed in February for the April harvest (Riezebos, 2006). Packaging takes two weeks, aging takes one month, and transportation four weeks, so that the earliest delivery time is July - this is known as order crossovers (*ibid.*). Leaf compression technologies have substantially improved the profitability of tobacco shipping by decreasing the size required for manufacturing facilities and storage (Vargas, 2001).

Most leaf exports sales are made by Alliance One, Universal Leaf, and Souza Cruz/BAT (Geist et al., 2009). Alliance One International (US), with US \$2.3 billion in sales worldwide in 2009 (Alliance One, 2009b), is largest exporter of Brazilian tobacco leaf (*Brazilian Tobacco*

Yearbook, 2009). The corporation was formed by the merger of two companies in 2005: the first was Standard Commercial Corporation (1910), the third largest leaf company in the world, and the other company was DIMON (1995). DIMON was created by a merger of Dibrell Brothers Inc (1873) and Monk-Austin Inc (1907), and in 1997 it acquired #4 ranked Intabex (Alliance One, 2009a). In other words, Alliance One is a megamerger corporation. Alliance One purchases leaf in 45 countries and sells to 90, with 57% purchased by European countries, 34% of sales to Altria (the parent unit for Philip Morris US), and 19% to Japan Tobacco International Europe division) (Alliance One, 2009b). It provides credit loans and fertilizer to its leaf farmers, and the company is concerned that crop diversification could impact its leaf inventories (*ibid.*).

In Brazil, Alliance One has two leaf processing plants with storage facilities, and one additional storage facility (Alliance One, 2009b). The company made 35% of its leaf purchases from Brazil, three times the amount sourced from its second largest supplier, although in 2006 it had trouble shipping out its Brazilian purchases due to a lack of shipping containers (*ibid.*). Based on its annual report figures and its 2nd place in exports, I estimate that Alliance One purchased approximately 186,000 tonnes of tobacco leaf in Brazil in 2009.

Universal Leaf (US, 1918) is currently the world's largest leaf exporter with \$US 2.55 billion in sales to 30 countries (Universal, 2009a). Universal Leaf purchases 20% - 30% of Brazil's annual leaf crop (*ibid.*), so I estimate that in 2009 it exported at least 158,000 tonnes of leaf, possibly as much as 185,000 tonnes. The company loaned over US\$104 million to farmers in the integrated production system (*ibid.*). In Brazil it operates one processing/storage facility, one storage facility, and leases another processing and storage facility from a third party (*ibid.*). Universal Leaf processes "ready to manufacture" tobacco strips (Duke & Jordon, 1995).

Souza Cruz/BAT leaf production has been as much as 197,696 tonnes; in 2009 it purchased 169,566 tonnes and exported 113,401 tonnes (Souza Cruz, 2009a), the remainder for its own cigarette production. (More on Souza Cruz/BAT below.)

The leaf export business is absolutely dependent on foreign market demand (Mullen, 2009). Vargas (2001) observes that Brazil and other tobacco producing countries are heavily dependent on a small group of leaf exporters. There are a two smaller leaf export companies in Brazil: Brazilian Associated Tobacco Company with offices in China, UK, India, Indonesia, and the US (Brazilian Associated Tobacco, [n.d.]), and Continental Tobaccos Alliance (Brazil, founded 1994) with five domestic locations (Contiental Tobaccos Alliance, [n.d.]). Certainly Alliance One regards them as credible competition (Alliance One, 2009b).

Manufacturers.

Official Federal Revenue numbers for cigarette production in 2008 is 5.4 billion packs of 20 sticks (*Brazilian Tobacco Yearbook*, 2009). Manufacturers take in 15.5% - 23.4% of the retail price (Euromonito, 2010g). Trade production figures for 2009 are 97.3 billion sticks, with 1.4 billion exported, and an 133 million imported (Euromonitor, 2010h).

The number of legal cigarette manufacturers in Brazil is small: only ten (Euromonitor, 2010h). The Brazilian government shut down five manufacturers in 2008 for failure to comply with cigarette licence requirements, including the third and fourth largest companies. Souza Cruz/BAT picked up their market share (Euromonitor, 2009c).

Souza Cruz/BAT is the dominant company in cigarette manufacturing; BAT owns 75.3% of Souza Cruz stock (Souza Cruz, 2008). Industry sources estimate its market share as 81% (Datamonitor, 2009a) to 86% (Euromonitor, 2009b), but these numbers are certainly based only

on the legal trade. Souza Cruz/BAT's own figures are 62.0% (Souza Cruz, 2009a). Souza Cruz/BAT reports it manufactured 117.3 billion cigarettes in 2009, and Brazilian sales were 72.8 billion cigarettes (*ibid.*). Souza Cruz/BAT revenues in 2008 were US \$2,880.4 million, with a net income of US \$679.1 million from a 23.6% profit margin (Datamonitor, 2009a). It is one Brazil's top five private corporations, with its headquarters in Rio de Janeiro (Euromonitor, 2009e). It has grown substantially, almost doubling its gross and net revenues from 2003 to 2009 (Souza Cruz, 2009a). For 2009 the company reported that the Brazilian Real/US dollar exchange rates had a positive effect on sales and profit margins for US contracts, while currency fluctuations negatively impacted the cost of inputs (*ibid.*). Souza Cruz claims to be one of Brazil's top ten corporate taxpayers (Souza Cruz, 2008).

Souza Cruz/BAT is a highly vertically integrated corporation. In addition to its two cigarette factories, it has four leaf processing plants, and its own in-house printing facility (Souza Cruz, 2009a). For distribution it has 7 major product distribution centres, 28 regional centres, and 93 "supply posts" (*ibid.*). It obtains supplies from its own purchasing procurement company that it set up with AMBEV beverage conglomerate (Souza Cruz, 2008). In other activities, the company provides crop analysis, and research and development for BAT subsidiaries in Latin America and the Caribbean (Souza Cruz, 2009a). It also owns a 50% stake in a joint venture BrasCuba, which gives it a 15% share of the Cuban cigarette market (*ibid.*).

The second largest cigarette manufacturer is Philip Morris International, with an 11% share of the legal market (Euromonitor, 2009d), which is in reality about 7% of sales, adjusting for the black market. Half of its sales are Marlboro (*ibid.*).

Manufacturing inputs are sourced from both domestic firms and international corporations. International suppliers and their inputs include Carolina Soil (US), growing

media;. Filtrona (UK, with Paraguay plant), filters; Flexlink (Sweden), conveyor belts; Payne (UK), tear tapes; Siegling (part of Forbo, Switzerland), equipment; Sun Chemicals (US) ,printing inks; Incotec (Netherlands), agriculture products; and Hauni (Germany), cigarette machinery. Brazilian firms in the trade are D-sign, advertising agency; Riley and Co (1999), materials and used equipment supplier; Tecelagen (1943), tear tapes manufacturer; and Thor (1985), equipment dealer. Machinery suppliers, who work under license from international companies, are important strategic partners to the leaf processors and cigarette manufacturers, providing them with training and exchanging insider information (Vargas, 2001). Because there are a limited number of suppliers of key inputs, including additives and packaging, these companies have moderate power in contract relations (Datamonitor, 2009c).

Distributors.

Distributors earn an average of 11.6% of the retail price (Euromonitor, 2010g). Little information is available on distribution outside of the Souza Cruz/BAT system. Philip Morris outsources about 30% of its distribution (Euromonitor, 2009c). Souza Cruz (Souza Cruz, 2009b) employs its own sales and delivery drivers who are coordinated through telemarketing, EDI (electronic data exchange), and a sales unit. Orders are loaded on trucks during the night at the distribution centres. The drivers make the deliveries and, like those in other route sales of consumer products, check displays, promote products, and makes sales aided with computerized route optimization systems. Drivers are responsible for collecting payments and entering the transactions in an automated accounts system. Trade, marketing, and distribution departments collect sales route records and track demand.

Retailers.

Legal sales of cigarettes in 2009 were 85,629 million sticks (Euromonitor, 2010g). Before 2009, Brazilian cigarettes were exceptionally low priced because of their low production costs (Euromonitor, 2009b) with most popular cigarettes costing \$1.03 USD (WHO, 2009). This has changed with the tax increases in 2009, and Souza Cruz/BAT raised its prices by 23% (Souza Cruz, 2009a), and other manufacturers increased their prices by an average 20% (Euromonitor, 2010h).

Retail sales are divided up into 42% by super/hyper markets, 17% small grocers, and 10% bar tobacconists in 2009 (Euromonitor, 2010h), with 26% of tobacco products sold through independent retailers (Datamonitor, 2009a). Retailers earn 12.3% of the price of a pack of cigarettes (Euromonitor, 2010g).

Souza Cruz/BAT customers operate 247,000 retail outlets (Souza Cruz, 2009a) and another 100,000 customers are small distributors (Euromonitor, 2009e). The corporation supports its retailers with point of sale displays (POS), merchandise loans, management consulting, and sales staff training (Souza Cruz, 2008). It offers two incentive programs for retailers: one for the use of its POS displays, and the other program for keeping account payments current (Souza Cruz, 2009a). Souza Cruz/BAT does not allow its retailers to offer PM on its displays, while Philip Morris gives a 30% space allocation for competitor's products (Euromonitor, 2010h).

Philip Morris' legal market share in 2009 was 11.3% (Euromonitor, 2010h). Philip Morris has about 100,000 points of sale (*ibid.*), and its retailers include hypermarkets Wal-Mart, Carrefour, and Pao de Acucar, and gas station convenience stores Shell and Esso (Euromonitor,

2009d). Philip Morris wants to place its cigarettes in the 700 AM/PM franchises outlets, but Souza Cruz/BAT has already paid for display space rights (Euromonitor, 2009c).

The eight other manufacturers have a combined 2.3% share of the legal market (Euromonitor, 2010h).

Datamonitor (2009a) rates retailer power as moderate. With the importance of point of sale displays in a regulated advertising market (Lavack & Toth, 2006), I rate retailer power as strong.

The black market.

The illegal market was slightly smaller in 2009 than in 2008: 31.7 billion sticks and 27.0% of all sales (Euromonitor, 2010g). Illegal cheap cigarettes are sold openly in Brazil, and the black market appears to be normalized with consumers “accustomed to the illegal products” (Iglesias et al., 2007, p. 37). Within Brazil, 60% of illegal cigarettes are smuggled (i.e. no tax), 30% non-taxed, and 10% counterfeits (*ibid.*). An example of non-taxed is SUDAMAX, which had factories in both Paraguay and Brazil, and would manufacture cigarettes in Brazil and label them as from Paraguay, bypassing taxes (Ramos, 2009).

Souza Cruz/BAT estimates that 14.4% of leaf ends up in the illegal market (Souza Cruz, 2009a). Tobacco leaf enters the black market through pinhookers, tobacco traders who buy up the leaf crop already under contract to another company - about 10% -15% of the annual crop (Mullen, 2009).

Paraguay contraband cigarettes are a third of the price of the cheapest Brazilian packs (Guevara et al., 2009), and an estimated 20 billion cigarettes come from that country (Souza Cruz, 2009a). Counterfeits and faux brands are produced in factories and “submarines” - mobile

illegal factories built into trucks (Guevara et al., 2009). Chinese counterfeits also enter Brazil through Paraguay and Uruguay (Euromonitor, 2009c).

The central actors in the Paraguay-Brazil black market are the “managers” who source transportation, procure local labour, and bribe officials (Guevara et al., 2009). A *passero* (“crosser,” a boat operator) at the Brazil -Paraguay border makes more money in a week by smuggling than in six weeks at a legitimate job, and locals are paid for storing illegal cigarettes in their homes, and for acting as lookouts (*ibid.*). Black market producers and vendors enjoy protection in marginalized neighborhoods, including in Brazil (Iglesias et al., 2007). At the top of the hierarchy, members of Paraguay’s elite are in the black market and smuggling operations often set up their own money exchanges for money laundering (Guevara et al., 2009).

Consumers.

Brazilian government figures estimate that there are 24.6 million smokers (“Brazilian Smokers,” 2009) while industry reports put the number at 22.7 million in 2009 (Euromonitor, 2010g). The most current academic research finds a smoking prevalence of 19% male and 12% female in 2009 (International Tobacco Control, 2009c). For the children not reported in these numbers, 8.6% of boys and 6.7% of girls between 14 and 18 already are smokers (Federal University of São Paulo survey conducted in 2008, reported in Euromonitor, 2010g). There is a smoker in 27% of households (Iglesias et al., 2007).

Cigarettes are the main form of tobacco consumption, comprising 97.8% of tobacco product revenues (Datamonitor, 2009a). 2009 total cigarette consumption, legal and illegal combined, was 117.3 billion sticks (Euromonitor, 2010g). The average smoker consumes over 15 cigarettes a day, and 92% smoke daily (International Tobacco Control, 2009c). Almost 30%

of smokers consume 20 or more cigarettes per day (Monteiro et al., 2007). International Tobacco Control (2009) finds that 51% of smokers report they plan to quit in the next 6 months.

The social images associated with smoking are adult identity or maturity (Casado, 2007), physical strength (for both sexes), and weight control/loss for women (Euromonitor, 2010g). Cigarettes are also used as religious offerings in Aboriginal and Afro-Brazilian religions. Brazilian society continues to show public tolerance for smoking, but that support is declining (*ibid.*).

Government support, regulation, and taxation of cigarette commodity chain actors.

Government support.

Support for tobacco growers, exporters, and Souza Cruz/BAT goes right to the top of the Brazilian Federal government. Recently the Minister of Agriculture, Reinhold Stephanes, stated for the *Brazilian Tobacco Yearbook* (English translation by the author)

while the world continues smoking, we should continue producing. And it is very hard to imagine that we will be the ones to put a limit on it... I do not see any reasons for us to stop supplying such a huge market, which really exists in legal, transparent and open form. (2009, p. 152).

The Brazilian tobacco leaf industry need have no fear of government limitation.

Regional-state governments have supported tobacco firms for many decades. In the 1970s Santa Cruz do Sul created an industrial district to support tobacco buyers (Vargas & Campos, 2005). In the 1990s Rio Grande do Sul offered Souza Cruz/BAT, Philip Morris, and Universal Leaf tax incentives under its industry development program PROINCI/RS, and gave Souza Cruz/BAT over US \$900 million in tax benefits (*ibid.*). Today the State of Santa Catarina

offers tobacco companies low cost, long term credit lines, tax exemptions on raw materials and inputs, and electrical energy subsidies (*Brazilian Tobacco Yearbook*, 2008).

Under Brazilian legislation known as the “Kandir Law,” the Federal government returned monies to regional-state governments for them to disperse as tax rebates. The leaf exporters and cigarette manufacturers expected to receive these tax credits, but instead the states are withholding the rebates (*Brazilian Tobacco Yearbook*, 2008). Universal Leaf claims it is due US\$24 million in tax credits (Universal, 2009a).

Tobacco farmers can access federal government loans from BNDES (National Economic and Social Development Bank), and US \$56 million was distributed to 14,694 tobacco growers in 2003 (Vargas & Campos, 2005).

Government regulation.

Industry regulations.

Tobacco growers have many regulations to comply with. By law, no one under 18 is allowed to work in tobacco, and every year leaf farmers must obtain school enrollment and attendance certificates for their children, or risk being reported to Social Services (*Brazilian Tobacco Yearbook*, 2009). The farmer must comply with government crop rotation requirements (Euromonitor, 2009b). Under the Brazilian Forest Code, at least 50% of the wood for curing (predominantly eucalyptus) must be supplied from the farm property, and the rest purchased from renewable sources (Geist et al., 2009), although the industry itself admits that as many as half of all farmers are not in compliance (*Brazilian Tobacco Yearbook*, 2009). At the regional-state level, laws for tobacco workers safety have been enacted by the state of Rio Grande do Sul (*ibid.*).

The Federal government has regulations for tobacco leaf. The Ministry of Agriculture (MAPA) specifies the technical requirements of cured tobacco leaves for leaf name, grade, packaging, labeling, and presentation (*Brazilian Tobacco Yearbook*, 2007). A crop nicotine analysis report is required by National Sanitation Inspection Agency (Anvisa). (*Brazilian Tobacco Yearbook*, 2009). Tobacco exports require a biochemical certification report from MAPA (*ibid.*).

Cigarette manufactures, leaf processors, and leaf exporters are subject to Federal registration requirements. The corporations are required to obtain a permit to operate from the Secretariat of Federal Revenue (Iglesias et al., 2007). The corporations must file annually with the Special Cigarette Manufacturing Register, part of the electronic surveillance system ANVISATAB (*Brazilian Tobacco Yearbook*, 2008; Iglesias et al., 2007). In addition, cigarette manufacturers pay a R\$100,000 annual registration fee for each brand, and are required to report cigarette composition (Iglesias et al., 2007). The companies must also electronically provide the federal government with detailed information on cigarette production and distribution through the *Sistema de Controle e Resticamento de Produção de Cigarros* known as SCORPIOS (*Brazilian Tobacco Yearbook*, 2008). The Federal Revenue Bureau has the authority to revoke the permit of factories not complying with federal regulations, and in 2008 it closed five cigarette factories (Euromonitor, 2009b).

Perhaps the Brazilian government's most intrusive regulation in the cigarette commodity chain is that the federal government, not the manufacturers or retailers, sets the price of cigarettes, which by law must be sold at the same price everywhere (Euromonitor, 2009c). The federal government attempted to intervene further in the retailing of cigarettes when the Secretary of Economic Rights and the Ministry of Justice pressed a lawsuit on Souza Cruz/BAT

and Philip Morris for their exclusivity agreements with retailers. The government dropped the suit less than a year later (Euromonitor, 2009b).

In addition to regulations, the Federal government has excluded tobacco companies from some programs beneficial to business. In 2001 tobacco farming was no longer eligible for the National Program for Family Agriculture (Iglesias et al., 2007). Especially onerous for the leaf companies and manufacturers is their explicit exclusion from using the simplified accounting provisions of the 2007 Simplified National Tax (*Brazilian Tobacco Yearbook*, 2009).

Taxes.

Besides regulation raising the cost of doing business, taxes also limit the cigarette commodity chain by increasing product prices. The Receita Federal do Brasil administers leaf and cigarette taxation. Taxes make up an average of 63% - 71% of the retail price of cigarettes (Euromonitor, 2010g). The tobacco industry states that in 2008 the Brazilian government took in R\$ 8,496,835,000 (over US \$4 billion) in tobacco taxes, representing 51% of the companies' gross revenues (*Brazilian Tobacco Yearbook*, 2009). Leaf processors and exporters provide as much as 40% of municipal tax revenues (UNFAO, 2003a), and the state of Santa Cruz do Sul obtains 71% of its tax revenues from tobacco (*Brazilian Tobacco Yearbook*, 2008).

Manufacturers pay a 41.25% IPI tax on tobacco, and a value added tax (ICMS) of 27% (*Brazilian Tobacco Yearbook*, 2009) is collected at the factory before shipment and is distributed to regional-state governments (Iglesias et al., 2007).

Government actions against the black market.

The government has conducted raids on the black market, for example Operation Fireball in 2006 had over 90 arrests in 11 Brazilian states (Guevara et al., 2009). Paraguay is the major source of Brazilian black market cigarettes, and 13 seizures in Paraguay in 2009 netted 37 million sticks (World Customs Organization, 2009).

Yet from the black market side, there is always a way around the police. In 2005 when Brazil stepped up border patrols, the smugglers simply shifted to water routes (Guevara et al., 2009). When all else fails, bribery of officials is routine, and judges often release those arrested and return the cigarettes (*ibid.*).

Tobacco control.

In the 1970s members of the Brazilian medical community were the first to advocate for tobacco control, but strong social support for smoking and tobacco firms' media campaigns delayed tobacco control until 1985 when an advisory group was set up within the Ministry of Health (Iglesias et al., 2007). Other authors place the start of Brazilian tobacco control in 1977 with the first action plan against tobacco use composed by the National Cancer Association (Goldfarb, 2003). The first pack health warnings and advertising restrictions were recommended as guidelines in Ministry of Health Ruling 490 of 1988 (Cavalcante, 2007). The National Tobacco Control Program was instituted in 1987 (Goldfarb, 2003), and the first Brazilian federal tobacco legislation was passed in 1998 (Euromonitor, 2009c). A key institution for tobacco control, ANVISTA, the National Public Health Surveillance Agency, was founded in 1999 (Iglesias et al., 2007).

Brazil's national tobacco control budget is US \$3.4 million, with 25 full-time staff (WHO, 2009). Brazil ratified the FCTC in 2005, and it has some of the world's strictest tobacco control measures (Euromonitor, 2009b). Tobacco control is directed by the *Instituto Nacional do Câncer* (INCA, the National Cancer Institute) (Iglesias et al., 2007). Iglesias and co-authors (2007) speculate that operating its tobacco control programs outside of political institutions may shield it from political influences. INCA coordinates, supports, and supervises state health agencies which train municipal level health workers, but coverage is sparse and many workers experience burnout (*ibid.*). The tobacco control program is decentralized at state and municipal level, and utilizes NGOs for service delivery (*ibid.*). The Tobacco Control Alliance (ACT) monitors compliance with the FCTC (Euromonitor, 2010g).

Brazil's tobacco control regulations and laws include (compiled from WHO 2009):

- No sales to minors.
- Limits on cigarette emissions for tar, nicotine, and carbon monoxide.
- Graphic warning labels for packs (100% of back) that are rotated every 5 months.
- Graphic warning labels on advertising.
- No use of the words "light" or "mild."
- Pack size fixed at 20 sticks.
- A ban on sales at health, education, and public facilities.
- No internet or vending machine sales.
- No billboard or public advertising - advertising limited to point of sale.

This list excludes health promotion activities included in the WHO tobacco control measures.

Enforcement of these tobacco control regulations is mixed, and different chain actors have means of countering tobacco control measures. At the micro level, consumers put down

their packs with the graphic health warning side face down (Jurberg, 2009), or put a cover over them (Euromonitor, 2009b). Still, the International Tobacco Control (2009) survey found 47% of smokers stated that the graphic warning labels made them think “a lot” about health risks.

Retailers often disregard the prohibition on sales to minors (Iglesias et al., 2007), and anti-smoking laws for children are not well enforced (Euromonitor, 2010g). Single sticks are sold despite the ban on it (Iglesias et al., 2007), mainly at bars, newspaper stands, and illegal street vendors (Euromonitor, 2010h). Some bars and restaurants sell an illegal 5 cigarette pack size, often at 20% - 25% above the legal price (Euromonitor, 2010g). Once again, enforcement is low (*ibid.*)

Manufacturers have their means of countering advertising restrictions, and a common one in Brazil the use of promotional items. Consumer goods with logos are frequently offered, including MP3 players, backpacks, watches (Euromonitor, 2010g), ashtrays, hats, and bags (Euromonitor, 2009b). The WHO (2009) rates Brazil’s compliance on promotion restrictions as 5 out of 10.

The WHO (2009) finds Brazil’s advertising restriction compliance as high at 9 of 10. In response, cigarette manufacturers are changing their marketing mix. They are improving packaging, and producing limited edition packs (Euromonitor, 2010g). Manufacturers are providing retailers with point-of-sale displays that are carefully designed to make full use of small spaces, often with illuminated displays (Euromonitor, 2010h). Philip Morris in particular is making full use of this means of advertising (Euromonitor, 2009d). While the Brazilian government has placed some restrictions on where retailers may sell cigarettes, the manufacturers have found new venues to reach children and adults by setting up temporary kiosks at festivals and parties (Euromonitor, 2010g).

National smoking bans are part of the FCTC's provisions, but Brazil's federal government has yet to enacted one. The municipalities are responsible for regulating and enforcing clean air standards, so until recently they have been the authority for enacting bans. A number of municipal laws allow ventilation systems and designated smoking areas in place of bans (Iglesias et al., 2007), and manufacturers promote the construction of "smokers' lounges" to bypass indoor smoking laws (Goldfarb, 2003). Now many of these local laws have been superseded in 2009 by smoking bans enacted in the regional-states of São Paulo, Rio de Janeiro, Minas Gerais, and Paraná, and the cities of Manaus, Belém, Floiranoópolis, and Salvador (Euromonitor, 2010g). For the other regions, smoking bans are still regulated at the municipal level.

Smoking bans appear to have the least compliance as smokers and business "often ignore" smoking bans (Euromonitor, 2010g). More than 75% of people surveyed reported observing illegal smoking in bars (International Tobacco Control, 2009c). Many bars and restaurants ignore smoking bans or set up noncompliant smoking areas; smoking in stairwells, while prohibited, is common (Euromonitor, 2010g).

One of the FCTC provisions is litigation against cigarette manufacturers. This tobacco control measure has had very limited success in Brazil because its judicial system deems that smoking is a personal choice (Euromonitor, 2010g). Almost all lawsuits against the manufacturers have been defeated (*ibid.*). From the first lawsuit in 1995 until March 2007, there had been 479 cases filed against Souza Cruz/BAT, with decisions decreed in 287 cases - the corporation lost only 10 suits (Souza Cruz, 2009c). In 2008 the cigarette manufacturers obtained dismissals in 32 of 41 cases (Euromonitor, 2009b). Several Brazilian regional-states and

municipalities sued U.S. cigarette manufacturers for healthcare costs, but the suits were voided in Brazilian court in 2007 (*ibid.*).

For FCTC tobacco control measure of crop diversification, Brazil has made efforts to start a program to reduce tobacco farming. In 2006 the Ministry of Agrarian Development (MDA) implemented the Production Diversification Program for Areas Planted to Tobacco, with R\$ 15 million in grants; it has 47 diversification projects completed and 60 underway during 2006 to 2008 (*Brazilian Tobacco Yearbook*, 2008). Yet this small project can hardly make a noticeable dent in the 234,000 farm families who grow tobacco. There is an apparent conflict of interest here as the MDA is also responsible for supporting tobacco agriculture.

In Brazil the tobacco growers, leaf exporters, and cigarette manufactures enjoy economic support from the federal and regional-state governments, while at the same time these chain actors are highly regulated and taxed. Brazil has an excellent record for tobacco control measures, yet it appears the consumers, manufacturers, retailers, and black marketers have found means to counter almost every one.

With Brazil's case presented, I move on to China.

Chapter 7: China

China is the world's largest producer of tobacco leaf, and the largest cigarette manufacturer. China is the world's largest country by population, one billion and 360 million people in 8,512,000 square kilometers (Stalker, 2007). China is one of the world's oldest civilizations - its written history goes back over 3,500 years (Edmonds & Smith, 2010). China's first dynasty was in 1523 BCE (World Encyclopedia, 2008). The People's Republic of China was founded in 1949; it has four main bodies: the National Party Congress, the Central Committee, the Politburo, and the Secretariat (Edmonds & Smith, 2010). It has 33 political divisions comprised of 22 provinces, 5 autonomous regions, 4 national municipalities, and 2 special administrative groups (Hong Kong and Macao) that are divided into 300 prefectures and over 650 cities, with these units further subdivided into counties, cities, city districts, and counties, and then into town governments into townships for the lowest level of local government (*ibid.*).

The Introduction of Tobacco to China

About 1600, tobacco entered China in two places: one was at coastal ports in Fujian where Chinese merchants and sailors (Oropeza, 2005) obtained it from Spanish traders in Manila (Philippines), and the second location was at the northeast border where Chinese soldiers obtained tobacco from the Manchus (Brook, 2004). Within 25 years tobacco was grown by many farmers in Guizhou province, and tobacconists were everywhere, supplying tobacco for smoking in long-stem pipes (*ibid.*). By 1658, men, women, and children hand-carried pipes, and hung pouches of tobacco on their waists (Dikotter, 2005).

Tobacco must have many names because the authors record so many of them: the “golden-shred inebriant,” “fire liquor” (Brook, 2004), “peaceful grass” (Xun, 2004), “grass for smoking,” “golden silk smoke” and “golden silk grass” (Dikotter, 2005), and “smoke blossom,” “herb of amiability,” and “herb of discernment” (Oropeza, 2005). Smoking was a familiar cultural practice from hundreds of years of smoking leaves as a health treatment (Kohrman, 2007). Tobacco was usually mixed with opium (Oropeza, 2005).

Tobacco smoking raised various health concerns. In folk medicine, hot smoke carries male energy and is deemed harmful for women, so they smoked with extra long stemmed pipes, and with water pipes that functioned as status symbols (Brook, 2004). Chinese physicians observed the harmful effects of tobacco from the very start of its use, and Ming Dynasty medical texts advised avoiding tobacco because it shortens the life span (Korhman, 2008). Scholar Fang Yizhi (1611-71) observed how smoking “scorches one’s lungs” (Washburn, 2008, p. 2), and how tobacco users vomit a yellow fluid and die (Brook, 2004).

The first ban on tobacco was enacted by ruler Chong Zhen (1627-1644), and the penalty was decapitation (Kohrman, 2008), but in 1645 after his reign, tobacco use and cultivation resumed (Brook, 2004). In 1676 Emperor Kangxi prohibited smoking in his palace, but pressure from the court caused him to substantially modify the ban in 1684 (*ibid.*).

But the doctors’ warnings and imperial regulations went unheeded, and by 1700 almost all farmers in Yunnan cultivated tobacco (Dikotter, 2005) to supply the massive demand for it. Smoking was a pleasure of the Chinese elite, including women (Brook, 2004), and other classes too (Dikotter, 2005). In 1774, the *Smoking Manual* educated the elite on the extensive social rules for smoking etiquette, and a book of verse on the pleasures of tobacco smoking, *The Tobacco Manual* was published in 1805 (Brook, 2004). Tobacco became “a token of

elegance...that set them [the elite] apart from their social inferiors, but also placed them together in each other's company" (*ibid.*, p. 88). Since its introduction to Chinese society, tobacco use has been important part of social interactions. Smoking spread to all social classes of Chinese society, over 30 million people, during the Opium Wars of 1840 and 1860 (Xun, 2004).

British American Tobacco and the Establishment of Cigarette Use, 1890 - 1937

The Bonsack machine and the incorporation of BAT.

The first manufactured cigarettes, American Tobacco Company's (ATC) "Pin Head" brand, were imported into China around 1890 by the distributor Mustard and Company (Cox, 2000; Gerth, 2003). A year later ATC set up its own plant and company in-country (Gerth, 2003). In 1898, ATC purchased 15 Bonsack cigarette-rolling machines and acquired a ten year monopoly contract on Bonsack machines for all of China (Cox, 2000). ATC expanded its market the next year by buying out Japanese cigarette exporter Murai Brothers (Suzuki & Miwa, 2009).

In September 1901, several major international tobacco companies fought over acquiring ATC; every company wanted to obtain its valuable Bonsack machinery rights and production capacity. As a compromise to prevent further costly competition, the major tobacco manufacturers formed the British American Tobacco (BAT) in 1902, with each one holding shares in BAT (Cox, 2000).

In the apocryphal version of this history, the US tobacco tycoon, James Duke, asked for an atlas and, based on its population, he chose China as his major market (O'Sullivan & Chapman, 2000; Duke & Jordon, 1995). In reality BAT began exporting its cigarettes to China in 1902, and distributed 1.25 billion sticks that year (Duke & Jordon, 1995). The corporation immediately began saturation marketing (Cochran, 2000).

The 1905 Chinese boycott of US goods left its mark on the emerging cigarette industry in two ways. First, rumours of poisoned US cigarettes (Gerth, 2003) negatively impacted BAT, and as a consequence in 1906 they started setting up or acquiring in-country manufacturing plants (Cox, 2000). Second, the boycott provided the conditions for the founding of BAT's only major Chinese competitor, the Nanyang Tobacco Company Ltd in Hong Kong, established by two brothers and expatriate family members (*ibid.*). Its sales grew dramatically during WWI, and it became a joint stock company in 1918 (*ibid.*). BAT tried to purchase them in 1914 and 1917, and again in 1921 when BAT thought they had deal, but at the last minute the Nanyang directors refused to sign (*ibid.*).

BAT frequently used a strategy of buying out its competitors, and Cox (2000) relates this history. BAT acquired the distributor Mustard & Company in 1903. A Russian firm, A. Lopato & Sons was manufacturing cigarettes in Harbin in 1889, and in 1905 BAT purchased a major financial share in it, and took it over in the 1920s. Liggett & Myers set up depots in Hong Kong and Shanghai around 1920, but BAT's exclusive rights in its contracts with dealers left them few sales opportunities, and in 1927 BAT bought them out, doing the deal outside the US to avoid litigation from the Sherman (antitrust) Act. The buy-outs continued, and in 1929 BAT acquired the ten year old Tobacco Products Corporation (Cox, 2000).

BAT could not buy out the Japanese Toa Company because it was part of the Japanese state monopoly on tobacco leaf (established in 1899) and cigarettes (added to the monopoly in 1904) (Suzuki & Miwa, 2009). Toa was created with the merger of three Japanese companies in 1906 specifically to compete with BAT, and it had a branch office in- country (*ibid.*). Toa could not compete with BAT's superior equipment, and marketing program, plus Toa sales plummeted during the 1915 anti-Japanese movement (*ibid.*). Still the Japanese monopoly attempted to get a

foothold in China. In 1909 Toa built two factories and bought one, and in 1914 Japan gave Toa the export rights to China that been assigned to Mitsui & Company for the prior 10 years (*ibid.*). Toa manufactured over 2 billion cigarettes in 1917, and 3.7 billion in 1921, although how many were exported back to Japan is unknown (Cox, 2000). Toa made another attempt to rise after the Manchurian invasion of 1932, which will be discussed at that juncture.

Toa's production was a small fraction of BAT sales. BAT distributed 10 billion cigarettes in 1912, and 31 billion in the early 1920s (Duke & Jordon, 1995). BAT cigarettes were 82% of the market in 1924 (Lee, Gilmore, & Collin, 2004).

BAT operations in agriculture, manufacturing, distribution, and marketing, pre-1925.

BAT obtained its monopoly market share with a combination of agricultural supports, manufacturing capacity, extensive distribution, and saturation advertising with billions of free samples. I take a moment to examine each one.

Agriculture.

BAT required a reliable supply of tobacco leaf to produce its cigarettes. Cochran (2000) explains how BAT encouraged tobacco farming. It began with BAT distributing tobacco seed gratis in 1913, and by the mid 1930s approximately 300,000 Chinese families (2 million people) were growing tobacco. In 1913, BAT set up a Shandong merchant as a dummy front that supplied free tobacco seed, credit, equipment loans, and cash payment for leaf, inducements that disappeared during the 1920s when leaf supply became plentiful. The merchant also acted as a purchasing agent and shipper with contracts with six railway stations, and under his name BAT

financed the building of seven purchasing centres with an attached leaf curing plant. BAT continued to purchase tobacco leaf indirectly through local merchants from 1917 through 1926, until its leaf purchasing centre was confiscated by a civil war general in 1927 (Cochran, 2000).

Manufacturing.

For its manufacturing capacity, BAT built six manufacturing plants between 1906 and 1925, and hired 25,000 Chinese employees (Cochran, 2000). Yet operations were hardly routine as BAT plants were disrupted by 56 strikes between 1918 and 1940 (*ibid.*). Nor could BAT operate its factories with a Western management system. Instead a Chinese national “Number One” was an acting foreman (or woman), and they recruited workers through family or place ties (*ibid.*).

Distribution.

For distribution BAT had its first warehouses in place by 1912, with over 246 by the early 1920s (Cochran, 2000). From 1902-1920, BAT compared the profitability of two types of sales and distribution systems: one its own company and the other autonomous Chinese commission agents (*ibid.*). Cochran (2000) offers the interesting story of BAT’s sales competition between two major Chinese sales merchants, Wu Tingshen and Zheng Bozhao, who utilized very different methods for securing wholesale distribution.

The Western directors and managers at BAT appreciated the English-speaking, Westernized Wu. BAT funded him as a dummy front with the Union Commercial Tobacco Company, which allowed BAT to operate outside of the government restriction of foreign companies to the treaty ports. While Cochran labels Union Commercial as a front, Cox (2000) defines it as a joint venture. BAT allowed Wu to sell on consignment (i.e. no prepayment). He

became even more valuable to BAT in 1913 when he became an advisor to the State Council, and a commissioner for the Ministry of Finance that set tobacco tariffs. But Wu's organization, dependent on official support and advertising, failed to make alliances with local Chinese wholesalers and retailers, so he failed to produce good profits. When his Western BAT mentor left China in 1919, Wu resigned six months later after being criticized for failing to collect past due accounts (Cochran, 2000).

Unlike Westernized Wu, Zheng spoke only a limited pigeon English, and maintained a traditional Chinese dress and lifestyle. He led his Yongtaizhan Trading Company like a family patriarch, with his son and son-in-law directing over 200 employees. Zheng used commercial shippers to distribute BAT cigarettes on their return trips home from delivering local products to markets. He focused on making contracts with merchants, recruiting them based on Canton place ties or affiliation with the tobacco trade. Zheng would waive or provide the monetary guarantees and capital BAT required, even placing goods on consignment so long as the merchant guaranteed that they would sell no other cigarettes. His wholesalers also acted as retailers. Zheng's organization produced far better profits, so BAT did much of its distribution through his organization of independent sellers. Between 1921 and 1941 Zheng generated at least 29% of BAT's Chinese profits, and probably as much as 60%. On the eve of the Japanese invasion in 1937, Zheng's company had distribution channels that encompassed over 25% of the Chinese market (Cochran, 2000).

BAT's own company distribution and sales system was organized into five levels, from the top level of Western executives on the "Administrative Committee" down to the individual sales districts (Cochran, 2000) based on Chinese postal codes (Cox, 2000). The Western

employees basically were the overseers, advisors, and inspectors of the work of the Chinese employees (Cochran, 2000).

The sales districts were managed by young Chinese men recruited from Shanghai's English-speaking missionary colleges (Cochran, 2000). They had two major duties, and the first was managing the district's commission sales agents. BAT required their agents to put up a large fund for business, work exclusively with BAT, and supply two guarantors liable for the agent's debts (*ibid.*). Agents signed "Contract 15A," which allowed BAT to own the cigarettes until it released them, and "Contract 16A" which guaranteed BAT a fixed return based on the agent's stocking levels (Cox, 2000). In addition to their management duties, the Chinese district managers collected sales and market data that enabled BAT to "synchronize production and distribution with relative accuracy" (*ibid.*, 2000, p. 161).

Marketing.

Saturation advertising was the hallmark of BAT operations in China. BAT established its advertising capabilities in 1905 by installing three printing presses in Shanghai, and adding seven more presses three years later (Cochran, 1999). In 1915 BAT set up a lithography school to train its workers (*ibid.*).

BAT's most important printed ad was the very popular multicolor New Years calendar, a Chinese cultural practice that BAT, and soon other cigarette manufacturers, appropriated for advertising (Cochran, 1999). These beautiful calendar posters (*yuefenpai*) were drawn by the best artists, and the cigarette manufacturers competed to employ them, and BAT attempted to monopolize their services (Chen & Feng, 2004). Between 1911-1941 over 700,000 calendars were distributed (Liang, 2004).

BAT printed vast quantities of public display posters, and beginning before 1908 local Chinese poster hangers called *snipers* “swept through a city and plastered BAT’s advertisements on every available surface” (Cochran, 1999, p. 49). In the 1920s, BAT hired Chinese locals to take down competitor’s posters and replace them with their own (Chen & Feng, 2004). Famous entertainers were pictured on BAT posters in the 1920s and 1930s, and without their permission (Liang, 2004).

BAT purchased all the newspaper ad space they could, making an effort to monopolize ad space (Cochran, 1999). BAT placed large display ads in newspapers for many years (Chen & Feng, 2004). Newspaper print advertising was often designed to look like the speech of a famous person, and large drawings in the ads depicted well-off people (Tsai, 2006).

Other advertising media employed by BAT were a neon sign on a newspaper building, billboards at transportation centres, vests for rickshaw pullers, and display windows and painted walls for shops, restaurants, and businesses (Cochran, 1999). Promotional items included cigarette cards and coupons, and collecting cigarette pack cards became a major hobby (Tsai, 2006). Coupons, or sometimes empty packs, could be traded in for gifts such as scarves, bottles, soaps, and matches (Chen & Feng, 2004), even horse racing lottery tickets (Tsai, 2006).

BAT marketing strategy included even more direct customer contact. From 1909 through the 1920s, BAT created public displays at markets and temple fairs, setting up a stage with free performances, prizes, and, most important, distributing free cigarettes (Cochran, 1999). BAT made deals with amusement parks for exclusive rights to advertising and sales (*ibid.*).

The overall effect of this saturation marketing was that “BAT created a dense network of visual images for persuading customers” (Cochran, 1999, p. 48). By the 1930s cigarettes were

an established mass consumer good (Xun, 2004) that for consumers was "somewhere between fashion accessories and food and medicine" (Gerth, 2003, p. 56).

While all these promotional methods induced men to smoke cigarettes, women's smoking behaviour took a different turn. For women, smoking remained a private behaviour, connoting a life of luxury and leisure (laziness), just the opposite of the Confucian ideal of the frugal and busy wife (Tsai, 2006). As the 20th century progressed, women's' private smoking was linked with the rejected role of the woman confined to the house (Xun, 2004). In addition, BAT's initial advertising images of sexualized women backfired as pictures of pinup girls were "jarring and confusing to Chinese consumers" (Cochran, 1999, pp. 38-39). While cigarette smoking became heavily linked to masculinity, women who smoked were labeled as "distasteful and improper" (Xun, 2004, p. 167). Women smoking in public in the 1920s and 1930s were assumed to be sex workers (Tsai, 2006). While BAT might have wished to market to Chinese women, they were not buying.

Universal Leaf and the Boycott of 1925.

BAT was not the only Western firm to profit from the Chinese cigarette industry. American supplier and exporter Universal Leaf Company (founded 1918) made major profits in China, and from its entry into the market in 1924 until WWII, the Chinese subsidiary was its major profit producer (Duke & Jordon, 1995). Duke & Jordon relate its early history in China.

The corporation formally entered the Chinese market in 1924, and they were a back-up leaf supplier for BAT. The firm purchased and processed Chinese leaf for export, local sale, and on contract during a 2-3 month buying season. Chinese growers would bring in 250 pound bales by ox-powered or wife-pulled carts, and the U.S. staff would buy it directly from the individual

farmer, or reject the leaf. The purchases took place at one of three buying stations located at railways, with up to 50 armed soldiers present to fend off robberies and kidnappings. The purchased leaf was packed by the buyer's Chinese staff and shipped by rail under guard. Some leaf went to Universal Leaf's Chinese compradors who sold it to Chinese cigarette manufacturers with a sample and a handshake, over 186 million pounds in 1931. Note that BAT and Universal Leaf were not the only leaf buyers: 15 other leaf dealers, including firms from Greece and Russia, had offices in Shanghai in the 1930s (Duke & Jordon, 1995).

In addition to import-export, Universal Leaf had three storage facilities, and operated two redrying plants in double shifts for 6 months a year. Its 120-130 Chinese plant workers, often entire families, laboured under the supervision of a Chinese Number One. Universal Leaf processing factories were disrupted by strikes in the 1930s. Little information is available about other redrying plants. Duke & Jordon (1995) make one reference to Universal Leaf buying out a Chinese redrying factory in 1934, but I have not found any references to other firms involved in leaf processing.

Universal Leaf's timing for entering the Chinese market could not have been better. The anti-British boycotts of May 30, 1925 seriously challenged BAT's market monopoly. Chinese companies promoted themselves with nationalism, and national products were associated with the survival of the country (Tsai, 2006), and for a time it was unpatriotic to smoke foreign cigarettes (Gerth, 2003). With the cigarette supply disrupted, Shanghai went from 14 cigarette factories to 182 over the next three years (*ibid.*) while at the same time the government's imposition of a 50% ad valorem tax on cigarettes in 1927 put many of them into bankruptcy (Cox, 2000). In response to the tax, BAT closed its factories (*ibid.*). In the economic turbulence, Japan's Toa acquired Asia Tobacco Ltd (Suzuki & Miwa, 2009). Universal Leaf (U.S.) made

good money providing the new Chinese national cigarette manufacturers with imported US leaf, machinery and parts, leaf processing, and export services (Duke & Jordon, 1995).

For BAT, the 1925 boycotts were a disaster. Its cigarettes were boycotted, and over 15,000 workers went out on a four month strike at two plants, with financial support from Nanyang (Cox, 2000). BAT rebranded the British sounding “Ruby Queen” to “Red Pack” to keep sales (*ibid.*). Chinese newspapers declined all BAT ads, steamship companies refused to transport BAT products, and the September blockade completely shut down BAT sales that month (*ibid.*). As mentioned earlier, in 1927 the BAT purchasing centre was confiscated, and with BAT out of commission, the newly founded Chinese cigarette manufacturers formed a guild to buy tobacco, capturing an 80% share of leaf production (Cochran, 2000).

BAT’s response was two-pronged, on business and political fronts. For business, first, they changed to a direct purchase system for leaf procurement that squeezed out local buyers with a cash- on-the-spot payment system, a big incentive for farmers (Cochran, 2000). With the threat of violence, BAT, like Universal Leaf, paid local militias to provide security during leaf purchasing (*ibid.*). As anti-British sentiment subsided, in 1928 BAT deeply slashed cigarette prices, a “price war” that forced many cigarette manufacturers out of business (Gerth, 2003).

On the political front BAT recontacted Wu Tingshen, their former distributor with ties to the Ministry of Finance, and Wu negotiated an exclusive contract with special rates for BAT for leaf transport on the Nationalist government held railways (Cochran, 2000). Unable to compete, the Chinese leaf purchasing guild died by attrition by 1935, and Wu paid for his services to BAT with his life, and was assassinated that year (*ibid.*).

Government and political activity before the Japanese invasion.

Doing business in China during the period before 1925 boycott required dealing with government regulations and taxes. Taxes appear to be the most critical issue. In 1913-1914 the Peking government set up a Wine and Tobacco Administration, and BAT negotiated with them for a 20% tax rate that was approved in 1921 (Cox, 2000). The Canton government placed a 40% tax on foreign cigarettes in 1925 (*ibid.*).

Chinese laws also impacted the incorporation of foreign businesses. The 1915 *China (Companies) Order in Council* set up two types of British registered companies, one for Hong Kong, and the other for the rest of China; the later required that a majority of directors and the managing director to be British citizens (Cox, 2000). BAT got around the law by claiming to be a Hong Kong corporation, and moved its headquarters there in 1920 (*ibid.*).

In the decade after the boycott, both BAT and Universal Leaf leveraged political influence on the Chinese government. BAT was quick to appeal to U.S. and British diplomats to protest taxes on their behalf (Cox, 2000). A regulation loophole in the early 1930s taxed hand-rolled cigarettes at 1/8th of the rate for manufactured cigarettes, which allowed a few producers in northern China to capture a 25% share of the local market. BAT called on its diplomats, and Chinese officials eliminated the business licenses for manufacturing hand-rolled cigarettes (*ibid.*). On another occasion BAT pressured US and UK diplomats to appeal to Chinese officials to rescind a provincial transit tax (*ibid.*). Using insider ties was another political tactic: Universal Leaf comprador L.T. Yuan had political ties (Duke & Jordan, 1995), just like BAT's Wu.

Bribery was another avenue of political influence. BAT targeted Chiang-Kai-shek's government in 1927-1928 by capitalizing a public company and offering influential Chinese

officials and businessmen \$100 shares for \$85 (Cox, 2000) - an instant 15% profit. With a similar ploy, Universal Leaf set up the Lien Hwa Leaf Company in 1935 and offered stock options to the Chinese elite to gain their support (Duke & Jordon, 1995).

Few references to the black market are available for this period. Counterfeiting appears to be flourishing by the 1930s, as indicated by BAT's inclusion of pack cards as an indicator of authenticity (Cochran, 1999). Trademarks were counterfeited as early as 1934 (Liang, 2004).

So just as it seems that BAT was about to regain its dominance of the cigarette commodity chain in the late 1920s, Japan invaded China, completely recasting the actors of the cigarette industry, and exiling its former star player.

Upheaval in the Cigarette Commodity Chain: From the Japanese Occupation to the PRC Revolution

The penultimate hit to BAT operations in China was the 1931 Japanese invasion of Manchuria. With the nationalization of the railroad, BAT sales in the region dropped 25%, (Cox, 2000). Japan set up a financial bureau to collect taxes, and it seized BAT stock for nonpayment of taxes (*ibid.*).

To ameliorate this situation, BAT bought a factory in Manchuria in 1933 (Suzuki & Miwa, 2009). BAT then proposed a cooperative price and territory agreement to Japanese state-owned Toa, but the firm refused the offer (*ibid.*). Instead, Toa again tried to put itself in a competitive position by buying four more factories between 1935 and 1939 (*ibid.*). But it was to no avail, as BAT retained two thirds of Chinese market from 1931-1941 (Cochran, 1980).

Two years before the Japanese invasion in 1937, Central and Southwest China had over 100 brands of cigarettes, 290,000 hectares in leaf agriculture, and produced 330,000 tonnes of

leaf (Yang, 2008). BAT cigarette production in China was 55 billion sticks before the 1937 invasion (Lee, Gilmore, & Collin, 2004), and its Chinese operations generated 38% of BAT's total worldwide revenues (Suzuki & Miwa, 2009).

Bombing during the 1937 invasion destroyed a major Universal Leaf warehouse and its inventory, right after its top year for tobacco exports, 346 million pounds (Duke & Jordon, 1995). During the Japanese occupation, BAT was producing 10 billion cigarettes a year (Cochran, 1980), less than 20% of its prior business. Because anti-foreign spirit was high, BAT assumed the name Yee Tsoong Tobacco Company to feign a local origin (Cox, 2000), and moved its headquarters and 33 operations to Hong Kong (Cochran, 1980).

During the occupation Japan's military government took control of the tobacco industry, and established a monopoly on leaf production with the Manchu Leaf Tobacco Kabushiki Kaisha and the Central China Tobacco Association (Cox, 2000). Japan prohibited BAT from direct leaf purchasing, and pressured the company to buy Japanese procured leaf with foreign currency, severely disrupting BAT's operations and sales (*ibid.*). The Japanese government restricted and regulated Universal Leaf's employment of Chinese labour (Duke & Jordon, 1995). The Japanese government expropriated all Chinese cigarette firms, so by 1941 they held 40% of China's cigarette production capacity (Cox, 2000).

Conflicting stories surround the end of BAT's China operations in August 1941. Cochran (1980) states that BAT suspended sales and withdrew after Pearl Harbour. Cox (2000) relates that the Japanese authorities froze BAT assets, and interned its non-Chinese staff, with over 100 held at a prison compound in a converted BAT factory. Universal Leaf also had its facilities confiscated in 1941, and its president and staff held as prisoners of war at the BAT compound, where at least one of its supervisors died in captivity (Duke & Jordon, 1995).

After WWII, BAT negotiated with Chian Kai-shek to return its assets, but received only one third back (Cochran, 1980). BAT resumed operations in cooperation with Nanyang during the Chinese Civil War from 1945 to 1949, sharing materials, producing cigarettes with joint manufacturing, and partitioning the market (*ibid.*). Universal Leaf did reclaim their facilities in 1945, but did not resume processing activities (Duke & Jordon, 1995). Exchange rate inflation had eroded their profits, and they moved to Hong Kong in 1950, writing off over US \$1 million in losses (*ibid.*).

Then came the Communist Revolution. In 1950 tobacco production was 154,000 tonnes for all China (Yang, 2008), perhaps a third of its pre-WWII volume. The Communist government terminated all foreign cigarette sales after 1951, and nationalized Nanyang (Cochran, 1980). All the Chinese cigarette manufacturers were nationalized in 1951 in order to generate revenue for the national government (Kohrman, 2007). In 1952, BAT assets were seized for back taxes and its executives held hostage, and in 1953 BAT surrendered their assets to get their staff released (Cox, 2000), and BAT wrote off the business as a loss (Cochran, 1980).

Cigarettes in the Peoples Republic of China Since Early 1950

The closed market and the “Open Door.”

When the Communists came to power, the party eliminated many vices, but it permitted cigarette smoking - it was not considered bourgeois (Xun, 2004). All the (male) Chinese officials smoked, and with the smoking behaviour of top officials on display, smoking became associated with power and status (*ibid.*). During over 50 years of TV broadcasts, government officials were almost always smoking, “an unabashedly government-sanctioned means for cultivating and enacting male authority and homosociality” (Kohrman, 2007, p. 103). Smoking became a man’s

image of authority, and the “official intoxicant” of the Chinese Communist Party (Dikotter, 2005, p. 134).

Officially, China was completely closed to foreign trade in tobacco and cigarettes from 1949 to 1979. The PRC rationed its nationally produced cigarettes from the 1960s until late 1970s (UNFAO, 2003b), and these monthly tobacco vouchers to families were monopolized by male family members, decreasing the opportunities for women to smoke. (Kohrman, 2007). The members of People’s Liberation Army were also issued cigarette rations (*ibid.*). The images and brand names used on cigarettes manufactured in the 1960s and 1970s were political propaganda tools (Rommel, 2000). Post-Revolution anti-prostitution campaigns continued to stigmatize women’s smoking as a behaviour of sex workers (Kohrman, 2007), and social prejudice against women’s smoking became very strong between the 1950s and the 1970s (Cui, 2010).

Not every door was actually closed because manufacturing inputs were needed. In the mid 1950s MAN Rolland started offering printing to the PRC from Hong Kong (Rall, 2007). Universal Leaf was shipping leaf from Hong Kong to Nanyang, as indicted by its conviction in 1958 under the US “Trading with the Enemies Act” (Duke & Jordon, 1995).

China invested in its tobacco industry. Shanghai Tobacco Machinery Co was established in 1952 at the former BAT Pudong Cigarette factory (Shanghai Tobacco Machinery, [n.d.]), and the following year the Mudanjiang Hengfeng Paper Company began producing cigarette paper (Mudanjiang Hengfeng, [n.d.]). In 1956 the Yuxi Hongta Tobacco Group began as a re-curing factory, and today it is China’s largest tobacco company (Euromonitor, 2010e). Xuchang Tobacco Machinery Co Ltd was founded in the 1960s (Xuchang, [n.d.]), and Changde Tobacco Machinery Company was set up in 1975 in a reconverted light bulb factory (Gay, 2009).

U.S. President Nixon first approached China to reestablish trade in 1972, and Universal Leaf was part of the delegation (Duke & Jordon, 1995). Deng Xiaoping's "open door policy" in 1979 opened China to foreign trade, and the China National Tobacco Company approved 10 joint ventures with Philip Morris (Lee, Gilmore, & Collin, 2004; O'Sullivan & Chapman, 2000). Yet foreign funding was restricted, for example the government capped Philip Morris' Shenzhen factory investment to \$14 million, well below what it wanted to invest (O'Sullivan & Chapman, 2000). The biggest barrier to the Chinese market for the transnational cigarette manufacturers and leaf exporters is that no foreign ownership is permitted (Lee, Gilmore, & Collin, 2004).

BAT made use of the open door. BAT was exempted from the customs tax on raw materials in 1979 in exchange for an agreement to manufacture local brands (Lee, Gilmore, & Collin, 2004). In 1981 BAT publicized its expertise in machinery and made sales to three companies, but its real goal was not sales but an entree into the industry (*ibid.*). BAT distrusted joint ventures, looking instead for leaf processing business and machinery sales paid for in hard currency (*ibid.*).

But the other transnational tobacco corporations were making moves on the market with joint ventures. After Philip Morris' head start, in 1981 RJ Reynolds manufactured their Camel brand at the Xiamen Cigarette Factory, and in 1988 they invested US \$21 million for a plant in Xiamen (O'Sullivan & Chapman, 2000). Many other joint ventures followed. More recently, in 2003 the International Tobacco Company (India) inked a ten year deal providing US \$8 to \$10 million in infrastructure to Yuxi Hongta Group (Tong et al., 2008). In 2006 the China National Tobacco Company and Philip Morris made an agreement for the government industry to manufacture the Marlboro brand, and for Philip Morris to distribute Chinese brands internationally (*ibid.*). As of 2009, the state monopoly has arranged 62 technology transfers for

equipment (“China National Tobacco Corporation, Focke of Germany,” 2009). In these technology transfer agreements, foreign companies share equipment designs while restricting sales of the machinery outside China for commonly eight or nine years (Gay, 2009). China uses these joint ventures to obtain technical knowledge (O’Sullivan & Chapman, 2000). BAT announced it had joint venture agreements in 2001 and 2004, only to have the government refuse approval (Lee, Gilmore, & Collin, 2004).

I have found one foreign supplier that has established manufacturing operations in China, Australian Amcor Asia (Australia). It established a factory in China in 1994 that produces flexible packaging used in the tobacco industry, and in 2007 the company opened a second plant (Amcor Limited, 2008).

China produced 500 million cigarettes in 1978 before the open door policy, and by 2006 China’s production was 2 trillion - a 400% increase in less than 30 years (Peto, Chen, & Boreham, 2009). The increase in cigarette production was facilitated in the 1980s by the government’s promotion of tobacco farming as a development strategy (Kohrman, 2007).

The founding and development of the State Tobacco Monopoly Administration.

In 1983, the Chinese Tobacco Monopoly Rules (Wang, 2009) brought about the formation of the State Tobacco Monopoly Administration (STMA) the following year, and responsibility for tobacco and cigarette production was transferred from the Ministry of Agriculture to the Ministry of Economics and Trade (Hu et al., 2008). The Chinese Tobacco Monopoly Law in 1991 restructured the state run industry (Wang, 2009) and reinforced the state monopoly (UNFAO, 2003b). Under this law, the STMA delegated authority to the CNTC for determining provincial leaf production quotas; leaf procurement, transportation and storage; and production and

marketing of cigarettes (Tong et al., 2008). The Economic Planning Commission sets the tobacco production quotas every October (Hu et al., 2008).

Yet while Chinese law designated the STMA as the ultimate authority, in practice between 1985 and 2003 the trade was dominated by local bureaucracies (Wang, 2009). Provinces were actively trading their production quotas to retain taxes (*ibid.*). The shift from regional to national control began when the STMA was repositioned in the National Development and Reform Commission in 2003 (Hu et al., 2008), and its activities redivided among the STMA, the Chinese National Tobacco Industrial Corp, and the Chinese National Tobacco Trade Corp (Wang, 2009).

The black market in the 1990s.

Shen, Antonopoulos, and Von Lampe (2010) claim that counterfeiting arose with the open door policy because private enterprise was prohibited, making the black market the only option to obtain money from the large cigarette market. When it comes to evidence, it is clear that transnational cigarette manufacturers were heavily involved in smuggling in the late 1980s, referenced in company reports with euphemisms such as “outside official channels” and “unofficial imports” (O’Sullivan & Chapman, 2000) or DNP, “duty not paid” (Lee & Collin, 2006). One major smuggling route in the 1980s was from Hong Kong to the Xiamen Special Economic Zone Trade Company Ltd. (Lee, Gilmore, & Collin, 2004).

BAT was smuggling: in 1993 only 5.4% of BAT’s sales in China were legal (Lee, Gilmore, & Collin, 2004). A BAT official was convicted in 1998 for accepting over HK \$23 million in bribes and HK \$10 million in loans for procuring duty-free cigarettes (O’Sullivan & Chapman, 2000). Thanks to BAT smuggling, it obtained 4.4% of the Chinese market in 1996

(Holden et al., 2010), which although this sounds small, still represents many millions of cigarettes.

One way the counterfeiters and smugglers sold their contraband to retailers was by setting up their own marketplaces, effective in part because of a gap in STMA cigarette distribution (Zhou, 2000). Black marketers paid local governments a lump-sum tax and lease fees to set up marketplaces where retailers purchased illegal products and evaded taxes (Zhou, 2000; Tong et al., 2008). Local governments would tip off markets about planned STMA raids, or refuse to shut down the markets (Zhou, 2000). Spontaneous wholesale black markets without local government backing also sprang up (Tong et al., 2008).

The PRC cracked down on these markets in 1998, eliminating many of them (Tong et al., 2008), and investigated the involvement of members of the People's Liberation Army in the black market (Lee, Gilmore, & Collin, 2004). Yet the export of illegal cigarettes has continued to grow since the late 1990s (Shen et al., 2010).

State tobacco in the 21st century.

Two major events dramatically changed China's cigarette industry: its entry into the WTO and its substantial consolidation of manufacturing companies and cigarette brands over the last decade.

China's entry into the World Trade Organization.

China's petition for entry into the World Trade Organization began with its GATT application in 1986, and China was admitted in 2001 (Tong et al., 2008). The U.S. Trade office during the Clinton administration secretly promoted cigarettes as trade policy, and made the opening of the

Chinese market a condition of its entry into the WTO (O'Sullivan & Chapman, 2000). The pressure to reduce tobacco import taxes must have been strong as the STMA offered to lower the taxes during the negotiations in 1997 (Holden et al., 2010).

BAT expected that the WTO agreements would improve export and investment opportunities for them (Zhong & Yano, 2007). Their strategy was to publicly support China's entry, which they hoped would lead favourable treatment, while privately and secretly they lobbied the EU and the US Trade Representatives for the terms they wanted (Holden et al., 2010; Zhong & Yano, 2007). During the negotiations, BAT attempted to obtain a joint venture agreement, but they were denied (Holden et al., 2010).

After all the negotiations, China secured a "timetable delay" for implementation of tariff reductions (Tong et al., 2008), which are actually tax harmonization with the domestic tariff rates. The pre-WTO imported leaf import tariff of 64% was reduced to 1% by 2004, and special permits to sell foreign cigarettes were eliminated in 2003 (*ibid.*). China's WTO membership resulted in the repealing of its export rebates for leaf and cigarettes, and eliminating the export bounty payment (Hu,T.-W., Mao, Ong, et al., 2006). China did obtain an exemption for tobacco on rules permitting foreign ownership of wholesale and distribution systems (Holden et al., 2010). The STMA is concerned that China's WTO membership will be a major threat to its operations (*ibid.*).

Eliminating chain actors: "Grasping the large."

In 2003, the Chinese government began an extensive process of consolidations and mergers. The purpose has been in part to build large companies to compete against the international brands (Shen et al., 2010). This strategy is called "grasping the large and letting go of the small"

(*zhuada fangxiao*) and it has “greatly condensed China’s tobacco industrial body” (Wang, 2009, p. 183). There were 185 cigarette companies in 2000 (Hu et al., 2008), and 31 in 2007 (Euromonitor, 2008b); the probable goal is 20 (Wang, 2009). Brands have been reduced just as dramatically as the number of companies, from 1049 brands in 2001 (Hu et al., 2006) to less than 155 (China Research and Intelligence, 2009), and now the STMA is focusing on the sales of 30 major brands (Euromonitor, 2010j).

Company reductions, reputedly done with the involvement of local governments, were accomplished through asset transfers by the state, share transfers (stakeholder shares), debt assumption, and canceling corporate status (Tong et al., 2008). The local governments are reported as participating in the process (*ibid.*), but I wonder about their actual cooperation because this restructuring has shifted power from them to the central government (Wang, 2009).

When the factories were closed, the workers received a lump sum pay out, retraining, or a new work assignment at another factor, and the fixed assets were sold off (Hu et al., 2008). This has been a big boost to the black market. Asset sales from state factory closures has put equipment in the hands of the black market, and laid-off workers have brought their skills to black market production (Shen et al., 2010)

Current Structure of the Cigarette Commodity Chain

Farmers.

The most current estimates have 5 million farm households growing tobacco (Hu et al., 2008), with approximately 22 million farm workers in 2007 (Euromonitor, 2008b). Tobacco growing in China is very manual labour intensive (UNFAO, 2003b). The average farm size is .3-.4 ha, with about one third allotted to tobacco (*ibid.*). Almost all farms grow other food crops, so there is

almost no mono-cropping (Hu et al., 2008; UNFAO 2003b). Farmers do not have a title to their land (Stalker, 2007).

In 2009 there were 123 million hectares under tobacco cultivation, and leaf production was 2.342 million tonnes (“China Fights Illegal Leaf,” 2009). Yunnan is the leading province in tobacco farming, producing double the output of the next leading province, Guizhou. Four provinces (Yunnan, Guizhou, Henan, and Sichuan) supplied over 50% of China’s tobacco leaf in 2004 (Hu et al., 2008). China leaf imports in 2008 were 385,000 tonnes, mostly from Brazil (*Brazilian Tobacco Yearbook*, 2009).

The CNTC signed 1.5 million leaf contracts in 2009 (“China Fights Illegal Leaf,” 2009). Contracts are based on the acreage cultivated and prices paid are based on leaf grade, with over 200 different prices that vary as much as 50% (Hu et al., 2008). The CNTC agent at the state leaf purchasing station determines the grade of the leaf, an exchange that “often leads to disputes between tobacco farmers and agents” (*ibid.*, p. 35; also reported in “China Fights Illegal Leaf,” 2009). While farmers lack power because of their small size as a family business (Datamonitor, 2009b), the situation has become so heated that the CNTC has permitted third party mediation through Community Pricing Committees (Hu et al., 2008).

Tobacco agriculture is attractive to farmers because they have the assurance of a state guaranteed purchase contract that their crop will be sold (FAO, 2003, China; Hu et al., 2008). Commercial seeds and fertilizer may be specified and provided by the CNTC at fixed prices (UNFAO, 2003b). Tobacco farmers also receive CNTC loans and technical support (Hu et al., 2008).

But the contract does come with a catch - it stipulates the exact quantity to be purchased, and the CNTC will not buy more than that amount (“China Fights Illegal Leaf,” 2009). This is

not a problem for the farmers as they can readily sell their sub-quality leaf or excess production to the black market (Hu et al., 2008). And when farmers provide less than the contract amount at the State purchase station, they get nothing worse than a verbal reprimand (“China Fights Illegal Leaf,” 2009).

The STMA - from leaf processing through distribution.

STMA structure.

Once the tobacco leaf is out of the farmers’ hands, the STMA controls all aspects of production and distribution until the cigarettes are purchased by the independent retailers. This is the STMA’s centralized vertical management of cigarette production (Tong et al., 2008). Leaf is purchased, transported, stored, manufactured, and distributed by the CNTC, and the provincial level companies set production schedules, determine the wholesale cigarette prices, and provide transportation (Hu et al., 2008).

In addition to processing their own domestic crop, state-owned companies process tobacco leaf as contract work for BAT, Japan Tobacco Inc (“Chinese Redrying Factory,” 2009), Philip Morris US, and Gudang Garam Tobacco Co (Indonesia) (“China Tobacco Exports,” 2009). The STMA has leaf export contracts with Universal Leaf, Alliance One, and Philip Morris US, and 2008 leaf export was 172,770 tonnes (*ibid.*). Two foreign manufacturers have offices in China: Philip Morris International in Beijing and International Tobacco Group (India) in Shanghai (*Global Tobacco Industry Guide*, 2009).

For manufacturing, the China National Tobacco Company is divided into 16 provincial corporations as independent legal agencies (Euromonitor, 2008b) that act as competitors (Hu et

al., 2008; Tong et al., 2008) with the incentive of retaining profits above its required profit and tax contribution (Hu et al., 2008).

The STMA provides almost all the manufacturing inputs under the control of the China Tobacco Materials Corporation (Shen et al., 2010; UNFAO, 2003b). But the state-run industry does use outside suppliers for printing and packaging. Printing equipment supplier MAN Roland has provided presses to Humen Colour, one of China's largest printers of cigarette packs, and Shanghai Jielong, a retail product packaging supplier for the Chinese tobacco industry (Rall, 2007). Amcor Ltd (Australia) provides flexible packaging with two Chinese factories (Amcor, [n.d.]). The STMA has imported packaging and printing technology from Japan (Euromonitor, 2008a).

The STMA has also created its own equipment industries, allowing it to bypass foreign suppliers (Gay, 2009). The China Tobacco Machinery Group (CTMG) operates four machinery factories, a tobacco expansion system subsidiary, a spare parts manufacturer, and an equipment research and development centre (*ibid.*). These companies have obtained leaf processing technology from Hauni, Gabuio, Comas, and McTavish, Messer (UK) and Airco Dier (US) (*ibid.*). The STMA is strongly involved with obtaining new technology through joint ventures (Tong et al., 2008).

Yet China does not provide all its own support services internally. The largest cigarette manufacturer, Yuxi Hongta Tobacco Group Co, has hired SAP-Germany to build its Enterprise Resource Planning System for electronic communication of data (Euromonitor, 2010j).

Distribution is handled by the China Cigarette Sales and Marketing Corporation (Shen et al., 2010). There are 16,530 distribution points in China (Wang, H., 2006). In one reporter's eye, the distribution system is so good that cigarettes are available everywhere in China

(Washburn, 2008). At the final level of distribution, cities have fixed districts and routes for cigarette distribution with state-owned vehicles, divided into five districts with one serviced each workday, a simple but inefficient system (Hu, Ding, & Shao, 2009).

The STMA controls imports. For 2009 imports were 4.5 billion sticks (Euromonitor, 2010j), and foreign imports have basically been locked out, with BAT having .2% of the market, Japan Tobacco .2%, and Philip Morris .1% for legal imports (Euromonitor, 2010i). The CNTC imports on consignment (*ibid.*), meaning that any unsold product is returned to the manufacturer, and payment is made only after the cigarettes are sold.

Production and trade statistics.

The production of cigarettes in 2009 was 2.29 trillion sticks (yes, trillion) produced by 30 manufacturing plants (Euromonitor, 2010j). Cigarettes are almost the exclusive tobacco product with 99.2% of total revenues (Datamonitor, 2009b). Manufacturers earn between 47% and 52% of the retail price (Euromonitor, 2010j).

In addition, 8.71 billion sticks were produced abroad in Sino-foreign joint ventures (China Research and Intelligence, 2009b); the STMA operates 11 cigarette factories outside China (Euromonitor, 2009g).

Cigarette exports in 2009 were 16.1 billion sticks (Euromonitor, 2010j). Philip Morris, in a joint venture with the CNTC, sells Chinese brands abroad, and China has its own exports, so Chinese cigarettes are on sale in over a dozen countries (Euromonitor, 2009g; Tong et al., 2008).

Another source of trade is the STMA's machinery group, the CTMG companies; they have exported equipment to 13 countries (Gay, 2009; Xuchang Tobacco, [n.d.]). Through a partnership with Hauni, the CTMG has sold equipment to seven cigarette manufacturers

including JTI and PMI (Gay, 2009). With all this international business, a CTMG company chairman has been quoted as being concerned that the changes in currency exchange rates was eroding their price advantage in the international equipment market (*ibid.*).

Retailers.

Total cigarette sales in 2009 were 2.21 trillion sticks (yes trillion). Total cigarette revenues in 2008 were US \$57 billion (Datamonitor, 2009b). Retailers earn an average of 11.75% of the retail price (Euromonitor, 2010j). There are approximately 4 million retailers (Tong et al., 2008) with over 5 million private sector retail points of sale (Wang, H., 2006). Retail sales shares are 38% for tobacco shops (Euromonitor, 2010j), 31% for small grocery stores, and 15% for street vendors (Euromonitor, 2008b), and 12.4% for hypermarkets (mostly for premium gifts) (Euromonitor, 2008a). Tobacco specialists are the leading retailers, and 4.9 million tobacconists place orders on-line (*ibid.*).

The STMA prohibited foreign retailers from selling cigarettes beginning in 2009, impacting Carrefour, Wal-Mart, and Metro chains. They simply moved their sales to their party retailers (i.e. in-home direct sales) (Euromonitor, 2010j).

Due to widespread counterfeiting, buyers have their concerns over where they purchase their cigarettes. Some customers who have complained about buying counterfeits have been roughed up by shop security (Shen et al., 2010). Many Chinese consumers forgo buying premium brands because they cannot be sure if the cigarettes are genuine (Euromonitor, 2008a).

The black market.

Unofficial estimates of illegal imports are over US \$5 billion in 2008 (China Research and Intelligence, 2009a). China's official figure for illegal production is 46.5 billion sticks comprising 2.2% of domestic consumption (Euromonitor, 2008b). Industry figures put the number at 193.2 billion illegal sticks consumed in 2009, representing 8% of consumption (Euromonition, 2010j). Legitimately manufactured cigarettes are exported, legally exempt from taxes, and then smuggled back into the domestic market as contraband (Hu et al., 2008; Lee & Collin, 2006; Tong et al., 2008).

As for manufacturing contraband, Yunxiao (Fujian) has an estimated 200 illegal cigarette manufacturers, and a single factory garners \$100 million yuan a year and may use the labour of as many as 500 workers (Chen, 2009). Illicit packing processes usually have 10-12 workers (Shen et al., 2010). Cigarette rolling machines cost \$1.5 - \$3 million yuan, but these costs are offset in just a few months (Chen, 2009).

Many people are required for the trade: farmers, unauthorized manufacturers, intermediaries (transporting from the manufacturer to the customer), former state workers, packaging producers, trademark and barcode printers, migrants for menial tasks, storage providers, security guards, transporters, sellers, look outs, and corrupt officials (Shen et al., 2010; for state workers, see also Chen, 2009). For many of these positions, counterfeiters use only family members to assure loyalty (Chen, 2009). Non-family menial labourers are taken in closed vehicles to work sites so they do not know its location, denied their cell phones, and held on the premises for duration of their work (Shen et al., 2010). The Chinese diaspora aids the smuggling network outside of China (Chen, 2009).

Yunxiao (Fujian) produces an estimated 400 billion counterfeit cigarettes a year (Chen, 2009). For counterfeiting, production is broken up into three separate locations to reduce the number of cigarettes to below the threshold for prosecution (*ibid.*). Production sites can be in legitimate factories, warehouses, farms, martial arts schools, temples, and private homes (Shen et al., 2010). Counterfeits can be made from waste tobacco that is treated with sulphur and carbamide to improve its appearance, or with non-tobacco materials such as sawdust and vegetable leaves - but they may also be fabricated with regular quality tobacco (*ibid.*). Rolling machines are key to being able to counterfeit (*ibid.*), with one machine producing about 300 cases a day (Tong et al., 2008). Counterfeits may be packed in genuine packs, counterfeit packs, or phony gift packs (Shen et al., 2010).

Marlboro counterfeits are very well made, and individually designed for over 60 different countries complete with tax stamps and health warning labels (Chen, 2009). In six years of black market busts in Belgium, counterfeits from China were always Marlboros (Vander Beken et al., 2008). Counterfeits are shipped through multiple ports to disguise their origin, and held at sea for as many as three months for further camouflage; Dubai and Singapore are the most popular ports (Chen, 2009). Belgium is the storage transportation hub for the EU black market, often utilizing legal transportation and legitimate shipping agents (Vander Beken et al., 2008). Overseas money laundering is done through aliases, false documentation, and phony companies (*ibid.*).

Local black market cigarettes are delivered by private vehicles or by commercial transport companies that may or may know the illegal status of the cargo (Shen et al., 2010). Fishing boats are also used for transportation (Chen, 2009). Illicit cigarettes are sold in shopping centres, department stores, hotel gift shops, and legitimate grocery stores and kiosks with

permits, and also by unlicensed street sellers (Shen et al., 2010). Illegal cigarettes are easy to obtain on transportation of all kinds and in village markets, and unwary tourists are targeted for sales (*ibid.*).

The financial rewards are huge: “smuggling one container of domestic cigarettes can result in the equivalent of becoming a millionaire” (Tong et al., 2008, p. 238). The cost to produce a 40 foot container of 10 million sticks is \$100,000, and its US street value is \$2 million (Chen, 2009). But there are other risks for the smugglers besides the law: gangs extort protection fees from illicit cigarette sellers and counterfeiters (Shen et al., 2010).

China has the reputation as the world’s major producer of counterfeit cigarettes, and counterfeiting appears to be increasing (Shen et al., 2010). Chinese counterfeiters supply 99% of U.S. black market and 80% of the European Union, and they are bold enough to advertise on the internet for customers (Chen, 2009).

Consumers.

The most recent official data for smokers is from 2002: men, 57.4% and women, 2.6% (WHO, 2009). Industry figures for 2009 appear to be low: 245.4 million adult male smokers, and 13.5 million adult women, for a total of 259 million smokers (Euromonitor, 2008b). Only 1% of women over 25 are smokers, and their numbers are declining (Peto et al., 2009). Most smokers start at age 14-15 (Euromonitor, 2008b). Poor households spend 6.6% (urban) to 11.3% (rural) of their total income on cigarettes (Hu et al., 2006), and economy-priced cigarettes are 55% of all sales (Euromonitor, 2010j). Consumption in 2009 was 2.4 trillion sticks (Euromonitor 2010i). Individual consumption has increased almost 250% since 1970 (Kohrman, 2007).

Smoking is “deeply entrenched” in Chinese culture as “the pervasive social acceptability of smoking runs deep and cuts across socioeconomic and professional groups as well as smokers and nonsmokers alike” (Ma et al., 2008, p. 664). One indication of the social acceptance of smoking is how all of the 10 top Chinese movies of 2001-2002 had scenes with smoking (Wang, H., 2006), and in 2007, 78% of movies and 93% of TV dramas showed smoking (Li., Q. 2010). Smoking is an integral part of Chinese social behaviour for men.

Male cigarette use is driven by *fayan*, a social interaction of men offering cigarettes to other men and smoking them in each other’s company. *Fayan* is a strong social driver for men to smoke (International Tobacco Control, 2009a). Refusing a cigarette when offered is rude, and offering a cigarette is rarely criticized (Kohrman, 2007; Ma et al., 2008). Smoking is part of business transactions and discussions, a “nearly inescapable interpersonal means of achieving success” (Kohrman, 2007, p. 109). With the custom of *fayan* “cigarettes are often used in exchange for a favour, to win a promotion and to develop a good relationship with one’s superior” (Xun, 2004, p. 167). Because of *fayan*, 12% of cigarette users smoke only when offered cigarettes, but do not buy them (“China’s Anti-Tobacco Fighters,” 2009).

Gift exchanges drive cigarette consumption. Premium cigarettes are given as gifts, especially for festivals (Euromonitor International, 2010j). Top priced cigarettes are a popular choice for presents (Hu et al., 2008; Xun, 2004). People offer their friends cigarettes to show their hospitality (Euromonitor, 2010j).

Smoking provides an image of being cool in modern China (Xun, 2004), and is a symbol of individual freedom (Ma et al., 2008). Expensive packs function as a status display (Hu et al., 2008) as “the right cigarette brand shows the entire world that you have become someone”

(Rommel, 2000). Smokers associate cigarettes with being modern, sophistication, riches, and success (Euromonitor, 2010j; O'Sullivan & Chapman, 2000).

Women smoke to exhibit “independence and wealth” (Kohrman, 2007, p. 101), and to display the “cool image” advertised in fashion magazines (Euromonitor, 2008b). Women who work may believe that smoking relieves stress (Euromonitor, 2010j). Women do not experience the same peer pressure to smoke as men because they smoke individually (Kohrman, 2007). For men, smoking is strongly associated with manliness (*nanzihan*) (Kohrman, 2008), and these types of images are used in advertising (Kohrman, 2007).

The common social attitude towards smoking is that it is an individual choice, legitimated by its legal status, and smoking is an acceptable public behaviour (Kohrman, 2008; Ma et al., 2008). The social norm is not to complain about smoking (Lee & Jiang, 2008), and women do not have the social status to be able to ask their husbands to refrain from smoking at social events (Cui, 2010).

Most Chinese think that smoking is not a serious health concern (Ma et al., 2008). “Most Chinese adults are not fully aware of the hazards of smoking” (Peto et al., 2009, p. 63). The 2009 International Tobacco Control survey (2009b) reported that only 68% of Chinese smokers believe that smoking is a cause of lung cancer, 37% know of the risk of heart disease, and 17% are aware of the link of smoking to strokes. In addition, most Chinese think that air circulation effectively removes second hand smoke (Ma et al., 2008).

Government Support, Regulation, and Taxation of Cigarette Commodity Chain Actors

Government support.

The state support for the cigarette industry is strong. From 1996-2000 the government invested \$4.2 billion RMB in the tobacco distribution system (Wang, H., 2006). In 2006 the CNTC invested US \$1.4 billion for infrastructure facilities for tobacco farming (Datamonitor, 2009b). In 2008 it spent US \$2.93 billion in leaf production and irrigation infrastructure (“China Tobacco Exports,” 2009). These are scattered reports, not a comprehensive picture.

Government regulation.

Industry regulations.

The STMA is the sole legal entity able to purchase tobacco leaf, manufacture cigarettes, and distribute them. Foreign companies are not allowed to establish their own factories (Wang, 2009). Semiofficially, provincial governments will block cigarette “imports” from other provinces (*ibid.*). One group of researchers (Tong et al., 2008) anticipates an increase in local protectionism and the formation of more local monopolies due to consolidation in the STMA.

Since 1991, the Economic Planning Commission establishes the tobacco production quotas every October (Hu et al., 2008). The STMA sets the leaf pricing (*ibid.*), and established wholesale prices jointly with the State Pricing Bureau (Hu, T.-W., Mao, & Shi, 2010). Leaf prices can vary as much as 50% (Hu et al., 2008), and significant regional price differences results in illegal intra-regional trade (“China Fights Illegal Leaf,” 2009).

The STMA issues tobacco monopoly permits (*zhuanmai xukezheng*) for production, wholesale, retail, and transportation of over 10 cartons (Wang, 2009). Retail permits not only specify the company that is permitted to sell cigarettes, but also the location for sales as well

(Euromonitor, 2010j). Obtaining a Permit of Exclusive Sale of Tobacco for the retailer is a long and difficult process, and sometimes involves corrupt officials, (Shen et al., 2010). Frustration with obtaining a permit pushes some retailers to sell cigarettes illegally (*ibid.*). The STMA has prohibited foreign retailers from selling cigarettes beginning in 2009 (Euromonitor, 2010j).

State taxation and revenues.

The CNTC, as a state run corporation, generates both profit and tax revenue for state (Hu et al., 2006). According to Ministry of Finance reports for 2008, tobacco taxes and profits generated RMB 450 billion (\$US 66 billion) (Hu, T.-W., Mao, & Shi, 2010). In 2005, tobacco generated 7.6% of central government revenues (Hu et al., 2008). All parts of the cigarette commodity chain are a “lucrative source of taxes for China’s government at all levels” (Tong et al., 2008, p. 215), and for decades tobacco and cigarettes were the top tax producers (*ibid.*). In Guizhou, Yunnan, and Henan provinces “the tobacco industry is the mainstay of the local economy and contributes a great deal to local revenues” (Hu, T.-W., Mao, & Shi, 2010, p. 106). Tobacco taxes were 70% of Yunan provincial revenues in 2000 (Kohrman, 2008), and tobacco taxes accounted for 25% of local and provincial revenues (Holden et al., 2010).

Tobacco leaf is taxed on the leaf contract and at wholesale, and cigarettes are taxed at wholesale and retail. The leaf tax is 20%, withheld by the CNTC at contract purchase (Hu et al., 2008). The leaf tax is for local governments, so they encourage, even strong arm, farmers to grow tobacco that has lead to an oversupply of leaf (*ibid.*), leaf that becomes available for the black market.

The average tax rate for cigarettes is 41% of the retail price (Euromonitor, 2010j). In May 2009 the ad valorem tax increased to a top rate of 56%, and a 5% tax was enacted on

wholesalers on top of the specific excise tax (per pack), and the CNTC instructed the manufacturers not to increase retail prices (Hu, T.-W., Mao, & Shi, 2010). The CNTC fears that raising cigarette taxes would result in a loss of employment (particularly in agriculture) and a reduction in tax revenues (Hu et al., 2008).

State actions against the black market.

Black market activities are investigated by over 50,000 STMA anti-counterfeiting agents (Chen, 2009). The stance of the Chinese government is that counterfeiting is done by “organized crime” (Shen et al., 2010). Arrest figures for 2008 are 5,505 convictions, and the confiscation of 9.28 billion counterfeit cigarettes and 28,000 tonnes of unprocessed leaf (“China Fights Illegal Leaf,” 2009) plus 8,849 cigarette rolling machines (Shen et al., 2010). Between 2002-2008 major arrests netted 30,825 suspects, of which 10,742 were convicted (*ibid.*), showing that 2 in 3 suspects were not convicted. Those convicted can receive a maximum sentence of seven years, but most get three years or a fine, (Chen, 2009), or commonly 2 years imprisonment (Tong et al., 2008). Police receive a 15% reward of the retail value of the contraband they seize, while the black marketers escape because there is no bounty for arresting the smuggler (Chen, 2009). When police are active in one region, it pushes counterfeiting into inland China (Shen et al., 2010).

China accounted for 21% of all global tobacco seizures in 2009, 126 seizures with 723.6 million sticks - one bust in Shenzhen brought in 25.6 million sticks, one of the ten largest seizures in the world that year (World Customs Organization, 2009).

The STMA attempts to dissuade Chinese citizens from working with the black market. Farmers receive “education” with propaganda campaigns delivered via loudspeaker cars and TV

(Chen, 2009), but there is a “degree of tolerance” for farmers who supply counterfeiters (“China Fights Illegal Leaf,” 2009). To deter further counterfeiters, confiscated rolling machines are dropped from a crane in public “destruction ceremonies” (Chen, 2009). But the reality is that low profit margins on legitimate economy cigarettes cannot match the profits on economy brand counterfeits (Shen et al., 2010), making them attractive to retailers.

The black marketers have reacted to police activities with street violence (Chen, 2009). Informants and law enforcement officials have been killed and tortured (Shen et al., 2010). As a result, police raids have been reinforced with as many as 5,000 officers (Chen, 2009). It is no surprise that some officials turn a blind eye to black market activities, or fail to convict family-tie members (Shen et al., 2010).

Some officials resort to selective enforcement for fear of losing local (illegal) employment (Chen, 2009). Other officials go further, acting as a “protective umbrella” (*baohusan*) who intervenes for a share of profits (Shen et al., 2010). The going rate for a bribe to an “umbrella” Xiamen port official is US \$10K, and it is easy for an official to pass over a shipment with a port inspection rate of 1% -2% (Chen, 2009). In 2008, 28 officials were prosecuted for complicity with the cigarette black market (*ibid.*).

Tobacco control.

Chinese academics and government officials were well aware of the 1964 US Surgeon General’s Report (Kohrman, 2007), but it was not until 1979 that the joint State Council issued “On the Hazards of Smoking and Tobacco Control Advocacy Notice” (Lee & Jiang, 2008), and the Ministry of Health jointly with other ministries published “Circular on the Publicity of Harms from Smoking and Tobacco Control (Hu, T.-W., Mao, & Shi, 2010). The first national anti-

tobacco legislation was approved in 1992, the Tobacco Monopoly Law (Lee & Jiang, 2008). The National Tobacco Control Office was created in 2002 under the Ministry of Health (Hu, T.-W., Mao, & Shi, 2010). China has ratified the Framework Convention on Tobacco Control, and it came into effect in 2006. The Committee on the FCTC is a twelve department interagency group under National Development and Reform Commission headed by the Vice Minister of Health (Lee & Jiang, 2008). The national tobacco control budget is \$2.88 million USD with 27 staff (WHO, 2009). Tobacco control is underfunded (Lee and Jiang, 2008; Ma et al., 2008), and the current funding is only 0.5% of the budget for disease control and prevention (Cui, 2010).

Tobacco control efforts not unified (Kohrman, 2008) because there is no national tobacco control program (Lee & Jiang, 2008), with few anti-smoking measures at the provincial or local level (Ma et al., 2008), especially where local governments gain substantial revenues from tobacco (Hu, T.-W., Mao, & Shi, 2010; Xinzhen, 2009). Tobacco control regulations are scattered in several pieces of legislation (Hu, T.-W., Mao, & Shi, 2010). There is no supervision or oversight on programs (Xinzhen, 2009). Social support for tobacco control measures appears to be high (Peto et al., 2009), yet in a 2004 survey, 73% thought that smoking will never be eliminated (Wang, H, 2006).

China' tobacco control regulations are:

- health warnings covering 30% of pack front and back (not to FCTC standards)
- pack size of 20 sticks
- limits on tar (not to FCTC standards)
- no sales to minors or pregnant women
- no advertising in newspapers, magazines, TV, or radio
- no vending or internet sales (new regulations).

This list excludes cessation and public health measures.

Again, social norms act to counter these tobacco control regulations. FCTC minimum pack health warnings were just instituted in 2009 (WHO, 2009), and the back label is in English, which 73%-90% of Chinese smokers do not understand (International Tobacco Control, 2009b). The state is reluctant to use pictorial health warnings as they would ruin cigarette packs as gifts (Wright & Katz, 2007), and a survey found that 30% of consumers said they would not buy cigarettes as gifts if they had graphic (pictorial) warnings (Euromonitor, 2010j).

Contrary to FCTC guidelines, deceptive terms such as “light” and “mild” are permitted (WHO, 2009). Many Chinese smokers believe that premium cigarettes cause less harm (Ma et al., 2008), and well over half of them think that “light” and “mild” cigarettes are less harmful (International Tobacco Control, 2009a).

The STMA regulates cigarette advertising (Euromonitor International, 2008b), which in effect is self-regulation. China has not eliminated ads on billboards (WHO, 2009). The prevalence of cigarette marketing images appears to be very high: there were over 4 million different print and internet ads in that consumers were exposed to in 2006 (Euromonitor, 2008b). Cigarette companies circumvent the advertising restrictions through a loophole that permits them to advertise their company name and logo so long as the ads do not reference cigarettes or smoking (Euromonitor, 2008b; Hu, T.-W., Mao, & Shi, 2010). Their name and logo can also show up on corporate sponsorship materials (Euromonitor, 2010j). Major cigarette companies still sponsor sporting events, including golf and horse racing (see Euromonitor 2010a).

The ban on sales to minors and pregnant women is “poorly enforced” and there is no punishment for breaking the regulation (Euromonitor, 2010j).

China does not have a national smoking ban, except on public transportation. At the local level, as of 2006, 45.7% of cities have a ban on public smoking (Lee & Jiang, 2008). In 2009, Beijing, Shanghai, Guangzhou, and other major cities have smoking bans (Euromonitor, 2010j). Although bans on public smoking are in place, they are rarely enforced (Chen, M. 2007; Euromonitor, 2008b; Lee & Jiang, 2008). Restaurant bans are almost never observed (Euromonitor, 2010j; Xinzhen, 2009), and “‘No Smoking’ signs are put up with a wink” (Washburn, 2008, p. 2). Consumers are not complying with smoking bans (Euromonitor, 2010j), and “‘No Smoking’ signs often ignored (Lee & Jiang, 2008).

Unlike in other countries, litigation has not been leveraged against the industry, with the first case in 2007, and only two in total, both of which were dismissed (Euromonitor, 2010j).

The Chinese government has publicly expressed concern about tobacco control causing social instability (“China Cigarette Packs,” 2009; Hu, T.-W., Mao, & Shi, 2010), and officials are anxious that the poor may revolt if tobacco control measures are “too strict” (Chen, M, 2007). The result is that the government is “reluctant” to use price and tax measures for tobacco control at levels consistent with the FCTC (Hu et al., 2006). Government ambivalence on tobacco control gives the appearance of tobacco control as voluntary (Ma et al., 2008). No major government official has given active support to tobacco control, except for one speech by former president Jiang Zeming at the World Conference on Tobacco or Health in 1997 (Hu T.-W., Mao, & Shi, 2010). Government messages on tobacco use do not promote quitting, but instead convey the goal of having a “healthy lifestyle” (Lee & Jiang, 2008).

Chapter Eight: Analysis

This analysis examines each case individually for Brazil and China, and then compares the two. The chain's history is reviewed, followed by the commodity chain model and a description of its process nodes and process paths. Next I examine the chain actors, determine the lead firms, and observe the links between actors. Then I consider the four categories of social forces and how they counter tobacco control. I end the chapter with additional analysis of the commodity chain model and a brief gender-based analysis.

Brazil's Cigarette Commodity Chain

Historical development.

Brazil is one of the original colonial sources of tobacco, starting with the Dutch West India Company trade in 1630, and European tobacco cultivation commencing before 1640. Northeastern Brazil was the source of practically all of Portugal's tobacco from the time they expelled the Dutch from Northeastern Brazil and "nationalized" the trade for itself in 1654 until 1811. Tobacco use was common in Brazil and in Europe during colonial times, and Brazilian exports were stable for many decades. The Portuguese government closely restricted access to the tobacco market with its state monopoly, and strictly regulated shipping. Nevertheless, smuggling via ship brought tobacco from Brazil to many European ports.

It does not appear that independence in 1822 and the country's transformation into a republic in 1889 had any significant impact on tobacco trade, so the next turn of events is the introduction of the Bonsack machine in 1903 by Souza Cruz. After a series of mergers by both companies, BAT bought out Souza Cruz in 1914, and a few years after set up a profitable contract system with farmers. In the 1920s German immigrants expanded tobacco farming and

leaf curing in southern Brazil. Unfortunately, here the history grows hazy except for BAT's eleven acquisitions from 1920 until just after WWII.

History intervened in the cigarette commodity chain in 1965 when the Rhodesian Boycot gave the transnational manufacturers and leaf exporters a "disaster capitalism" opportunity to make profits in Brazil's underdeveloped tobacco industry. By 1990 Brazil's tobacco leaf industry had gone from domestic-owned to almost completely foreign-owned. The new foreign owners undertook intensive mechanization in the 1990s that boosted leaf production by over 50% and threw many local people out of work with the reduced need for labour.

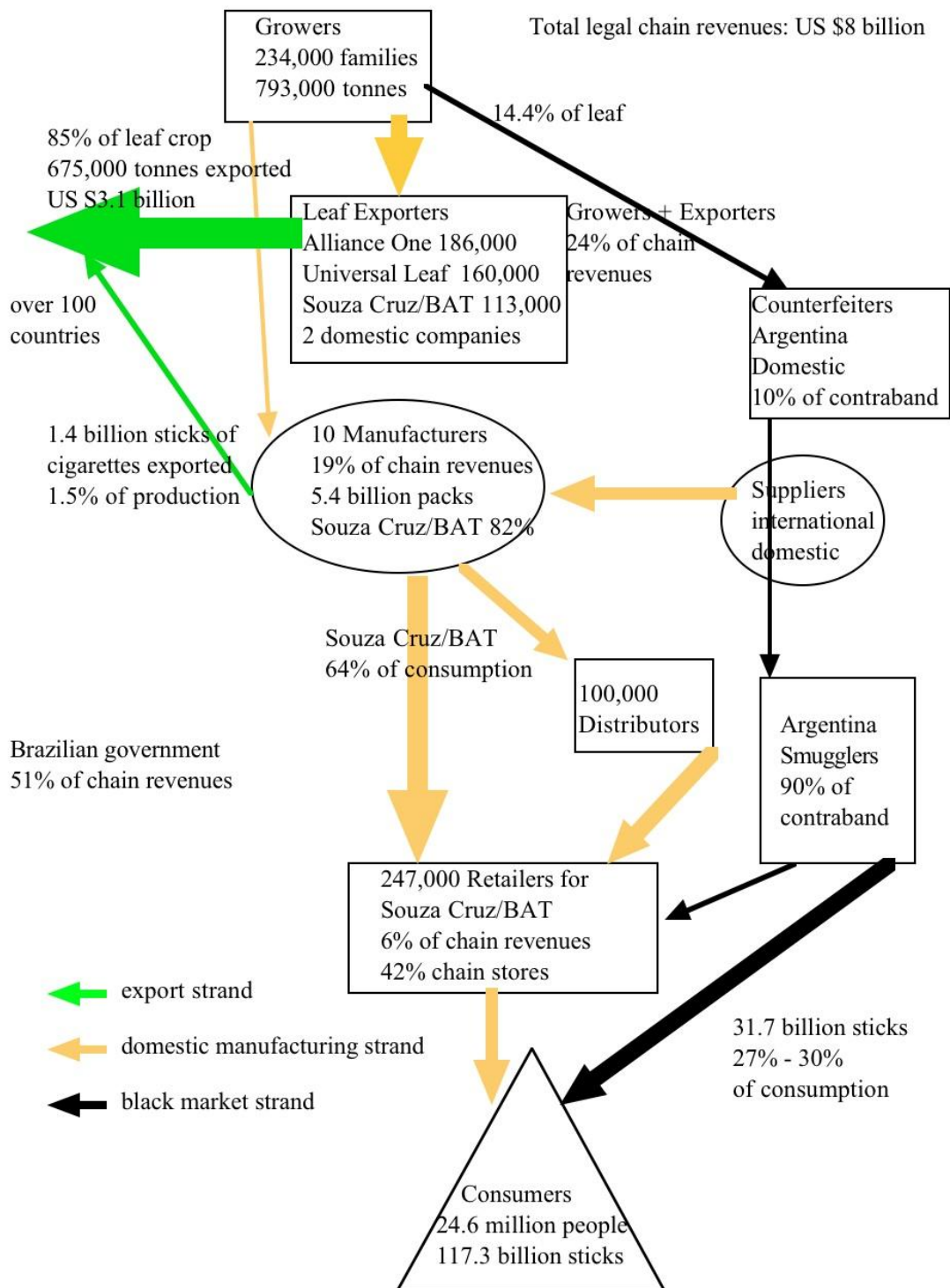
Also of note in the 1990s was the rise of Brazil as a black market for cigarettes, particularly from Argentina. A MERCOSUR ruling in 2003 forced Brazil to void an export tax that was specifically aimed at shutting down the smuggling from Argentina. Estimates of black market penetration in Brazil are from 27% - 30%, making it the second largest supplier of cigarettes in the country.

Process nodes and process paths.

The cigarette commodity chain model diagram is on page 145. At the first process node, the growers input seed and other agricultural supports and output cured leaf. The beginning of the chain could alternatively be designated as the leaf buyers because they supply the agricultural inputs of seed and chemicals. The next node is the leaf exporters that input the cured leaf, processes it for manufacturing, and output it to primarily offshore cigarette manufacturers. Unfortunately, trade statistics are by destination, not the specific companies, so actor information is not available. This is the process path for 85% to over 90% of leaf production.

Souza Cruz/BAT is its own node as it is highly vertically integrated for its cigarette production, and it controls a monopoly on domestic manufacturing of cigarettes. Once Souza Cruz/BAT completes its contract with the farmer, it inputs the cured leaf and processes it for manufacturing, fabricates the cigarettes with a large number of other material inputs, prints its own packaging, and then acts as its own distributor for a substantial number of retail dealers. Here the process path from Souza Cruz/BAT can diverge to either the retailers or small distributors that store and transport cigarettes to additional retailers.

Figure 2: Brazil Cigarette Commodity Chain, 2009



In Brazil, almost half of legal cigarette sales are made at large chain stores, and I speculate that these large corporate customers are supplied direct-to-retailer by Souza Cruz/BAT. Completing the model, the black market nodes are counterfeiters and smugglers.

The model has three distinct strands of process paths. The first strand (based on output) is the export strand. The second strand is the “routine” path of tobacco leaf through to domestic cigarette consumption. The third strand is the black market, that link with the process nodes of growers and retailers, and exert influence on the external actor of the state, the judiciary. The processes paths are linked globally to over 100 countries through export trade in leaf, numerous international suppliers, and millions of black market cigarettes smuggled into the country.

Lead firms and chain actors.

With its market monopoly on cigarette sales and strong participation in leaf export, Souza Cruz/BAT clearly qualifies as the lead firm. All the major chain actors engage in numerous acquisitions, both historically and today. Souza Cruz/BAT has gained its lead firm position by rapidly building its process capacities in manufacturing, printing, leaf processing, and supply procurement since its entry into the market in the early 1900s. It accomplished this in part with acquisitions. BAT supplies just under two thirds of the cigarettes to the consumers, while the black market supplies about 27% - making the other actors quite marginal, even Philip Morris.

Alliance One and Universal Leaf are the two equal co-leaders in the leaf export trade strand. Since their export volumes are so similar, it difficult to assign one of them to the lead firm position. Before the Alliance One mergers of 2005, Universal was the lead firm.

Black market actors have built their own infrastructure, constructing manufacturing facilities, acquiring skilled managers, finding local storage and transportation, and laundering money.

Foreign chain actors are gaining a presence in Brazil's cigarette commodity chain. Japan Tobacco Inc has purchased three leaf processing plants. Altria, a US corporation and the parent company of Philip Morris US, has monopolized most of the tobacco seed supply for Brazil.

Chain actor links.

The link from growers to buyers appears to be strained. The tobacco farms have set up their own union, AFUBRA, and farmers have held back crops. Still, the contract of the integrated production system gives leaf buyers substantial leverage over the farmers who need its financial supports. The asset specificity of curing units helps lock in farmers to tobacco growing. Governance power definitely favours the buyer.

In the link between the manufacturer and the retailers, the manufacturers limit competitor access to retailers with exclusivity agreements, a monopoly position. With Souza Cruz/BAT's market monopoly, it can force retailers not to put competitor's products on BAT displays, which are the point-of-sale store fixtures the manufacture has provided. BAT offers benefits to retailers for doing business: promotional compensation, high quality product displays, staff training, management consulting, and merchandise loans. These activities are evidence of the retailer's leverage with the manufacturers and distributors.

Almost all suppliers are international corporations, or large domestic firms under license to an out-of-country supplier (predominantly for equipment). Supplier power appears to be moderate because many inputs are available only one supplier.

Information on other links is limited. The grower-counterfeiter link appears to be relaxed as pinhookers give a farmer access to instant cash in an environment with social tolerance for black market activities. Smuggler-retailer links appear to be profit based. Smuggler-consumer links seem to be normalized, and many poor neighbourhoods are protective of cigarette smugglers.

Process links: transportation, storage, and communication infrastructure.

Very little data is available on these processes. Information about transportation surfaces here and there. The 1920s leaf trade expansion was facilitated by new road and rail infrastructure. Transportation must be a major process support as indicated by the leaf buyer's provision of leaf transport to the grower in the integrated production system contract. It would be interesting to find out how Alliance One will source the additional container transport it requires. Storage is critical for the leaf exporters, and all of them have their own storage facilities, and they also use leased facilities and third-party services. The only reference I found for communications is Souza Cruz/BAT's use of electronic data interface for its route sales drivers.

Social Forces in Brazil Countering National Tobacco Control

Chain actors countering national tobacco control.

Transnational cigarette manufacturers have many tactics for bypassing national regulations, which includes tobacco control regulations. As an example of the utility of intra-corporate trade to bypass national legislation, BATs propagation, manufacturing, and international distribution of a prohibited agricultural product for over a decade cannot be ignored. When sales are restricted in one place, the manufacturers simply find new venues.

Lobbying is a common big business tactic, but SindiTobaco appears to be a particularly good lobbyist for its corporate members.

Retailer compliance on underage smoking is low, indicating a public tolerance for underage “experimentation.”

Consumers have pushed against tobacco regulation. The need for public establishments to appease their smoking customers has brought about loopholes municipal smoking bans and noncompliance by both businesses and their customers. The consumer demand for small packs and single sticks causes retailers to break the 20 stick pack regulation to keep sales. Consumers avoid graphic warning labels by placing the pack face down or covering it.

External actors countering national tobacco control.

Some local governments get a major share of their revenues for tobacco and cigarette taxes. In Brazil 40% of municipal taxes come from tobacco, and for regional-state of Santa Cruz do Sul tobacco taxes bring in 71% of its revenues. As a consequence, local and regional governments have provided cigarette commodity chain actors with substantial tax incentives and business infrastructure with industrial districts.

Trade treaties are external actors of the cigarette commodity chain, and one of Brazil’s tobacco control measures against the black market was voided by MERCOSUR.

The conflicted nation-state.

Regulation and taxation by the state has always been part of Brazil’s tobacco industry since Portugal’s monopoly in 1674, and the first state actions to address the black market begin in

1761. The influence of the Brazilian nation-state as an external actor on the cigarette industry has been consistently strong with taxation and regulation.

Different levels of Brazilian government support cigarette chain actors with billions in tax breaks and loans. Government actions can have unintended consequences that benefit cigarette commodity chain actors. A prime example of this is that when the federal government shut down five manufacturers for tax non-compliance, Souza Cruz/BAT picked up their market share – the federal government had improved the manufacturer's monopoly position. The Brazilian judiciary has effectively shut down almost every lawsuit against Souza Cruz/BAT and the cigarette manufacturers. This government conflict of interest extends to the Ministry of Agricultural Development that supports tobacco agriculture, but recently it has been tasked with handling Brazil's crop diversification program with the goal of reducing tobacco agriculture.

Social norms.

Tobacco use has been a Brazilian social behaviour for well over 400 years, and Aboriginal cultivation begins at least 1,000 years ago. Cigarette use continues to have broad social acceptance that leads to non-compliance with smoking bans and sales to minors. An unusual social norm driving cigarette consumption in Brazil is the pervasive social acceptance of the black market, and buying illegal cigarettes is something routine for consumers, not clandestine. I understand that bribery is part of doing business everywhere in Brazil, so bribery of officials is a routine practice not limited to cigarette black marketers.

The social norm of smoking as a personal choice is evidenced in the Brazilian judiciary designating the smoker's ability to make a rational choice about consumption a legal fact as well

as a social fact, whether or not it is a medical fact. Regardless of its truth, the cigarette manufacturers have been able to fend off lawsuits with ease.

China's Cigarette Commodity Chain

History of chain development.

Tobacco is not native to China; still, it found its way into China through traders and soldiers. Tobacco use started with pipe smoking by men, women, and children, and it has been a part of Chinese society for almost 400 years. Until the foreign introduction of cigarettes in 1890, it appears that the Chinese tobacco industry was domestic, not exported.

In 1898, a US owned cigarette manufacturer imported 15 Bonsack machines, and the race was on for the Chinese market. Declaring a truce in 1902, a syndicate of US and British cigarette manufacturers formed British American Tobacco. From that moment on, BAT acquired almost every competitor in sight, secured a regular domestic supply of tobacco leaf, built leaf processing and manufacturing capacity, established extensive distribution networks, covered the landscape and newspapers with its advertising, and passed out countless free cigarettes. BAT created the demand for cigarettes, and then dominated the market with acquisitions.

Yet the development of BAT's Chinese empire was disrupted in 1925 with the anti-British boycotts. BAT was basically out of operation for several months, and in the void almost 200 Chinese manufacturers attempted to get a piece of the cigarette trade and monopolize the tobacco leaf supply. US Universal leaf was there to sell them the necessary machinery and supplies, and the firm bought Chinese leaf for export. Over time BAT began to reclaim its monopoly through skillful business practices and political connections, a process that was aided

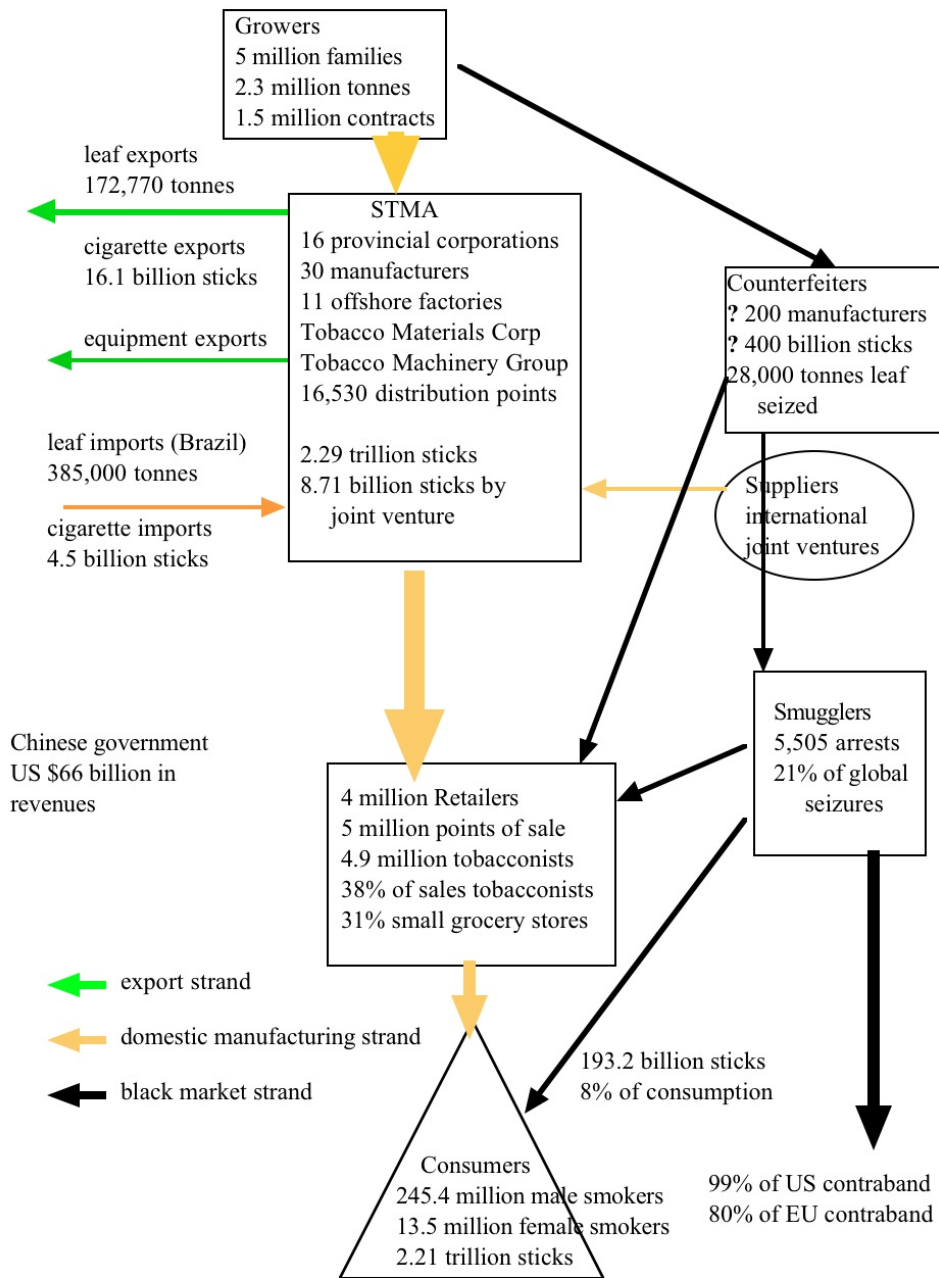
by the Chinese's government's high cigarette tax that put some newly formed competitors out of business.

Then came the Japanese invasions which significantly reduced both BAT's and Universal Leaf's ability to do business. After the People's Republic of China came to power, both companies were nationalized along with the rest of the Chinese cigarette industry. The government invested in the cigarette manufacturing capacity of its state-owned industry. Cigarette use was reinforced by TV broadcasts of Chinese party officials smoking, and a coupon ration system. Smoking for women was further stigmatized in the 1950s through the 1970s by its association with sex workers.

The Open Door Policy of 1979 brought in a wave of joint ventures with many of the major transnational cigarette manufacturers. BAT did not become involved because they deemed joint ventures a bad business risk. In 1983 the PRC established the State Tobacco Monopoly Administration (STMA), and centralized its power with further legislation in 1991. Tobacco agriculture was increased as part of economic development in the 1980s. Illegal trade grew in the 1990s, and BAT was reduced to a 4.4% share of the Chinese cigarette market that it obtained through smuggling.

The STMA has gone through dramatic changes in the 21st century. China's membership in the WTO voided many of its regulations and taxes on tobacco products. In 2003 the STMA began "grasping the large" and decreased its cigarette companies from 185 to 31, and reduced the number of cigarette brands from 1049 to 155, not to decrease cigarette consumption, but to make it competitive in the world market.

Figure 3. China Cigarette Commodity Chain, 2009



Process nodes and process paths.

The cigarette commodity chain for China starts with growers as the first process node, and then the STMA is the second one; it controls all processes from leaf curing to the final distribution to the third node, retailers, and from there to the ending node, the consumers. The black market strand also originates at the growers node, and then a process node comprised of counterfeiters and smugglers ship their contraband to internal and foreign buyers, both legal and illegal.

These processes are connected to the global cigarette industry through its own exports of tobacco leaf, equipment, off-shore manufacturing plants, and over 62 joint ventures with foreign suppliers. Philip Morris partners with the STMA to provide international distribution.

Chain actor links and governance.

Grower-STMA buyer relations are specified by individual contracts, and prices based on the appraisal of STMA leaf purchasers. Disputes over leaf pricing have made grower-buyer tensions so high that third party mediation has been brought in, an almost unthinkable delegation of authority in the PRC. The grower-counterfeiter link has no reports of coercion, and there appears to be social tolerance for the relationship. STMA limits on leaf purchase quantities results in the availability of excess and rejected leaf for counterfeiters.

For its supplier links the STMA has created its own set of state-owned suppliers, and few private suppliers are permitted to operate. Some quantity of printing and packaging are externally sourced. The STMA uses joint ventures with suppliers to develop equipment and process technology. Exports of equipment link the STMA with other international firms in the cigarette industry.

In the retailer links, the governance of the STMA-retailer links are hard to pin down since government cigarettes are the only products available. The retailing licence requirement does appear to be a source of strain, and pushes some actors into illegal sales. Without any reports of forced purchases, it appears the smuggler-retailer link is driven by profit. The retailer-consumer link shows some strain as customers concerned about bogus products are avoiding purchasing premium brands, and retailers have reacted with violence against consumers who have complained about their cigarette purchases.

The external chain actors of local governments, government judiciary, and port officials are linked to the black market nodes. These links can be based on profit or bribes, or through coercion with threats of violence.

Process links: transportation, storage, and communication infrastructure.

The only comment on transportation in the regular process path is that the current system is antiquated, based on delivery by a fixed schedule and not actual product demand. Black market exports make use of containerized shipping. The STMA works cooperatively with Philip Morris for international distribution.

No information was available on storage. For communications infrastructure, China's largest cigarette company was installing customized process management software, and some type of large capacity electronic on-line order system is in place for order placement by tobacconists.

Lead firms and chain actors.

There can be no doubt that the STMA is the lead firm in China's cigarette commodity chain.

China's Social Forces Countering National Tobacco Control

Chain actors.

China's cigarette commodity chain actors enjoy a privileged position for business operations, and they can simply ignore the warnings of tobacco control advocates. The government/cigarette industry has failed to fully implement FCTC measures. Manufacturers use a loophole in advertising regulations to openly advertise themselves. There is no punishment for retailers breaking the ban on sales to minors and pregnant women. Consumers and businesses frequently ignore smoking bans.

External actors: local governments and trade organizations.

Several provincial and local governments are heavily dependent on tobacco taxes and cigarette revenues. One result has been that several local governments have actively supported the black market to obtain more revenue. Local implementation of smoking bans has been slow. Local governments continue to aggressively promote tobacco farming, even when there is an oversupply that finds its way into the black market.

As related in the case history, China's admission to the WTO had serious consequences for its cigarette regulations and taxes.

The conflicted nation-state.

As a government-owned industry, the Chinese government budgets billions of dollars for its development. The industry generated US \$66 billion in 2008. During its restructuring, grasping the large had the unintended consequence of putting equipment and workers into the black market. Officials cooperate with counterfeiters and smugglers for profit or from fear of reprisals,

and just one out of three arrests results in a conviction that brings only a couple of years in prison or a fine.

Many academic authors have observed China's conflict of interest between its state-run industry and its public health. T.W. Hu, Mao, & Shi (2010) give the most blunt assessment, "while the powerful state actors have significant interests in the sale of tobacco, they are the major players to implement tobacco control policies. Obviously, there is a conflict of interests" (p. 109). China's Director of the National Office of Tobacco Control, Dr. Yang Gonghuan, pleads, "at the very least, the ministry in charge of tobacco production should not be in charge of tobacco control as well" (quoted in Cui, 2010, p. 251). Business interests have the upper hand as "the government's business-oriented ministries dominate tobacco control policy" (Chen, M., 2007, p. 730), and the STMA companies appear to be simply ignoring tobacco control officials (Cui, 2010).

The Chinese Ministry of Health has not enacted retail tax increases or other tobacco control measures for fear of economic harm to the country - an attitude also held by many of its citizens (Ma et al., 2008). Local governments are very conservative in implementing tobacco control due to its local economic importance (T.W. Hu, Mao, & Shi, 2010).

Social norms.

Tobacco use, although not native to China, has been established over hundreds of years.

Smoking was a status symbol long before cigarettes were manufactured. Early smoking bans were not effective, not even for the Emperor in his own palace, and nor are they now due to the broad social acceptance of smoking.

The social custom of *fayan* drives cigarette consumption for men, and cigarettes are integral to social relations as gifts. These social drivers operate without limits as social etiquette forbids complaining about smoking.

Comparison Analysis

The Cigarette Commodity Chain.

In comparing the histories, BAT was the actor that rapidly developed the cigarette industry and dominated the cigarette markets of Brazil and China (among many others) before WWII. While Souza Cruz/BAT remained securely in charge in Brazil, in China the PRC Revolution nationalized the industry, and BAT was kicked out. China increased its state-owned industry within its own borders until the Open Door Policy of 1979 brought in many joint ventures with the cigarette manufacturers. In the meantime the Rhodesian boycott of the late 1960s made Brazil a target for acquisition by transnational tobacco companies.

I anticipated a difference in chain structure between China's state-owned industry and Brazil's capitalist market, but the chain models show many similarities in the domestic process path. The resemblance is due to the vertical integration of the STMA and BAT. The STMA integration from leaf curing through distribution is much like Souza Cruz/BAT's in-house processing from cured leaf through distribution. Souza Cruz/BAT has achieved a monopoly position in its national cigarette market, and with the STMA restructuring, a far smaller cluster of firms has monopolized a market once serviced by hundreds of companies.

While it would be expected that Brazil's cigarette commodity chain operating in the capitalist free market would have international links, China's apparently closed state-run monopoly has easily 100 links to foreign corporations, and the STMA has a powerful partner in

Philip Morris. Both black market strands have export links in several countries, and notably China is the contraband supplier for the US. The cigarette commodity chains of Brazil and China exhibit the globalized structure that are a central feature of commodity chains.

For sourcing their supplies, the two lead actors differ. Souza Cruz/BAT has in-house printing, while printing appears to be one of the few services that the STMA outsources. Souza Cruz/BAT has international and domestic suppliers, while the STMA has built its own internal sources of supply and utilizes a limited number of suppliers.

Black marketers in both countries are improving their infrastructures. In Brazil they have acquired factories, storage facilities, and off-shore money laundering. The black market in China has obtained equipment and the expertise of laid off workers, and conducted its own wholesale-to-retail markets. The black market in Brazil is dominated by smugglers in Paraguay, while contraband in China trade is produced in country, but most is exported. The illegal products are a much larger portion of consumption in Brazil than in China.

Leaf exports dominates the Brazilian chain, conducted by three major actors and two small local companies. The STMA controls tobacco leaf exports in China, and its exports are not insignificant as it ranks 4th in the world for exports.

Social forces countering national tobacco control.

Both Chinese and Brazilian manufactures have changed marketing programs to counter advertising restrictions, and manufacturers in China can advertise so long as cigarettes are not pictured in the ad. I wonder if China's retail permit location restriction might serve to stop Souza Cruz/BAT's sales at festivals and parties.

Some local governments and regional government in Brazil and China are dependent on tobacco and/or cigarette taxes. Brazilian governments offer tax and infrastructure incentives. The provincial Chinese governments encourage tobacco farming and local governments support illicit markets for a fee. Government officials are bribed in both countries.

Trade treaties have overturned tobacco control taxes and regulations in both countries.

Both federal governments have taken actions that had unintended negative consequences for tobacco control. Brazil's closure of cigarette manufacturers for tax evasion resulted in a tighter monopoly position for BAT. China shuts down factories, and the equipment and workers end up in the black market. These are not the only examples of the conflicted nation-state.

As for social norms, both Brazilian and Chinese society have a social acceptance of cigarette use. Tobacco use has been established for 400 years or more. Different social norms are at work in the two countries, and several Chinese social customs reinforce cigarette consumption. The social images of the benefits of smoking are different between the two nations as well, such as the use of cigarettes for status display in China and its use as a marker of adult identity in Brazil. The gender-based social benefits for women differ as well, as discussed in the next section.

Additional Analysis

The commodity chain model.

How well has the commodity chain model performed? The chain metaphor does a fairly good job as an heuristic device for identifying actors, revealing the links between the legal and illegal market, foregrounding monopolies, and displaying market globalization.

But the commodity chain heuristic has its weaknesses. Despite intensive data searches, the retail chain actors remain hidden. The commodity chain model is poor at accounting for marketing and advertising effects on consumption. Gereffi's schema for classifying governance did not fit as a good descriptor of the real life interactions. Finally, the classification of the state as an external actor obscures the close historical involvement of governments in tobacco and cigarette commerce - despite its protestations, the cigarette industry has always had high taxes and extensive regulation.

Gender-Based analysis.

As I lamented earlier, the cases afforded me few opportunities to see the forces of gender at work. Still, they are not absent. The gendered division of labour appears in the history of the cigarette commodity chain with women destemming tobacco leaves in Brazil, and Chinese farmer's wives providing the brute force to pull carts to the leaf buying stations. The pre-WWII Chinese factories did have women supervisors as the Number One in cigarette factories.

Smoking prevalence shows a gender difference in Brazil, and a gender chasm in Chinese society. I had always wondered why so few Chinese women smoke, and so many men. The Chinese case makes it clear. Women's roles were changing at the turn of the twentieth century, and private smoking did not mesh with a woman's new public roles. Then BAT used scandalous pin-up girls at the beginning of cigarette advertising that started an association of sex workers with smoking in Chinese society. PRC anti-prostitution campaigns between the 1950s and the 1970s further stigmatized female smoking by depicting prostitutes as smokers. Some tobacco control specialists have called this lower prevalence of women smokers a "gender protective effect." In this case it appears to be an accident of history.

Both cases show gendered meanings for cigarette use between men and women within a culture. Nor are women in different societies enticed by the same social images of the benefits of smoking: Brazilian women are looking for help with weight-loss, and Chinese women want to be fashionable or relieve stress.

The lower status of Chinese women means that they cannot ask their husbands to refrain from smoking. The result of this patriarchal cultural barrier is the men's loss of a primary social support for smoking cessation that would be taken for granted in Western cultures.

While I could include more examples and a finer detail of analysis, my research goal has been accomplished. The cigarette commodity chain models display a more complete picture of industry actors than the limited view currently held in tobacco control research. The models display the strong the vertical integration and monopoly positions of BAT and the STMA. Weakness in the cigarette industry have been uncovered in the relationship between the small farmers and those who buy their tobacco. While the nation-state enacts tobacco control, numerous social forces counter its actions: the industry, smugglers, consumers, local governments, trade organizations, and the conflicting actions of the state, all supported by 400 years of the social acceptance of smoking. With this understanding, I next offer my suggestions for improving tobacco control.

Chapter Nine: Conclusion

This thesis has pursued two research goals. The first is to create a cigarette commodity chain model to improve tobacco control monitoring efforts, and the second is to demonstrate that the nation-state is an ineffective actor for tobacco control. Here I present an evaluation of how the cigarette commodity chain model has performed for my action agenda of identifying corporate cigarette profiteers and areas of tobacco industry weaknesses. I close with my radical recommendations to restructure tobacco control efforts outside of the nation-states.

The Commodity Chain Model

Writing the history of tobacco consumption and trade has given me a better appreciation for its social and commercial embeddedness. It is amazing how quickly tobacco consumption was embraced in Europe and China, in less than three decades after its introduction – a testament to tobacco’s addictiveness, and the extent of the trade. As for its commercial roots, the tobacco trade and tobacco smuggling go back before 1600 to the very beginnings of capitalism. In public health, we act as if stopping the tobacco epidemic is a matter of regulation, treatment, and education, and we fail to consider its 400 year history.

From my experience with using the commodity chain model as an heuristic device, I conclude that it has performed well overall for my action agenda. This thesis presents a much larger scope of industry actors than the FCTC’s narrow view. I have pointed out four new areas to monitor that are integral parts of the cigarette industry.

First of all, black market organizations are part the cigarette commodity chain. This is not because I have arbitrarily placed these actors in the model, but because the smugglers link with legitimate cigarette commodity chain actors and suppliers, and influence government

officials. The black market encompasses many dispersed actors, so the black market, like the nation-state, should not be reified into a single, unified actor. Tobacco control monitoring efforts and research should not be divided into the specious categories of tobacco industry and cigarette black market – they are all sources of cigarettes, and their processes link them together.

Second, the commodity chain methodology has exposed more lead actors in the global cigarette industry. Tobacco leaf exporters Alliance One and Universal have come into view as lead firms in the worldwide provisioning of tobacco. The cigarette commodity chain model demonstrates that the STMA is not simply a domestic company, but a global competitor – the third largest exporter of tobacco leaf, surpassing US exports, and an international cigarette exporter through partner Philip Morris and STMA offshore plants. These three entities must be monitored if supply-side tobacco control measures are to be effective.

Third, the model has demonstrated the globalization of the cigarette commodity chain with its worldwide exports by both legitimate and illegal actors. Suppliers are global too. Even the “domestic” Chinese state-run industry has extensive ties to the international cigarette industry with joint ventures and through its leaf and equipment exports. The cigarette industry is global, so regulation of the industry must rise to global levels.

Fourth, while this study did not identify many retailers individually, it provides direction for which type of firms to target. The retailers’ place in the cigarette industry has remained hidden in the public’s mind, and in tobacco control research. Part of my action agenda is to expose these retailers and their complicity in the tobacco epidemic.

Look how much broader a picture this is! The commodity chain case models reveal industry actors that are almost invisible in tobacco control monitoring and research: growers, the black market, leaf exporters, and retailers. The model demonstrates the extent of the

globalization of the cigarette industry, and debunks the false picture of the STMA as only a domestic actor. Effective tobacco control monitoring must include these targets.

Even more actors could be exposed with further studies. For one, a cigarette commodity chain analysis could be applied to more countries. A study of the top 10 cigarette producing countries and the top 10 consuming countries would likely cover most of the global cigarette commodity chain. For another, commodity chain analysis could be applied to tracing a corporation's process links. Industry lead firms Philip Morris International, Altria (parent of Philip Morris US), and Japan Tobacco Inc. appear briefly in this thesis, but they are not the market monopoly holders in the case countries, yet all three are market leaders elsewhere. My cases provide a much larger roster of cigarette industry actors, but not all of them by any means.

As I had hoped, the study has uncovered a weakness in the cigarette commodity chain: the grower-buyer link. The link displays significant tensions in its governance in both Brazil and China. I suggest that the FCTC provision for crop diversification to displace tobacco should be strongly emphasized, particularly in China and Brazil where the tobacco farmers do not engage in mono-cropping. Too bad the Bloomberg Foundation, a major tobacco control philanthropy, excludes crop diversification from its projects. Many tobacco growers are not happy with their return on tobacco, but need financial support to jettison tobacco, and must have a cash-crop replacement.

New Directions for Tobacco Control

I have identified four categories of social forces that prevent the nation-state from being an effective actor for tobacco control. First, cigarette commodity chain actors find ways to bypass tobacco control regulations, particularly the transnational cigarette manufacturers. Transnational

cigarette manufacturers use intra-corporate trade to thumb their noses at national laws. There is no use in restricting advertising by specific types – the corporations will design new marketing programs that bypass the country’s regulations. Not to be stopped, transnational cigarette manufacturers have leveraged trade treaty organizations to void taxes and regulation in Brazil and China. So, in response to Sklair’s question, can the national governments curb the power of the transnational cigarette manufacturers, this study replies that the answer is no. Nor have the nation-states curbed the black market organizations that thrive in the nation-state system as well as any corporation. It is expected that the cigarette commodity chain actors will attempt to counter tobacco control measures, and they continue to do so successfully.

A second social force, external chain actors, impedes tobacco control. Local governments dependent on tobacco taxes give support to corporations and black market organizations, and are slow to adopt tobacco control measures. Trade treaty organizations have overturned tobacco legislation in both Brazil and China. National tobacco control legislation is the loser.

Third, the nation-state activities of different units are conflicted, with agriculture and trade ministries supporting cigarette firms, while public health discourages cigarette consumption. The conflict of interest occurs even within ministries: the STMA is responsible for both the cigarette industry and tobacco control, and Brazil’s MAPA supports tobacco agriculture while it is in charge of the crop diversification program to reduce tobacco farming. How can effective tobacco control be carried out by these juridical units? China’s state-owned tobacco industry has a bald-faced conflict of interest between revenues from cigarette consumption and the public health burden of its high male smoking rate. As for Brazil, the federal government enacts strong tobacco control regulations for its own citizens, while the industry supplies tobacco

for over 100 countries, spreading the tobacco epidemic. In both countries, the activities of its federal government have intentionally and unintentionally increased the monopoly position of the lead firms. The nation-state is a conflicted actor, and its actions for tobacco control have resulted too often in unintended benefits for cigarette commodity chain actors.

Fourth and finally, social norms reflect the social acceptance of cigarettes and render smoking bans and other anti-tobacco restrictions ineffective. Social acceptance is especially strong in China, reinforced by the social customs of *fayan*, gift exchange, and hospitality.

While any one of these social forces alone might be effectively addressed, in combination they are a powerful counterweight to national tobacco control measures. Since I find the nation-state unable to be an effective actor for tobacco control, what do I propose in its place? I offer the radical solution of splitting tobacco control efforts into international and local levels. At the international level, I recommend the radical solution of giving the FCTC some teeth and making it the legal standard for regulations. The local level is the place for public health efforts.

First, cigarette supply is international because the cigarette industry operates internationally, so regulation of that industry must take place at that level. This is supply-side tobacco control. Looking at the power of international trade treaties, why not give the FCTC enforcement power? Both Brazil and China license tobacco exporters, cigarette manufacturers, distributors, retailers, and public businesses (such as bars), and other countries have these regulations as well. I propose that the FCTC should have the equivalent of the power of a “citizen’s arrest” to request the issuing government authority to suspend or revoke licenses for infractions of FCTC provisions. For example, manufacturers who fail to comply with package warning standards would have their license revoked by the FCTC, and maybe even further

punished with restrictions on their international trade. A bar that tolerates smoking would have its license suspended.

The FCTC has standards for tobacco control. I suggest that the FCTC provisions be refined so that all of its standards are specified. A standard taxation schedule for tobacco and cigarettes removes the tax differentials between countries, price differences that in part fuel the black market. Smoking bans parameters should be explicit to avoid legislative loopholes. With these measures, regulation is pushed to international level via the FCTC.

Demand for cigarettes comes from the local level. Cigarette marketing programs are designed to appeal to local consumers, and Holden and Lee (2009) observe that cigarette demand is generated at the local level. Tobacco control programs need to be locally designed because social images of the benefits of smoking are different between countries, and their social norms for smoking vary. This is where to address demand – local.

Another reason why the local level is the place for tobacco control efforts becomes clear with a line from a Leonard Cohen song, “everybody knows.” Everybody knows, especially teenagers, which stores in their neighbourhood do not check for age identification. Everybody knows, particularly smokers, which bars, restaurants, and other public places in town turn a blind eye to smoking bans. In Brazil, everybody knows where to get a pack of black market cigarettes. In China, everybody knows that the manufacturer logos on advertising represent cigarettes, even when no cigarette is in the ad.

So funding for tobacco control should go to the local and regional programs where everybody knows what is happening with cigarette use in their community. These programs could be created by NGOs, schools, hospitals, or any other organization interested in addressing cigarette use. Since the evidence shows that the state cannot impose regulation from above, then

the communities should be given the funds to enact cessation and prevention programs that are meaningful to them. The Director of China's National Office of Tobacco Control, Dr. Goughaun, concurs, "the most important groups to reach, however, are the doctors and government officials at the local level" (quoted in Cui, 2010, p. 252). They are the front line actors for enforcement and public health, and they must have the funds and the authority to reduce demand for cigarettes.

I will do what I can to advocate for my proposed changes to delivery of tobacco control to international and local levels, but as I noted in the beginning of this thesis, I do not expect a warm reception for my radical changes. I hope for better acceptance for the cigarette commodity chain model, and I will publish on the methodology as broadly as I can because the cigarette commodity chain model has the potential to substantially improve the execution of supply side tobacco control and industry monitoring. But I have no time to lose as the tobacco epidemic claims millions of lives, and 29% of the world's teenagers and adults are addicted to cigarettes. I have told two stories about the agent and vector of the tobacco epidemic - now it is time to apply the lessons, and save the host, the consumers.

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