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REDUCING TOBACCO GROWING IN TAIWAN AND GOVERNMENT INTERVENTION: CHALLENGES AND OPPORTUNITIES

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ABSTRACT

Under the influences of globalization and trade liberalization, the consumption of tobacco products is increasing around the globe bringing with it consequences for public health as well as other social, economic, and environmental problems. The first international public health treaty under the WHO, the FCTC includes various tobacco control measures to reduce supply and demand. The search for economically-viable alternatives to tobacco growing, among other factors, has been critical to a successful supply reduction policy. We begin with an analysis of the unique historical background and legacy of Taiwan's tobacco industry before providing an overview of the tobacco growing industry in Taiwan. We compare the domestic legal framework with that of the FCTC before finally discussing difficulties encountered during the history of policy enforcement as well as possible solutions in hope of contributing to the international study of alternative crops.

KEYWORDS: *F.C.T.C., monopoly, alternative crop, tobacco industry, Framework Convention on Tobacco Control, tobacco grower*

I. INTRODUCTION

Under the influences of globalization and trade liberalization, the use of tobacco products is increasing around the globe bringing with it consequences for public health as well as other social, economic, and environmental problems. Given the profound health risks of smoking the World Health Organization [hereinafter WHO] decided to directly address the global tobacco epidemic. After multiple stages of negotiations, the WHO finally adopted the Framework Convention on Tobacco Control [hereinafter FCTC] in 2003. The first international public health treaty under the WHO, the FCTC includes various tobacco control measures to reduce tobacco supply and demand. The search for economically-viable alternatives to tobacco growing, among others, has been included in the FCTC as a critical component to a successful supply reduction policy.

The reduction of tobacco supply would inevitably affect the livelihood of tobacco growers. Article 17 of the FCTC [1] provides, "Parties shall, in cooperation with each other and with competent international and regional intergovernmental organizations, promote, as appropriate, economically viable alternatives for tobacco workers, growers and, as the case may be, individual sellers." To further implement this provision, in its third session the Conference of the Parties [hereinafter COP] to the FCTC called for the establishment of a working group on economically sustainable alternatives to tobacco growing to implement a series of tasks (e.g. developing a standardized methodological framework for comprehensive assessment of the viability and sustainability of tobacco growing and alternative livelihoods).[2]

Although Taiwan is not a Party to the FCTC, Article 17 of the Convention has already positively affected its policy. In 2009 Taiwan amended the Tobacco Hazards Prevention and Control Act [hereinafter the Act] in order to implement relevant provisions set forth in the FCTC, including Article 17. Article 4(3) of this Act states that a certain amount of the Health and Welfare Surcharge imposed on tobacco products shall be used to provide assistance to tobacco farmers and workers from relevant industries.[3]

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[1] WHO Framework Convention on Tobacco Control art. 17, May 21, 2003, 42 I.L.M. 518 (2003) [hereinafter FCTC].

[2] FCTC, *Decision*, at 58, FCTC/COP/3/DIV/3 (Feb. 16, 2009), *available at* http://apps.who.int/gb/fctc/PDF/cop3/FCTC_COP3_DIV3-en.pdf (last visited Mar. 16, 2010).

[3] Tobacco Hazards Prevention and Control Act, art. 4 ¶ 4, "Health and Welfare Surcharge shall be used exclusively for the National Health Insurance reserves, for implementing hazard-related preventive measures at both national and provincial levels, for promoting public health and social welfare, for investigating smuggled or inferior tobacco products, for preventing tax evasion of tobacco products, for providing assistance to tobacco farmers and workers of relevant industries.

Despite the inclusion of this provision, how the policy on economically viable alternatives to tobacco growing in Taiwan is to be implemented remains vague and controversial. This article aims to address the problems Taiwan faces when assisting tobacco farmers' transition to economically-viable alternative livelihoods and offer possible solutions.

This article proceeds as follows: Section II is a historical overview of Taiwan's tobacco growing industry. Section III provides a sketch of the industry at present. Section IV examines the special relationship between tobacco growers and manufactures in Taiwan. Section V explores the effects of the FCTC on tobacco plantations. Section VI analyses obstacles to transition. Section VII provides some plausible solutions to this issue. Section VIII is a conclusion.

II. THE HISTORICAL LEGACY OF THE TOBACCO INDUSTRY

A state monopoly used to be the main feature of Taiwan's tobacco industry. In the past the government barred private enterprises from competing in the tobacco market in order to dominate the lucrative profits gained from tobacco. A state monopoly began as early as the Japanese colonial era, and was not abolished until it was included as a precondition to Taiwan's accession to the WTO.

Under the monopoly system, the government annually procured crops from tobacco growers. The government's procurement then became the tobacco growers' major incentive to plant tobacco. This influence remained even after the state monopoly' abolition. In order to clarify this particular problem of Taiwan's tobacco industry, the following part evaluates the monopoly system for tobacco products during three distinct periods: the Japanese colonial period, the period of the Taiwan Provincial Tobacco and Wine Monopoly Bureau, and the period of the Taiwan Tobacco and Liquor Corporation.

A. State Monopoly During the Japanese Colonial Period

Tobacco plantations in Taiwan can be traced back to 1855. Nevertheless, a significant industry did not emerge until 1895 when Taiwan became a colony of Japan. The Japanese government actively promoted tobacco plantations on the island and laid the foundation for state monopoly in the later stages. At that time, Japan's militarization resulted in an increase in government expenditure. In addition, the government's

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The rules of allocation and the operational agenda dealing with the collected surcharges shall be formulated by the competent authority at the central government level and the Ministry of Finance within three months after the promulgation of this Act, and shall be examined and approved by the Legislative Yuan."

revenues were reduced due to British and American tobacco companies' acquisitions of Japanese tobacco companies. In order to resolve the financial crisis, the Governor-General's Office in Taiwan then decided to incorporate tobacco production, processing, and marketing as part of the government monopoly.[4]

Additionally, to efficiently implement the tobacco monopoly, the Japanese government further introduced the "tobacco plantation permit" scheme to require potential tobacco growers to register with the authorities. Cultivating, exporting, or importing tobacco crops without a permit were prohibited. The tobacco plantation permit requirement ensured the government's exclusive procurement of the tobacco crops. In order to encourage tobacco farming in Taiwan, the Japanese government also promulgated the "Tobacco Crops Incentives/Rewards Order" and established the "Tobacco Portfolio" (formed by tobacco growers) to subsidize the costs for tobacco growing. As a result, one year after implementing the tobacco monopoly policy, there were 362 tobacco farmers, over 151.3 hectares of tobacco plantations, and 280,000 kilograms of tobacco production per year in Taiwan.[5]

B. The Taiwan Provincial Tobacco and Wine Monopoly Bureau Period

In 1945 when the Government of the Republic of China representing the Allied Command accepted the formal surrender of the Japanese military and took the control of Taiwan, the Chief Administrative Executive Office in Taiwan decided to continue the government monopoly of tobacco in order to bolster its financial condition. As a result, the "Governor-General Monopoly Bureau" was reorganized as the "Taiwan Provincial Monopoly Bureau". Later in 1947, it was again reorganized and the name was changed to the "Taiwan Provincial Tobacco and Wine Monopoly Bureau" [hereinafter the Bureau]. The government also promulgated "Taiwan Provincial Tobacco Crops Exclusive Sales Provision", which was translated from Japanese regulations with minor changes, so as to strengthen the government monopoly of tobacco.[6] In 1951, the Bureau became subordinated to the Taiwan Provincial Ministry of Finance. In 1968 the government monopoly of camphor ended and tobacco and liquor became the only products subject to government monopoly.[7]

In the economic boom of early 1980s, due to Taiwan's favorable export

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[4] HSIN-LAN HUNG, TOBACCO INDUSTRY IN TAIWAN 58-59 (2004).
[5] *Id*, at 65 & 79.
[6] *Id.* at 84.
[7] Taiwan Tobacco & Liquor Corporation, http://www.ttl.com.tw/home/home.aspx (last visited Mar. 8, 2010).

balance to United States and Europe, the huge surplus of the government monopoly of tobacco and liquor became the target of trade negotiations. The United States and Europe began to request that the government open the tobacco and liquor markets. For instance, the U.S. kept pressuring Taiwan to open the tobacco market in order to help reduce the significant trade imbalance. In 1986, after years of negotiations, the U.S. and Taiwan signed the "Taiwan-U.S. Tobacco and Liquor Agreement" under which Taiwan agreed to open its market to American tobacco products, beers, red wines, and other liquors.[8] This agreement became the template for later bilateral or multilateral negotiations including Taiwan. One year later in 1987, Taiwan opened the cigarette market to Europe and South Africa.

Once the tobacco market was opened to foreign imports, domestic market share began to decline gradually but significantly. In order to address this and to reduce tobacco stocks, the Bureau encouraged tobacco farmers to abandon tobacco growing by providing state-funded compensation.

C. The Taiwan Tobacco and Liquor Corporation Period

The operation of the Bureau has been criticized for lacking efficiency. In response to its WTO accession commitment[9] to liberalize trade, the government of Taiwan committed to (1) abolish the tobacco and liquor monopoly system; (2) subject tobacco and wine to tax; and (3) progressively promote the privatization of tobacco and liquor industries.[10] Therefore, after its accession to the WTO, Taiwan's monopolized tobacco and liquor markets were opened as a free market in which supply and demand are basically driven by the market forces. In response to the government monopoly system's abolition, the Bureau was further reorganized and became the "Taiwan Tobacco and Liquor Corporation"[11] [hereinafter the Corporation] in accordance with the "Regulations

[8] Jung-ju Shen, A Study of the Tobacco and Alcohol Administration System in Current Taiwan, at 37 (Jan. 30, 2008) (unpublished Master thesis, National Chi Nan University).

[9] WTO emphasizes fair competition in international trade. WTO functions to (1) Enforce and manage WTO Agreement and its annex; (2) provide forums for negotiation among WTO members; (3) Supervising the enforcement of DSU; (4) Supervising the enforcement of Trade Policy Review Mechanism; (5) Cooperating with IMF and World Bank for seeking unity of economic policy.

[10] Chao-chiang Chen, The Impact of Taiwan Joining WTO on the Performance of Taiwan Tobacco and Liquor Corporation (TTL)-Diagnosis and Remedies, at 26 (June, 2003) (unpublished Master thesis, Tam Kang University).

[11] The person in charge of Taiwan Tobacco and Liquor Corporation is Bo-tau Wei. Taiwan Tobacco & Liquor Corporation's address is No.4, Sec. 1, Nanchang Rd., Zhongzheng Dist., Taipei City. Its latest license has been valid since August 7, 2008. The number of its license for producing tobacco and liquor is DN009310001000.
See National Treasury Agency's website, http://www.nta.gov.tw/dbmode93/MakerResultM.asp. (last visited Mar. 8, 2010).

Governing Taiwan Tobacco and Liquor Corporation", passed by the Legislative Yuan on April 25, 2002. The Corporation enjoys neither administrative authority nor monopoly status. This reform ensures that the Corporation's operation is conducted as a business enterprise rather than as a state enterprise. In addition, the Ministry of Finance and local governments also took over administration and management of tobacco growing, production, and sale after the abolishment of the monopoly. Taiwan government also passed the "Tobacco and Liquor Management Law" on January 1, 2002 and other relevant regulations in the interest of tobacco market regulation, consumers interests protection, and public health promotion.[12]

III. SCALE AND VARIETIES OF TOBACCO CROPS IN TAIWAN[13]

The climate of Taiwan has limited its ability to grow different types of tobacco. Its efforts of cultivating different varieties of seeds and crops were also restricted along with the restructuring of the Bureau.

A. Varieties of Tobacco Crops

Taiwan only grows the yellow Virginia Type[14] because of its climate condition. Also the quality of the crops is spoiled by the high contents of nicotine and tar which left the crops with fewer aromas. As a result, the Monopoly Bureau Tobacco Experimentation Center [hereinafter the

[12] *See* The Impact of Tobacco and Liquor Market and Corresponding Strategy after Joining WTO, Bureau of Foreign Trade, *available at* http://wwwdoc.trade.gov.tw/BOFT/web/report_detail.jsp?data_base_id=DB008&category_id=CAT312&report_id=786 (last visited Mar. 8, 2010).

[13] According to the standard classification system established by United States Department of Agriculture (USDA), American tobacco is divided into 6 levels: Level 1: Flue-cured tobacco; Level 2: Fire-cured tobacco; Level 3: Light air-cured tobacco; Level 4: Cigar filler tobacco; Level 5: Cigar binder tobacco; Level 6: Cigar wrapper. USDA, http://www.usda.gov/wps/portal/usdahome (last visited Mar. 8, 2010).

[14] Tobacco product is generally mixed by three kind of tobacco, including Virginia, Burley and Oriental. Virginia tobacco is flue-cured type tobacco which is roasted and dried by the heat. Virginia tobacco is named after the US state where it was first cultivated. It is also called "bright tobacco" because of its yellow to orange color, achieved during the flue-cure. This type grows particularly well in subtropical regions with light rainfall, such as Georgia (USA), southern Brazil and Zimbabwe. Burley is an Air-cured tobacco. After being air-cured, the tobacco turns brown with virtually no sugar, giving it an almost cigar-like taste. It needs heavier soils and more fertilizer than Virginia. The best Burley is grown in the USA, Central America, Malawi and Uganda. Oriental is the smallest and hardiest type, grown into the hot summer of the Balkans, Turkey and the Middle East. These conditions and a high planting density create an aromatic flavor, enhanced by sun-curing, as in a traditional Turkish cigarette. *See* British American Tobacco, http://www.bat-science.com/groupms/sites/BAT_7AWFH3.nsf/vwPagesWebLive/DO7AXG65?opendocument&SKN=1 (last visited Mar. 5, 2010).

Center],[15] which was established under the Bureau, was instructed to put efforts in improving and cultivating better crop varieties.[16]

For instance, in order to control the quality of the crops, the Bureau centralized the annual practice of tobacco seeds allocation to growers. After the 1960s, the Center began to promote the cultivation of Tai-Yin No. 5 which was the tobacco crop cultivated by the Center. To prevent the spread of Cucumber mosaic virus in the 1980s, the Centre successfully planted Tai-Yin No.6, and later Tai-Yin No.7, Tai-Yin No. 8 and Tai-Yin No. 9. Currently, the Corporation still involves in giving out tobacco seeds (Tai-Yin No. 10)[17] to growers.

B. The Scale of Tobacco Plantation

The tobacco plantation began in Taiwan in 1855, and the monopolization of tobacco started from 1905 during the era of Japanese colonization. At that time, the total tobacco plantation area was approximately 5500 hectares.[18] After the Second World War, to combat food shortage, the government turned its efforts to encourage grain production, and as a result, the total area of tobacco plantation withered to mere 1015 hectares in 1945. Nevertheless, after 1950, the total tobacco plantation areas begun to increase, where at its peak, 12,000 hectares[19] of lands were devoted to tobacco plantation. Nevertheless, it began to gradually decline to between 8000 to 9000 hectares. Moreover, as Taiwan applied for joining the General Agreement on Tariffs and Trade (GATT) in 1987, the importation of American tobacco brought a direct impact to Taiwan's tobacco industry resulting in the decline of its market share annually. To lessen the pressure from tobacco over-stocking as the market demand shrank, the Bureau promulgated a compensation mechanism to encourage abandonment and termination of tobacco plantation by current tobacco growers. Under the scheme, growers were compensated NTD 600,000 for every hectare of tobacco land. The implementation of the compensation was successful. Within 18 years, from 1978 to 1996, the total acreage shrank from 8000 to 4165 hectares. And the number of tobacco

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[15] Tobacco Leaf Researching Institute was established in Fengyuan, Taichung County in 1917. It was renamed as "Tobacco Research Institute" and then merged by Fengyuan Tobacco Factory in 2004.

[16] Tobacco Research Institute of Taiwan Provincial Tobacco and Wine Monopoly Bureau, Annual Researching Report 1, 1-23, (July 1995).

[17] *Id.*

[18] *See* Shiu Wang, *General Situation of Tobacco Production in Taiwan and the Achievement of Variety Improvement of Tobacco*, 3 SITUATION OF TAIWAN AGRICULTURE 26, 26-27 (1992).

[19] Tai Wan Sheng Yen Tsao Kuan Li Ti Chih Chi Yen Tsao Shih Chang Chien Chieh [Introduction of Taiwan Tobacco Regulatory System and Tobacco Market], http://www.shop998.com/yanzhishi/ShowArticle.asp?ArticleID=836 (last visited Mar. 5, 2010).

farmers dropped from 4352 to 2601. The total tobacco production[20] in the 1980s declined from 190,000,000 to 130,000,000 kilograms (see Table 1, Table 2).

In response to the impacts arising from Taiwan's accession to the WTO, at the beginning of 2002, the Bureau attempted one last time at the buy-out licensing, as per capital domestic tobacco consumption decreased by 18% but the overall tobacco consumption increased[21]. The Bureau was losing its guaranteed market share to foreign brands. One study estimated the market share of imported tobacco increased from 1.94% to 17.68% during the first year of opening cigarette market.[22] The same study also noted that consumers viewed imported and domestically produced tobacco as substitutes.[23] The growth of imported tobacco in market share revealed that the consumers had no preference towards the domestically produced tobacco and that the demand for domestically grown tobacco should have withered.

Note that in order to compete with foreign brands; the Bureau initially introduced the use of the higher quality imported tobacco leaf in its cigarettes to retain its market position. As the competition became fierce, the percentage of foreign tobacco leaf used in domestically produced tobacco also increased from initial 30% to 90% as of 2001.[24] Within six years of liberalization, the market share of domestically produced tobacco products fell from 100% to 40%. Moreover, as all foreign brands use tobacco leaves from abroad, and domestical tobacco leaves constitute less than 10% of the final product. Thus in reality, the market share of domestically produced tobacco only accounts for merely 5%.

Also, in line with another compensation rule for the revocation of tobacco plantation permits, the tobacco-plantation licensing was abolished through special payout price at NTD 1.05 million per hectare (see Table 1). Henceforth, the total tobacco plantation area decreased from 4382 hectares to 2196 hectares, and production declined from 950 million to 524 million

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[20] As a result of special permission, the fixed quantity of required procuring by the Taiwan Provincial Tobacco and Wine Monopoly Bureau is 2500 kg per hectare. In addition, Taiwan's tobacco does not have a strong competitive advantage. If the Taiwan Provincial Tobacco and Wine Monopoly Bureau didn't procure tobacco, those farmers cannot sale tobacco to other people. Therefore, this article sees the quantity procured by Taiwan Provincial Tobacco and Wine Monopoly Bureau as the quantity produced by tobacco farmers in Taiwan.

[21] Chun-yuan Yeh et al., *Yen Pin Chieh Kang Fu Li Chuan Tui Hsiang Yen Hsiao Fei Liang Chi Chan Yeh Chih Ying Hsiang* [*Studies on Tobacco Health and Welfare Surcharge on Tobacco Industries and Consumption*], 78 AGRICULTURAL ECONOMICS YEARLY 105, 131 (2005).

[22] *See generally* Chee-ruey Hsieh et al., *The Demand For Cigarettes in Taiwan: Domestic Versus Imported Cigarettes*, 17(2) J. CONTEMP. ECON. POL'Y 19, 33 (1999), *available at* http://homepage.ntu.edu.tw/~clin/1999cig.pdf (last visited Mar. 16, 2010).

[23] *Id.*

[24] Frank J. Chaloupka & Adit Laxixuthai, *U.S. Trade Policy and Cigarette Smoking in Asia*, (NBER Working Paper Series, Working Paper 5543, Apr. 1996), *available at* http://www.impacteen.org/fjc/PublishedPapers/w5543.pdf (last visited Mar. 16, 2010).

kilograms. Nevertheless, relevant materials indicate that tobacco farmers did not decrease in number, where 2000 tobacco household growers remained steady. Hence, the abolishment of licensing only reduced the size of the plantations, but provided few incentives for farmers to turn alternative crops.

In addition, although the Corporation is no longer required to purchase tobacco from growers after Taiwan's accession to the WTO, as a matter of practice, the Corporation still purchases a fixed amount of tobacco in response to lobbying from tobacco farmers and other interest groups.[25] (see Table 1) In 2007,total tobacco plantation acreage had fallen to less than one third of that in 2004, or 702.75 hectares. Up until 2009, the number remained more or less the same. Tobacco acreage was 702.79 hectares, with 1,967 tobacco growers and an annual purchasing of 175 million kilograms. In addition to the fact that the number of tobacco growers has fallen to just under 2000, the purchased acreages and tobacco crops have significantly reduced compared to those before the abolishment of the permits (see Table 1).

IV. THE RELATIONSHIP BETWEEN DOMESTIC TOBACCO MANUFACTURES AND TOBACCO GROWERS

The Bureau was the sole tobacco procurer during the state monopoly period, and also played an important role assisting tobacco growers. How it interacted with the growers thus became important. With the abolishment of the monopoly system, the Bureau was restructured into a corporation and this fundamentally altered the relationship between growers and the government. Relevant analysis follows.

A. During the Taiwan Tobacco and Wine Monopoly Period

1. Relevant Protective Measures for Growers — Since most tobacco leaf produced domestically was provided to the Bureau for manufacturing cigarettes, the Bureau was thus in charge of the administration of relevant production matters, such as the application for grower permits, cultivation, plantation, harvesting, and procurement. In addition, the Bureau provided help to growers during the harvesting processes. The measures adopted by the Bureau to assist farmers included: free supply of tobacco seed to ensure the quality of the crops; interest-free or low-interest loans for tobacco cultivation; free distribution of fertilizers and pesticides; the publication of the procurement price prior to cultivation so that growers could evaluate whether to plant tobacco in that particular year; full procurement of tobacco

[25] *See infra* Part VI 1.

leaf; and subsidies or natural disaster relief. The aim of these measures was to ensure that the growers were fully protected.[26]

2. The Effect of Monopoly on Rural Development. — According to the relevant sources, tobacco planting was the major source of income for agricultural areas. For instance, from 1995-1996, large-scale tobacco plantation areas, such as Caotun Township, Jhushan Township, Jhongpu Township, Jhuci Township, Gukeng Township, Gaushu Township and Meinung Township on average brought in billions in tobacco income.[27] Relevant taxation information also shows that the two largest tobacco planting townships, Caotun and Meinung, had the greatest disparity between the earning from tobacco and other sources of income. It was estimated to amount to a factor of ten, and thus illustrates the importance of tobacco income plantation for growers.

The 1960s was the golden period for Taiwan's tobacco plantation. During this decade, saw a peak in terms of acreage and quality of tobacco. Tobacco growers enjoyed the sizeable revenue from tobacco growing, and their lives consequently improved. As tobacco cultivation usually took place in between the first and second rice plantings, planting tobacco meant supplemental income for farmers. Also, since the tobacco-planting season differs from rice planting seasons, the two different types of crops at did not interfere with each other. Therefore, planting tobacco crops was viewed by the farmers as a means of generating additional wealth.

3. The Effect of Foreign Tobacco Imports on State Monopoly. — In 1987, when Taiwan opened up its market to foreign tobacco, the Bureau was no longer guaranteed the exclusive supply of the local market. This then lead to a structural change in Taiwan's tobacco planting.

In response to the rapid decline in demand for tobacco leaf, the Bureau began in 1993 and 1994 respectively to process applications from former tobacco farmers who voluntarily gave up tobacco cultivation, and provided NTD 450,000 of compensation per hectacre in addition to NTD 150,000 of financial assistance for farmers who wished to switch to another business. The total sum per hectare a farmer could receive from the government was approximately NTD 600,000. Apart from this compensation, the Bureau placed a cap on the amount of tobacco leaf cultivated per hectare, and put a stop on the escalating tobacco purchasing price. The results was immediate apparent. Total tobacco acreage decreased from 12,000 hectares to 4,000 hectares.[28]

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[26] Ming-chih Hsiao, Chan Hou Tai Wan Yen Tsao Chan Yeh Chih Fa Chan [The Development of Taiwan's Tobacco Industry after War], at 143-44 (June 2000) (unpublished Masters thesis, National Chung Hsing University).

[27] *Id*.

[28] Jui-hung Hsu, The Functions of Community Public Affaires of Community Newspaper－A Study of "The Meinung Today" and Self-Deliverance Demonstration Case of Meinung Weed Farmer, at 47-49 (Jan. 2004). (unpublished Master Thesis, National Sun Yat Sen University).

In March, 2000, the Bureau issued the "Announcement to Reduce Tobacco Growing Acreages"[29] with the aim of reducing total tobacco plantating acreage to 3,000 hectares, and the amount of compensation was set in accordance with the rate of NTD 600,000 per hectare as used in 1993. However, such a rate dissatisfied a number of growers who then initiated a series of protests and negotiations. The Ministry of Finance and the Bureau finally succumbed to pressure and agreed to increase the compensation to NTD 1,050,000 per hectare.

According to the aforementioned rule for the revocation of tobacco plantation permits,[30] planting tobacco is a privilege subject to the conditionality of permits issued by the authority. The change to the tobacco and wine monopoly system brought about the issue of compensation for the growers. The rule also provided that with the granting of the compensation, the tobacco plantation permits shall be no longer effective. The quantity and price of future procurement of tobacco leaf should be determined solely by the tobacco company in accordance with actual needs, and according to the Government Procurement Law.

B. During the Taiwan Tobacco and Liquor Corporation Period

The "Law Governing Taiwan Tobacco and Liquor Corporation" was promulgated in 2002. Consequently, the Bureau was reorganized as the "Taiwan Tobacco and Liquor Corporation" without a monopoly right or any administrative position. Rather, the newly reorganized corporation now has to compete with other businesses on an equal footing, and operate on a market-oriented basis.[31] After the abolishment of the tobacco and liquor monopoly, the Ministry of Finance took over management of tobacco and liquor from the Bureau.[32] The Corporation was transformed purely into a tobacco and alcohol producer and has become one of the competitive domestic tobacco and alcohol manufactures. Such functional

[29] Taiwan Provincial Tobacco and Wine Monopoly Bureau, *So Chien Shen Chan Yen Yeh Chung Yen Mien Chi Shuo Tieh* [*Announcement to Reduce Tobacco Growing Acreages*] (Feb. 23, 2000).

[30] Taiwan Provincial Tobacco and Wine Monopoly Bureau, *Tai Wan Sheng Yen Tso Keng Tso Che Hsiao Yen Nung Chung Chih Hsu Ko Pu Chang Chu Li Yao Tien* [*Directions to Taiwan Province Compensation for Revocation of Tobacco Plantation Permits*].

[31] The management of the enterprise of tobacco and alcohols was administered by the National Treasury Agency of Ministry of Finance during State monopolization times. It is not only responsible of supervising and assessing, but also is in charge of consulting, maintaining orders and drafting tobacco and alcohol-related regulations. After the reform of the State monopolization, the administer of the enterprise in the central government is the Ministry of Finance, in the special municipalities it is the government of the special municipality, in county (city) it is the county (city) government. The National Treasury Agency of the Ministry of Finance is in charge of establishing, changing, dismissing and other related tasks of the businessmen of tobacco and alcohols (including manufacturing and importing). National Treasury Agency of Ministry of Finance, http://www.nta.gov.tw/dbmode93/index.asp (last visited Mar. 16, 2009).

[32] *Supra* note 10.

transformation demanded a change of the Corporation's procurement policy.[33]

Nevertheless, the Corporation, continues to procure seasonal tobacco leaf in May each year in accordance with the Government Procurement Law. The total number of contracts is eighty-eight per year and per season. Two million kilograms is set as one procurement unit.[34] Normally, twenty-five to thirty tobacco growers bid for one contract (2 million kilograms) with one person nominated to represent the group during the tendering process. After the award of the contract, the Corporation proceeds with the weighing of tobacco leaf brought in by the growers and money changes hands afterwards. Small tobacco growers who wish to sell their tobacco leaf need to be associated with certain organizations to participate in the transaction. Due to the change of the tobacco market in Taiwan, tobacco growers once attempted to move away from the predicament of limited market opportunity domestically by exploring opportunities to export their tobacco leaf. However, since the quality of tobacco leaf produced in Taiwan is not sufficiently competitive; such endeavors were unsuccessful.

In light of the above, although the Corporation no longer had authority to direct administrative matters concerning tobacco planting or growers after the abolishment of the monopoly system, it retains its special and important role for growers under the unique circumstance of Taiwan's tobacco plantating.[35] Tobacco growers still rely heavily on the Corporation as the sole buyer, even though the market dynamics are not longer the same as when it was under the state monopoly.

Because the Corporation is the sole domestic buyer, it exerts a level of control over purchasing price. As a matter of practice, it is believed that tobacco growers, to a large degree, are dependent on the influences of interest groups that lobby in the Congress and thus indirectly pressure the Corporation to maintain the procurement price and tobacco plantation acreage above a certain level. Unlike the situation in other countries which have to deal with tobacco farming, such as Brazil[36] and Canada,[37] where

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[33] *Supra* note 24, at 47.

[34] The tobacco farmers sow the seeds in August, and the bureau purchases their crops in May of the next year. Basically, the amount of area which Taiwan Provincial Tobacco and Wine Monopoly Bureau purchased accords with the purchase standard of the previous year. There is a fixed purchase standard every year now.

[35] After opening the tobacco market, there is no limit on the establishment of tobacco corporations. However, in light of the fact that the quality of the tobacco produced by Taiwan is not good enough, and the cost of raising tobacco in Taiwan is relatively high, domestic private tobacco corporations tends to import foreign tobacco products for higher profits as a result. Therefore, Except the Taiwan Tobacco & Liquor Corporation, the tobacco farmers in Taiwan lack the target to sell their crops.

[36] *See* Ministry of Agrarian Development of Brazil, *Tobacco growing, Family Farmers and Diversification Strategies in Brazil: Current Prospects and Future Potential for Alternative Crops*,

the governments normally disassociate themselves from tobacco companies and growers, the situation in Taiwan is quite the opposite. To be more precise, with inappropriate interference from the Congress, the Corporation is unable to fully implement its decision on the basis of market forces. The main reason is that the Corporation in essence remains a 100% government controlled undertaking of which the annual budget is completely subject to the approval of the Congress.

A recent development of Taiwan's tobacco market relates to Imperial Tobacco Company, one of the world largest tobacco companies. It established its subsidiary Tai-Yin Imperial Tobacco Company [hereinafter Tai-Yin Imperial] in the Miaoli Guangyuan Technology Park in Taiwan. The new factory has very slightly increased local employment opportunities, [38] but the manufacturing of low-priced cigarettes is detrimental to human health, and contrary to the objectives of tobacco control policy that Taiwan has introduced through legislation. Moreover, the establishment of a subsidiary in Taiwan, somewhat Taiwan's attempts to establish a reputation as combating the tobacco epidemic. It is noted that Tai-Yin Imperial[39] also manufactures numerous tobacco brands such as Davidoff, Boss, and West.

Whether this tobacco company's investment will affect tobacco cultivation in Taiwan remains to be seen. As mentioned above, Taiwan's domestic tobacco leaf is not globally competitive due to price and inferior quality. Tai-Yin Imperial may not purchase tobacco leaf from local growers. However, it is yet to be seen whether Tai-Yin Imperial might try to establish amiable relationships with growers, or whether it might be willing to purchase from local growers when the price of domestic-grown tobacco leaf.

V. THE FCTC AND CORRESPONDING TAIWAN POLICIES

A. Trends and International Norms of the FCTC and COP3

technical document for The Second Session of the Conference of the Parties to the WHO Framework Convention on Tobacco Control, at 38 (May, 2007).

[37] *See* John C. Keyser, Crop Substitution and Alternative Crops for Tobacco, technical document for The First meeting of the Ad Hoc Study Group on Alternative Crops established by the Conference of the Parties to the WHO Framework Convention on Tobacco Control, at 40 (Feb. 2007).

[38] Now News website, http://www.nownews.com/2009/06/04/11463-2460162.htm (last visited Mar. 16, 2010).

[39] The president of Imperial Tobacco Group PLC in Taiwan is Gray, the address of the corporation is No.8, Qunyi Rd., Zhunan Township, Miaoli County 350, Taiwan (R.O.C.). The license of manufacturing tobacco is valid as of November 12, 2008, the number of the license is DN009713319002. *See* National Treasury Agency, http://www.nta.gov.tw/dbmode93/MakerResultM.asp (last visited Mar. 16, 2010).

At its first session in 2006, the COP of the FCTC decided to establish an *ad hoc* study group on economically sustainable alternatives to tobacco growing. The research includes: summarizing the uptake of existing economically viable alternatives for tobacco growers; recommending mechanisms to assess the impact over time of tobacco companies' practices; reporting on initiatives at the national level in accordance with Article 17; and recommending cost-effective diversification initiatives. The second meeting of the study group on economically sustainable alternatives to tobacco growing took place June 17-19, 2008. The meeting included parties that had participated in the first meeting and representatives from tobacco growing countries and large-scale tobacco manufacturers. The aim of the meeting was to expand the scope of work from that of the first meeting, to describe recent experiences and cross-nations reviews, to review policy development and analyse policies that are conducive to adopting economically sustainable alternatives to tobacco growing, and to prepare feedback and recommendations for submission to the Conference of the Parties.

B. Taiwan Tobacco Hazards Prevention and Control Act

The objectives of the FCTC are to reduce tobacco consumption and reaffirm the right of all people to the highest standard of health through an evidence-based treaty, whereby Parties to the treaty fulfill treaty obligations through legislation, administration, and other law enforcement mechanisms to order to reinforce the FCTC objectives. In response to this, the Act has incorporated the contents of the FCTC and its guidelines so as to catch up with current international standards on tobacco control.

As mentioned above, the FCTC attempts to reduce tobacco supply through various approaches, including the promotion of economically viable alternatives under Article 17 of the FCTC. It is hopeful that through appropriate guidance the livelihoods of tobacco growers would be sustained during the transition, and would not be affected by the reduction of tobacco production in such a way that would promote underground cultivation.

The Act was amended and passed on July 1, 2007, and at the same time, the Executive Yuan was authorized to set the date Article 4 would take effect.[40] This amendment particularly specifies the distribution of the

[40] Regulations of the Tobacco Health and Welfare Surcharge Distribution and Utilization, Article 4: "The distribution of the tobacco health and welfare surcharge should consider the actual need of the people who receive the guidance and is taken care of by the surcharge to spread a fixed amount of money for guiding and looking after the tobacco farmers and related labors. However, the amount of money can not exceed 1 percentage of the tobacco health and welfare surcharge which is collected in the previous year, it should be organized by Council of Agriculture, Executive Yuan by the annul budget process, the remaining sum should be distributed according to the standards

Health and Welfare Surcharge of tobacco products which is to be used to assist tobacco growers' transition to economically sustainable alternatives to tobacco growing, and thus to realize the objectives of the FCTC. The amendment also authorizes the Central Competent Authority to set forth "Regulations of the Tobacco Health and Welfare Surcharge Distribution and Utilization" to allocate the collected surcharges. The competent authority is to set up a specific unit or appoint a specific individual at each level to be fully responsible for the execution of matters concerning the prevention and control of tobacco hazards. Under the premise that it does not exceed one percent of the Health and Welfare Surcharge from the previous year,[41] tobacco growers and relevant industry workers shall receive a fixed amount directed at counseling and financial assistance. This is reiterated in Article 3 of the Act,[42] which provides consultation and care for tobacco growers and workers in relevant fields. Moreover, for those affected by the promulgation of the Act to such an extent that they unable to engage in relevant tobacco growing farmers, subsidies are provided to assist the growers during the transition period if they switch to growing alternative crops.

With the implementation of the Act, Taiwan increased the Health and Welfare Surcharge from NTD 10 to 20 as of June 1, 2009. Moreover, in accordance with the newly amended "Regulations of the Tobacco Health and Welfare Surcharge Distribution and Utilization", the revenue generated from the tobacco health surcharge is partially used for assisting growers to switch to economically sustainable alternatives to tobacco growing. The policy of promoting economically sustainable alternatives to tobacco growing of the Executive Yuan has three main directions.

First, without intervening in production and marketing, the Competent Authority is to assist growers' planting of alternative crops, such as fruits, flowers, and herbs used in Chinese medicines. At the same time, on a contractual basis, the government is to assist growers as they shift toward a holistic approach of farming, and to usher the industry toward organic agriculture and forming an ecologically-sound leisure industry.

Similarly, alternative livelihoods are as important as adopting economically sustainable alternatives. Growers are encouraged to develop a second skill other than tobacco growing. The success of this measure relies

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presented as follows: …."

[41] According to the estimate, the total budget of guiding tobacco farmers approximates NTD 200 million. By the statistics documents in 2009, the total revenue of tobacco farmers is about NTD 350 million.

[42] Regulations of the Tobacco Health and Welfare Surcharge Distribution and Utilization, Article 3: Tobacco health and welfare surcharge according to the article 4 of this act is limited to tobacco farmers who operate in cooperation with the application of this act and therefore not be able to do the tobacco-related work, and also whose cooperation fits the goal of this act, to prevent the tobacco hazards."

on a list provided by the Corporation, which identifies registered growers and their respective partners, children above the age of fifteen, and the spouses of children. The list enables the government to identify needs of local growers, cultivation time of alternative crops, the willingness of growers to receive continued education, and local industries in which newly learned secondary skills could be gainfully utilized.

Finally, the assisting measures provided to tobacco growers also attempt to usher farmers away from tobacco planting and toward agritourism, an industry which promotes agricultural produce and the benefits of a leisurely bucolic lifestyle to tourists. This includes refurbishing and beautification of tobacco smoking houses for agritourism and relevant educational and training purposes. According to one estimate, the implementation of the plan costs roughly NTD 150,000,000. Moreover, 300 growers each year are eligible for training programs, and 150 people annually would be encouraged to obtain business licenses, with allocation of funds of NTD 10,000,000. Additionally, the budget for running agritourism businesses comes to NTD 40,000,000.

VI. ISSUES RELATED TO THE ENFORCEMENT OF POLICY ON ECONOMICALLY VIABLE ALTERNATIVES

The situation concerning tobacco leaf production in some other countries warrants with comparison that in Taiwan. In China, tax revenue from tobacco leaf production is the major source of local government funds. For example, Yunnan Province alone collected 62% of all tax revenue from tobacco leaf production in 2003. Tobacco leaf is the main input allowing the cigarette industry to generate high profit and tax revenue. Therefore, the Chinese government has played an important role in the production of tobacco leaf.[43] In Brazil, the world's second largest tobacco producer, the crop is cultivated within an integrated framework system that yields one of the greatest returns per day of an agricultural crop.[44] The United States, exports approximately the same amount of tobacco leaf as it imports. Because US tobacco leaf is popular globally, and tends to be more expensive than tobacco leaf from other countries, the value of US tobacco leaf exports is twice the value of the same quantity of imported leaf.[45] There is a strong economic incentive for farmers and governments to cultivate more tobacco leaf, because tobacco growing generally provides important revenue for farmers and governments. The situation in Taiwan, however, is the other way around. As mentioned above, Taiwan's tobacco

[43] T-W Hu et al, *China at the crossroads: the economics of tobacco and health*, 15 TOBACCO CONTROL i37, i38 (2006).
[44] *See generally supra* note 37.
[45] JUDITH MACKAY & MICHAEL ERIKSEN, THE TOBACCO ATLAS 52 (2002).

leaf is less competitive in the global market due to geographical limitations. Under the wave of global trade liberalization, this is a critical moment for Taiwan to assist farmers to grow alternative crops. The issues encountered by Taiwan when promoting economically viable alternatives are much dependent on the government. Taiwan is exempted from problems of entanglement between tobacco companies and growers because the industry was once state-run. Even though the Corporation is no longer under the obligation to procure tobacco from local growers, consequence from the monopoly period took their toll after the modernization of the Corporation. Interest groups lobbied in Congress, pushing for a certain percentage of government procurement. All of these lessen the incentives for tobacco growers to grow alternative crops. In addition, the policy implementation had its limits, thus highlighting the particular difficulties that Taiwan encounters.[46] This section will describe the particular phenomena and problems encountered in Taiwan.

A. Buy-Out Policy and Related Administrative Problems

There are several reasons that the government has to totally eliminate tobacco growing in Taiwan. First, Taiwan's tobacco leaf is not competitive in the global market. There is no economic reason for Taiwan to grow tobacco. Second, the Act has been passed and thus tobacco growers will be provided with financial assistance to help them turn to economically sustainable alternatives to tobacco growing. Third, the FCTC encourages countries to reduce tobacco cultivation. While the policy of eliminating tobacco growing is clear, there are still some administrative difficulties for the government.

Along with the abolishment of the monopoly system, the government also suspended its right to administrate the growers' affairs and its right to procurement. The government made it clear that the tobacco growing industry is no longer to be viewed as a protected one, and that the tobacco growing is one of the general agricultural industries over which the government no longer has any control. These changes have, however, made it difficult for the government to ascertain the qualifications and eligibilities for its grants and financial assistance.

After the suspension of the right to administrate, neither the government nor the Corporation could fully grasp the exact number of growers who still continue to plant tobacco. Compared with previous situation, where a specific list of growers was maintained by the Bureau for

[46] Farmers have little ability to sell their product at the best price because the industry usually decides the value of their leaf without independent verification. *See* Second Session Of The Conference Of The Parties To The WHO Framework Convention On Tobacco Control (COP2), A/FCTC/COP/2/11JP.

financial assistance, currently the government is faced with uncertainties as to who is eligible for the grants and subsides.

The payments of NTD 600,000 or NTD 1.05 million given by the government to the growers were monetary compensation based on reliance protection (*Vertrauenschutz*). In other words, the policy was initially based on the need for market liberalization as demanded by the accession to the WTO, rather than based on the need to obtain the highest possible health for the public. Therefore, the difficulty in obtaining a complete and accurate list of growers is one of impediments to policy implementation. In order to run effective education and training programs and provide financial assistance, an accurate list is indispensible. On the other hand, the lack of a correct list would not impede the research and development of alternative crops, training, marketing or packaging. In short, the incorporation of a tobacco health surcharge into the new law would avoid the implementation problem, if it targets villages as a whole when helping growers with the transition to alternative livelihood, rather targeting specific tobacco growers.

B. The Lack of Incentives for Growers to Plant Alternative Crops

Restricted by the natural environment, tobacco farming in Taiwan is basically characterized by low acreage and small economic scale with high labor cost. As mentioned above, tobacco leaf grown in Taiwan cannot compete with that grown in many other countries in terms of the quality and price.[47] However, as also indicated above, prior to market liberalization in 1986, tobacco farmers enjoyed special protection.[48]

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[47] For instance, the amount of tobacco export was 986,301 kilograms in 1986, the price per kilogram was USD 1.96 (The purchasing price of the Taiwan Tobacco and Wine Monopoly Bureau was NTD 120 per kilogram in that year), the sum of tobacco export was 3,530,176 kilograms, the price per kilogram was USD 2.78 (The purchasing price of Taiwan Tobacco and Wine Monopoly Bureau was USD 159.5 per kilogram that year). After that, the amount of tobacco export was no more than 1 million kilograms. In 1999 the total sum of export was only 72,000 kilograms, the price per kilogram was USD 3.05 (The purchasing price of the Taiwan Tobacco and Wine Monopoly Bureau was NTD 191.3 per kilogram in that year). Because of the cost of raising tobacco in Taiwan was too high and the foreign tobacco plantation increases, Taiwan Tobacco and Wine Monopoly Bureau could not compete with foreign tobacco growers in the international market. As a result, there was a lot of reserve of tobacco crops in the Taiwan Tobacco and Wine Monopoly Bureau, it has not only decreased the efficiency of the use of the money, but also risked losing the quality of the crops. *See* Song-kang Sung, The Proactive Strategy of Taiwan Tobacco Industry After Entering WTO -- A Case Study of TTWB, at 31 (2002) (unpublished master thesis, National Sun Yat-Sen University).

[48] *See supra* Part IV.A.(a), The Taiwan Tobacco and Wine Monopoly Bureau takes the following measures: providing seeds to the tobacco growers for free to ensure the quality of the crops, providing the loans to the growers, distributing the fertilizers and pesticides for free, announcing the purchasing price of the crops before the plantation so that the growers can estimate whether to grow it or not, purchasing all the crops that the growers planted to protect the growers' profits, if there is any natural disaster during the time of growing tobacco, the growers can get compensation

Tobacco leaf was guaranteed government procurement, with hefty profits, as the tobacco growing industry was one of the protected state industries. This landscape changed after Taiwan's accession to the WTO, when the Bureau was restructured to corporate operation, and tobacco acreages were reduced to a manageable size to balance production and market demand. In 1993-1994 and 2002 respectively, the government accelerated the handling of matters concerning farmers quitting growing tobacco, and reclassified tobacco leaf as a general agricultural crop, no longer subject to special governmental protection.

Nevertheless, the remaining tobacco farmers who were compensated with hefty sums when the government introduced the payout scheme, also benefited through congressional lobbying from the interest groups composed of local farmers,[49] unions and politicians.[50] They were successful in securing government procurement of a certain amount of tobacco leaf annually (though this amount decreases annually). The price often amounts to triple[51] the price of imported tobacco. The double-sided benefits tobacco farmers may receive attribute to the failure of implementing the reconversion measures. In short, the flip-flop of Taiwan's agricultural policy is the reason for the unsuccessful completion of the reconversion measures.

Additionally, the Corporation remains ambiguous in its role to facilitate tobacco growers in the implementation of reconversion measures. Formerly, the Bureau acted as a government agency, and had the power to administrate matters concerning tobacco growing and determine who was on the registered list. After restructuring, although the Corporation lost the upper hand of securing compliance and effective administration capability of government agency, paradoxically, it still functioned as a public-owned

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form the bureau.

[49] Except part of tobacco growers take the measure of "self-saving", "petition" and "protestant", they organize new units of cooperation of tobacco growers in droves. There are 4 different organizations of tobacco growers emerged during the time of 03-04 in Pingtung. *See* Lan-shin Hung, You Duei Mei Nung Yu Yen Tsao Ching Chi [You Duei Meinung and tobacco economy], the handout of the class "Liou Duei Hakka Study Camp", Taiwan Historica of Academia Historica. (July 22, 2005).

[50] Ministry of Finance indicated that The Taiwan Tobacco & Liquor Corporation has no obligation to purchase tobacco crops, but the Executive Yuan considered the protection of the tobacco growers during the transitional period, it decided to continually purchase the crops for three years, and the purchasing amount will decline annually. The acreage will also be decreased. *See* Press Release, Ministry of Finance, Treasury, Yen Nung Yao Chiu Cheng Fu Shou Kou Yen Yeh, Chin Hsing Chen Ching Ching Yuan [The Tabacco Grower Ask The Government to Purchase Tobacco Crops] (Sept. 14, 2004), *available at* http://www.mof.gov.tw/ct.asp?xItem=18934&ctNode=657&mp=1 (last visited Mar. 16, 2010)..

[51] *Id.* The purchasing of Taiwan Tobacco & Liquor Corporation didn't fit the actual need of the corporation, resulting in 20 million kilograms tobacco reserves, and 7.6 billion money not used by the corporation, Ministry of Audit asked the corporation to review and improve the situation. It also made bad effect to the operation of Taiwan Tobacco & Liquor Corporation.

enterprise, bound by the rigidity of bureaucratic process,[52] and limited by government laws and regulations, and with its policies much influenced and swayed by political pressure and interest groups. The compulsory procurement of poor-quality tobacco leaf from local growers exemplifies the non-competitiveness of the Corporation.

It was expected that tobacco farmers, after the liberalization of the tobacco leaf market, would have turned away from tobacco growing activities because of its high production cost, if the Corporation stopped procuring locally grown tobacco leaf or if it procured leaf in accordance with market price and quality requirements. However because of the political pressure from various lobbying groups, the state-owned Corporation, contrary to the market principles of supply and demand, procured excessive tobacco from tobacco farmers. Comparing with other food crops where the average price is only a few NTD per kilogram, the tobacco procurement price is set much higher, which itself is an incentive for tobacco growing. Thus, despite the poor quality of Taiwan's tobacco leaf, the small plantation acreages, the high labor cost and the lack of global competitiveness, this flip-flop political background[53] fosters the unwillingness and reluctance of tobacco growers to plant other alternative crops.

C. Particular Habits of Taiwan's Tobacco Growers

In comparison with other developing countries, the climate in Taiwan is suitable for growing crops other than tobacco. Tobacco farmers' choices about where and how to grow tobacco is constrained by Taiwan's inherent geographical limitation. The Central Mountain Range runs from the northern to southern part of Taiwan, leaving little room for fields. For example, 1994 statistics show that out of 768,086 households, as many as 763,831 household[54] had less than 0.5 hectares of cultivated fields. This means 94% of households had less than 0.5 hectares of cultivated field. Confined by such limited arable land, farmers would utilize every inch of the field to optimize the land output. Thus in addition to the standard crop of rice, farmers would also utilize intercropping to subsidize their incomes.

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[52] Taiwan Tobacco and Wine Monopoly Bureau transformed into Taiwan Tobacco & Liquor Corporation in July 1, 2002, but it is still owned by the government. According to the ordinary plan the ownership of the corporation should be transferred into private form, but it is still owned by the government now.

[53] According to the statistics of 2007, the average purchasing price of the tobacco crops is NTD 179 per kilogram; the average revenue is NTD 166, 114 per tobacco grower family. *See* Taiwan Tobacco and Liquor Corporation, Tai Wan Yen Chiu Ku Fen Yu Hsien Kung Ssu 91-96 Nien Shou Kou Shen Chan Yen Yeh Liang Chih Tzu Liao [Data of Procurement of Provincial Tobacco in Six Years, 2002-2007].

[54] National Statistics, R.O.C. (Taiwan), http://eng.stat.gov.tw/public/Attachment/712101765971.pdf. (last visited Mar. 8, 2010).

As mentioned above, the environment in Taiwan is mostly suitable for growing Virginia tobacco, the planting season of which lasts from late August, or early September, to February of the subsequent year. This type of "growing in autumn and harvest in winter" is popularly known as "Winter Li-Daw". Nevertheless, the preliminary leaf processing of Virginia tobacco is excessively labor intensive. The workdays required for the process often exceed other agricultural crops.[55] However, because of the guaranteed procurement in the past, the net production profit still ranked higher than other agricultural crops. Farmers would favor tobacco growing to other agricultural crops when market versatility and price fluctuations were taken into consideration. Hence, even after the abolishment of the tobacco franchise, the incentive to grow tobacco remains attractive, and tobacco farmers have resisted the implementation of reconversion measures.

VII. SOLUTIONS TO THE PROBLEMS ENCOUNTERED ON THE COURSE OF RECONVERSION MEASURES

Although there are difficulties encountered by the government, this article still suggests a reform of tobacco farming through offering economically viable alternatives for tobacco growers and workers. The se measures include developing alternative livelihoods for tobacco growers, conducting research for the identification of alternative crops and helping tobacco growers plant these crops, using government financial resources to develop the infrastructure needed, and eliminating non-market factors (such as full privatization of the Corporation and establishment of a market-oriented mechanism). Through these, it is hopefully that impediments to reducing tobacco growing in Taiwan will finally be resolved.

A. Alternative Livelihoods for Tobacco Growers

As explained above, tobacco has been reclassified as general agricultural crops since the Bureau was transformed to the Corporation on January 1, 2002. Since then, the government is no longer obliged to purchase tobacco crops by allocating funds in the annual budget list. In order to sustain growers' livelihoods which are affected by the reduced tobacco purchasing, the government therefore introduced a series of measures, such as developing alternative crops and granting compensations, to help tobacco growers. According to the "Adjustment Program of Paddy

[55] *Supra* note 4 at 138.

and Upland Field Utilization" (the Adjustment Program),[56] applicants, who voluntarily discontinue tobacco growing or turn to growing alternative crops, are eligible for an award, which ranges from NTD 24,000 to NTD 50,000.[57] In addition, it also adopted various policy measures in assisting reconversion:

1. Providing Assistance in Alternative Crops Growing in Accordance with Regional Characteristics[58]. — In order to develop economically viable alternatives for tobacco growers, the Taiwan government assists farmers to grow alternative crops (such as papaya, bananas, red beans, Chinese herbs, etc.) to be decided on an area-by-area basis in accordance with local conditions. Experience shows that both papaya and banana, which are grown locally to replace tobacco, have huge market potentials. In addition to introducing alternative crops, the government also uses agricultural contracts[59] to guarantee tobacco farmers' interests in growing alternative crops and to ensure the success of alternative crops marketing. Tobacco farmers' livelihood then can be sustained. Furthermore, in consideration of Canada's and Brazil's successful experience, the Taiwan government also invests a huge amount of capital in reconversion programs. For example, technical workshops for banana and herbs plantation, special channels for quality-rice sale, and classes for organic-rice marketing[60] were established.

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[56] In response to the accession to the WTO supporting the opening of rice market for importation and the elimination of state supports for agricultural products, Taiwan government has taken the policy of "Balance of Demand and Supply" as the main policy objective of rice industry. In order to achieve the goal, a "Subsequent Plan of Adjustment and Utilization of Farm" has been implemented to give farmers guidance about crop rotation and set-aside lands, and the structural adjustment of the rice industry since 1990. Agriculture and Food Agency has enhanced the promotion standard of rice rotation and farming based on contracts, and advanced the rental facilities of set-aside lands to achieve the policy for activation of set-aside lands. *See* Agriculture and Food Agency, Council of Agriculture, Executive Yuan, Shui Han Tien Li Yung Tiao Cheng Hou Hsu Chi Hua [Tactics of set-aside lands and promotion standards of "the Subsequent Plan of Adjustment and Utilization of Farms"], http://www.afa.gov.tw/peasant_index.asp?CatID=1195 (last visited Mar. 16, 2010).

[57] *Id.*

[58] *See* Bureau of Health Promotion, Department of Health, FCTC Taiwan Report, affix 13 "Providing backup for economically efficient alternative activities" (Sept., 2007).

[59] Enhancing the contractual production and marketing of agricultural products is one of the most important agricultural policies in 2009. The Council of Agriculture has actively guided the producing and marketing groups, such as farmers, firms, and farmers' associations, to implement the contractual cropping system, which is in order to assure the rights of both sides and reduce the risks of price. *See* Council of Agriculture, Executive Yuan, Chiang Hua Nung Chan Pin Chi Tso Chan Hsiao [Enhancing the Contractual Production and Marketing of Agricultural Products] http://www.coa.gov.tw/view.php?catid=19067 (last visited Mar. 8, 2010).

[60] Each plantation in Taiwan has a lower productive toll which leads to the lower abilities of bargaining on market. To solve problems generated by the small-sized mode of agricultural industry and to assist the farmers to enlarge the operating scale of plantation, Council of Agriculture has established a Co-management Group program assisting various agricultural associations to formulate a co-management group and has undertaken several projects for producing and marketing since 1987. In May 2008, the government announced several critical agricultural policies, including the project of speeding the producing and marketing groups

In Meinung,[61] Kaohsiung County, the local government even developed tourism programs where children from other places can learn about the cultivation of rice.

Nevertheless, because tobacco growers in Taiwan, who are hardworking, usually grow tobacco in between the two routine plantings in order to earn additional income, it is difficult to persuade them giving up tobacco growing totally during the periods of fallow. Developing fine rice cultivation as an economically viable alternative is beneficial for tobacco growers, but it does not solve the problem of growing tobacco in the same area in sequential seasons for various benefits. Thus, it is necessary to search other alternative crops for crop rotation. The Taiwan government has suggested Brassica napus,[62] sorghum,[63] carrots, cucumber, and white radish for crop rotation. The growth of white radish[64] has been proved as a potential alternative crop for tobacco in Meinung.

In conclusion, because recently the demand for tobacco has been steadily declining, the number of growers who had voluntarily turned to plant rice, papaya, and banana are growing steadily. After the first harvest season in a year, farmers are encouraged to grow white radish (instead of tobacco) as in-between crops, which can bring fruitful harvest in December of a year and compensate farmers for not growing tobacco.

2. Providing Assistance in the Development of Viable Alternative Livelihoods. — In addition to encouraging tobacco farmers to grow alternative crops, the Taiwan government is also advocating alternative livelihoods for tobacco growers. The growers are encouraged to attend

becoming enterprises and integrating the farmer organizations. The project aims (1) to strengthen the integrating, organizing, and operating abilities and to achieve the effects of economic scale, (2) to cultivate talents of management and to train the teaching resources, (3) to motivate the agricultural producing and marketing groups becoming enterprises and to enhance the managing efficiency, and (4) to strengthen the economical business of producing and marketing groups and to enhance the industrial competition. *See* Council of Agriculture, Executive Yuan, Fu Tao Nung Yeh Chan Hsiao Pan Chi Yeh Hua Ching Ying Shih Cheng Fang Hsiang [Policy on Assisting Agricultural Associations to Formulate a Co-management Group and Undertaken Several Projects for Producing and Marketing], http://www.afa.gov.tw/peasant_index.asp?CatID=1242 (last visited Mar. 8, 2010).

[61] *See supra* note 58.

[62] Rapes is a crop compatible with growing in autumn and winter to be the alternation between main crops. It grows in the seasons between early October and early December. *See* Hung-tan Chen, Hsin Hsing Shui Tien Chiu Li Tso Lu Fei Chien Shao Yu Tsai Pei Chi Shu [Chang, Introduction and Growing Techniques of Newly Alternation between Main Crop-Rice in the Autumn], http://tdares.coa.gov.tw/show_monthly.php?id=tdais_tdais_edit_20080312023050 (last visited Mar. 8, 2010).

[63] Guinea corn is a crop compatible with growing in autumn and winter to be the alternation between main crops. *See* Kuo-ming Chang & Shing-sang Ling, *Experiments in comparison of alternation re-growing in winter and spring of crossbred Guinea corns*, http://tdares.coa.gov.tw/htmlarea_file/web_articles/tdares/218/5-13.pdf (last visited Mar. 8, 2010).

[64] *See* EpochTimes.com, In the Season of white radish, Farmers Peddling Along the Street, http://www.epochtimes.com/b5/8/12/21/n2370066.htm (last visited Mar. 8, 2010).

"Second Skill Training Courses"[65] hosted by municipalities or county governments. Considering the economic development of Taiwan, the training courses emphasize particularly on service-sector-related and trade-oriented training. In addition, compared to other developing countries' experiences (e.g. Brazil and Zimbabwe), Taiwan's job market is more able to facilitate former farmers' transition to non-agricultural employment.

B. Reinforcement of Financial Support and Infrastructure

In addition to monetary compensation granted to tobacco growers for discontinuing tobacco growing, it is highly recommended that the government provide proper incentives, financial support, and necessary infrastructure for the pursuit of alternative livelihoods. For example, when promoting investment in agricultural tourism, government can provide long-term low interest-rate loans as well as providing professional assistance. The government could also take the initiative to plan and to supervise the construction of relevant infrastructures (such as public roads, the irrigation system, and the drainage), which are necessary to empower the community to grow alternative crops and to develop agricultural tourism. The development of infrastructure would avoid transferring the cost to individual tobacco growers who might be daunted by the excessive expenditure, and guarantee the community's prospects for more sustainable livelihoods. As for the financial problems which tobacco farmers might face during the initial stage of growing alternative crops, the government could buy in their products at prefixed prices so to ensure that growers would have secured incomes. Although there might be legal issues concerning whether it would contradict with WTO rules on subsidies, the problem would not be so serious due to the minor scale of the subsidization. Additionally, assistance should be provided to growers in participating in contractual growing, in marketing alternative crops, and in establishing special selling channels. All these measure would help to increase growers' incentives to invest time and effort to grow alternative crops.

Furthermore, Article 4 of the "Regulations of the Tobacco Health and Welfare Surcharge Distribution and Utilization" in Taiwan specifically provides that one percent of the Health and Welfare Surcharge should be directed at providing tobacco farmers and relevant tobacco workers financial supports and counsels. The Regulations aim at assisting tobacco growers with planting alternative crops and realizing the objective of Article 17 of the FCTC. These Regulations further provide the government with legitimate basis to direct the process and policy of reconversion.

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[65] *See supra* note 58.

C. Elimination of Non-Market Factors

Canada's experience has shown that, in order to reduce tobacco growing, all factors that interfere with the normal operation of a free market mechanism must be excluded. The Taiwan government also needs to remove all non-market and non-economic factors in the tobacco market. If there were no the government's support (e.g. guaranteed purchase program) and if tobacco farming can be decided by supply-demand principle, tobacco growers would have no incentive to grow tobacco. In other words, if the locally grown tobacco is in excess supply, the profit margin would become relatively low. This would lessen growers' incentives to plant tobacco crops. On the other hand, the government could also adopt measures (such as financial assistance and low-interest rate loans) to increase growers' incentives to plant alternative crops. Under this dual-approach, growers would no longer need to rely on political pressure to force the government to buy tobacco. Once a functional market mechanism is in place, the objective of alternative crops policy would then be realized.

D. Full Privatization of the Taiwan Tobacco and Liquor Corporation

As aforementioned, the biggest obstacle encountered in Taiwan in reducing tobacco growing is the distortion of free market mechanisms, caused by ambiguous policies and political pressures from interest groups. Since Taiwan's accession to the WTO, market liberalization in theory should have eliminated any economic incentives for local growers to continue with tobacco growing as local tobacco leaf diminishes its market share. The recent promulgated Regulations, which require one percent of the Health and Welfare Surcharge to be provided for assisting tobacco farmers to grow alternative crops, should also help eliminate tobacco growing in Taiwan. In other words, with the dim prospect of a mere five percent of market share, and with an annual budget of as much as NTD 2 billion to spend on assisting alternative livelihoods, it should be a reasonable expectation to have a successful elimination of tobacco growing. Nevertheless, in practice, tobacco growing is still a common practice contrary to expectation. Thus, Taiwan's experience serves as a prime example of the challenges and opportunities of government intervention. The exogenous factors of the free market mechanism and international obligations should have ensured Taiwan's transition to a nation free from tobacco growing, but government intervention, despite being in good faith, paradoxically became an obstacle.

State enterprise is a common phenomenon around the world. However,

privatizing state enterprises has become part of the chain in liberalization and internationalization. By redefining the role of government and abolishing dispensable regulations, a functional market mechanism can be assured. Therefore, privatization is essential to increase the efficiency of business management.[66]

In response to liberalization and internationalization, the Taiwan government has abolished a tobacco monopoly[67] and opened up its market for foreign tobacco products. The Tobacco and Alcohol Administration Act and the Tobacco and Alcohol Tax Law were promulgated in 2000 and came into force on January 1, 2002. The monopoly system was abolished at the same time.[68] The Bureau was also reorganized and became the Corporation as explained above.

If we use the definition of "state enterprise" - one enterprise with direct or indirect holding or partial holding from the government, and being run by the government,[69] the Corporation certainly remains a state enterprise. Therefore, even though the Corporation has been restructured to a company with limited liability, it is still expected to bear the burden in assisting policy and political mission implementation, such as the procurement of tobacco leaf. The procurement is extremely important to tobacco growers because their product (tobacco leaf) has no competitiveness due to the inferior quality and relatively high price. In other words, without the procurement, the farmers would have no incentive to grow tobacco.[70]

If the Corporation could successfully be fully privatized, it would no longer bear the burden of protecting tobacco growers and stabilizing tobacco prices. When it stops buying tobacco from farmers, the farmers

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[66] Che-fu, Huang, A Study on the legal issues of Privatization—Focusing on Taiwan Tobacco and Liquor Corporation, at 12-24 (2005) (unpublished Master Thesis, National Wen Hua University).

[67] Protocol of Tentative State Monopolization of Tobacco and Liquor was proclaimed in July 7, 1953 by president with 46 articles. It was abolished in May 22, 2002 by the announcement of President of R.O.C. NO. 09100102030.

[68] Huang, *supra* note 66, at 99.

[69] The beneficial reasons of the existence of the state enterprises are for: (1) the purpose of establishment of strategic industry and avoiding the interference of crucial industry from foreign corporations, (2) the prevention of private capital's failure from insufficient supply for demand of economical development or from leading to deterioration of income distribution, (3) the purpose of providing lower price products and services which are not capable of being provided by corporations under the liberal economical mechanism, and (4) the demand of government's intervention which promotes the efficient utilization of economic resources. The drawbacks of the existence of the state enterprises are: (1) that the range of the public works are too broad, (2) that the efficiency of management eclipses, and (3) that the unfairness of having the double positions of a player and a judge.

[70] According to *The Rule of Compensating the Cancel of Tobacco Plantation permission in Taiwan*, Taiwan Tobacco and Liquor Corporation does not have obligation to procure tobacco produced by Taiwan farmers since it had allocated the compensation of NTD 105. However, the association of tobacco farmers is still requesting Taiwan Tobacco and Liquor Corporation to procure the tobacco products, which leads to the policy made by Executive Yuan's negotiation between the association and Ministry of Financial for continuing procuring for three years.

would then need to face competition from other countries on a free market basis, and their incentive to plant tobacco crops would decrease. Current obstacles encountered during the implementation of reconversion measures would vanish. However, because of political pressure from the Congress, the Corporation has little prospect of privatization. Moreover, the Corporation's reluctance to privatize would sooner or later cause financial difficulty due to the lack of competitiveness. The financial burden would eventually shift to the treasury and people's tax revenue would be exhausted.[71]

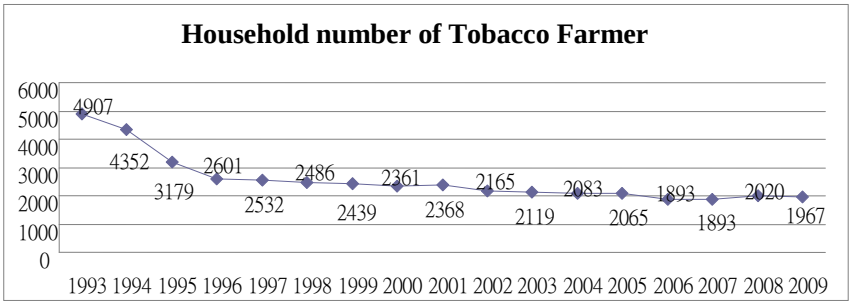
VIII. CONCLUSION

In conclusion, the major obstacle the Taiwan government faces in its alternative corps policy is the distortion of the market mechanism, which is caused by political pressure from relevant interest groups and ambiguous policies. This article offer several possible solutions to a problem that the Taiwan government has faced for decades: (1) to discover alternative livelihoods for tobacco growers in Taiwan, so that they may give up their tobacco growing without hesitation; (2) to provide sufficient financial support and build basic infrastructure for those villages where tobacco growers live to help them create new ways of life; (3) to remove all non-market factors so as return to a market oriented transaction of tobacco leaf so as to encourage tobacco growers to abolish tobacco growing and grow alternative crops; and (4) to fully privatize the Corporation so that it will no longer have the responsibility of buying tobacco leaf in Taiwan.

[71] It should be noted that although we suggest a full privatization of the state own tobacco company, it must be done in a careful manner so as to avoid the possibility that international tobacco companies benefit from the privatization process by expanding in the host country and eventually worsening the tobacco control efforts of the host country.

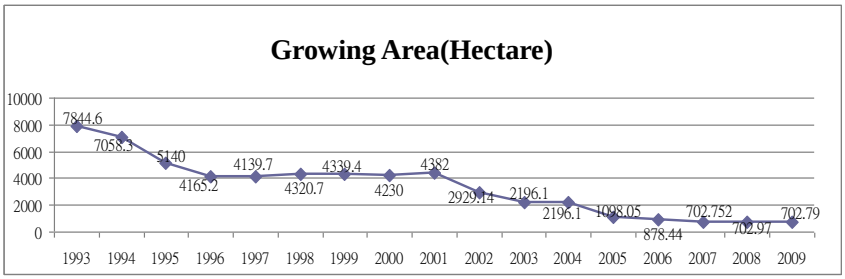
APPENDIX

FIGURE 1: HOUSEHOLD NUMBER OF TOBACCO FARMER FROM 1993-2009



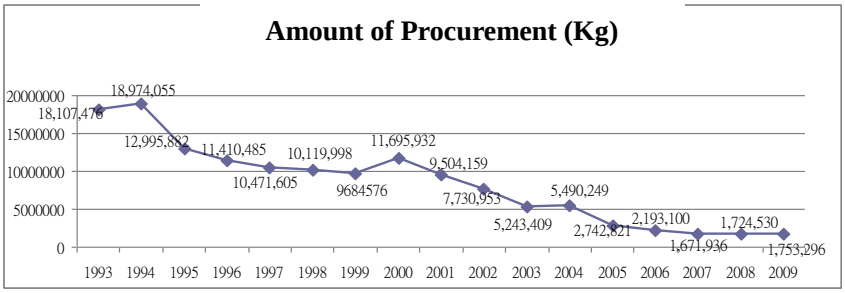
NOTE: ACCORDING TO FIGURE 1, THE OVERALL HOUSEHOLD NUMBER OF TOBACCO FARMERS HAS SHOWN A DIMINISHING TREND. THE HOUSEHOLD NUMBER OF TOBACCO FARMERS HAS SHARPLY DECREASED AFTER FIRST ABOLISHMENT PERIOD FROM 1993 TO 1994. THE HOUSEHOLD NUMBER OF TOBACCO HAS DECREASED STEADILY AND SLIGHTLY AFTER 1996 WHICH EVENTUALLY REACH AROUND 2000 HOUSEHOLD.

FIGURE 2: TOBACCO GROWING AREA FROM 1993-2009



NOTE: ACCORDING TO FIGURE 2, THE AREA FOR TOBACCO GROWING HAS SHOWN A DECREASING TREND. TWO OF THE MAJOR DECREASING INCIDENTS WERE HIGHLY RELATED TO TWO RESPECTIVE WAVES OF ABOLISHMENT. THE AREA FOR TOBACCO GROWING HAS DECREASED BY 47% FROM THE FIRST WAVE OF ABOLISHMENT (1993 TO 1994) TO 1996. THE NUMBER HAS ALSO DECREASED BY AS HIGH AS 50% BETWEEN SECOND WAVE OF ABOLISHMENT (20001 TO 2002) AND 2004 WHICH EVENTUALLY LED TO A STEADY DECREASE.

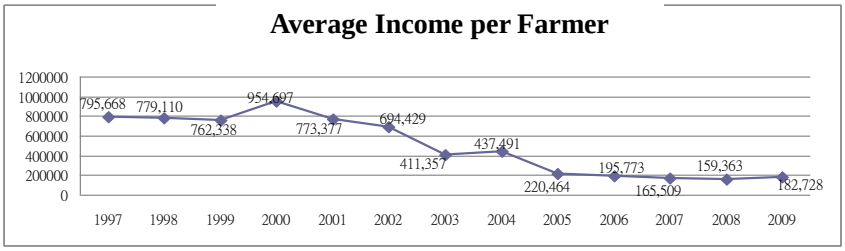
FIGURE 3: GOVERNMENT'S PROCUREMENT OF TOBACCO LEAF FROM 1993-2009



NOTE: ACCORDING TO FIGURE 3, THE CHANGE IN GOVERNMENT PROCUREMENT OF TOBACCO LEAF SHOWS A SIMILAR TREND TO THAT OF GROWING AREA AS SHOWN IN FIGURE 2. THE PROCUREMENT AMOUNT DROPPED BY ABOUT 40% BETWEEN 1993 AND 1996 WHICH IS BELIEVED TO CORRESPOND TO THE DECREASE IN GUARANTEED PROCUREMENT AMOUNT AS A RESULT OF LARGE-SCALED WITHDRAWAL OF FRANCHISE CERTIFICATE BY FORMER TAIWAN PROVINCIAL TOBACCO AND WINE MONOPOLY BUREAU AFTER THE FIRST WAVE OF ABOLISHMENT. THE PROCUREMENT AMOUNT ALSO DROP BY 53% BETWEEN 2000 AND 2004 WHICH IS BELIEVED TO BE RELATED TO THE WITHDRAWAL BY FORMER TAIWAN PROVINCIAL TOBACCO AND WINE MONOPOLY BUREAU OF FRANCHISE CERTIFICATE AND

MEASURES CONCERNING GUARANTEED PROCUREMENT. THE TAIWAN TOBACCO AND LIQUOR CORPORATION STILL PROCURE CERTAIN AMOUNT OF TOBACCO LEAF WITH THE RATE DECREASE ANNUALLY. THEREFORE, THE PROCUREMENT AMOUNT HAS SHOWN A DECREASING TREND EVERY YEAR SINCE 2005.

FIGURE 4: TOBACCO FARMER'S AVERAGE INCOME FROM 1997-2009



NOTE: ACCORDING TO FIGURE 4, THE AVERAGE INCOME PER TOBACCO FARMER HAS SHOWN A DECREASING TREND AS THE TREND INDICATED BY THE PROCUREMENT AMOUNT OF TOBACCO LEAF. THE AVERAGE INCOME DROPPED BY 54% BETWEEN 2000 AND 2004 WHICH IS BELIEVED TO BE RELATED TO WITHDRAWAL BY THE GOVERNMENT OF GUARANTEED PROCUREMENT POLICY AFTER THE SECOND WAVE OF ABOLISHMENT. THE AVERAGE INCOME HAS SHOWN A SIMILAR TREND TO THAT OF FIGURE 3 IN TERMS OF THE PERIOD AFTER 2005. TAIWAN TOBACCO AND LIQUOR CORPORATION PROCURE 50% OF THE PROCUREMENT AMOUNT FROM 2003 TO 2004 AND CUT BACK ON THE AMOUNT PROCURED EVERY YEAR. TOBACCO FARMERS TRIED TO PERSUADE THROUGH INTEREST GROUP LOBBYING THE TAIWAN TOBACCO AND LIQUOR CORPORATION TO PROCURE THE TOBACCO LEAF WITH HIGHER PRICE PER UNIT AS A REFLECTION OF THE GLOBAL INFLATION OF THE RAW MATERIAL COST WHICH RESULTS IN THE SLIGHT RAISE OF THE AVERAGE INCOME OF TOBACCO FARMERS IN 2009. OVERALL, THE AVERAGE INCOME PER TOBACCO FARMER HAS SHOWN A DECREASING TREND

RECENTLY.

Table 1: The general information of tobacco agriculture in Taiwan (from 1993-2009)

Taiwan Tobacco and Liquor Corporation (including the period of Taiwan Provincial Tobacco and Wine Monopoly Bureau Era,1997-2009)(Provided by Taiwan Tobacco and Liquor Corporation, Published by Directorate-General of Budget, Accounting and Statistics Executive Yuan, R.O.C. (Taiwan)

YEAR	NO. OF TOBACCO FARMERS	PERMITTED TOBACCO PLANTATION AREA (HECTARE)	QUANTITY OF TOBACCO PURCHASE (KILOGRAM)	AMOUNT OF MONEY OF TOBACCO PURCHASE (YUAN)	AVERAGE PRICE PER KILOGRAM	AVERAGE OUTPUT PER HECTARE	AVERAGE INCOME PER TOBACCO FARMER	NOTE
1993	4,907	7,844.6	18,107,475.6					
1994	4,352	7,058.3	18,974,054.5					During 1993-1994, according to "Key Points of Application to Abandoning and Terminating Tobacco Plantation by Current Regional Tobacco growers Compensation Proceeding", the Taiwan Provincial Tobacco and Wine Monopoly Bureau carried out termination of

									tobacco plantation
1995	3,179	5,140.	12,995,882.4						
1996	2,601	4,165.2	11,410,484.7						
1997	2,532	4,139.7	10,471,605.3	2,014,632,144	192.39	486,658	795,668		
1998	2,486	4,320.	10,119,998.4	1,936,866,494	191.39	448,268	779,110		
1999	2,439	4,339.4	9,684,576	1,859,341,746	191.99	428,477	762,338		
2000	2,361	4,230	11,695,932.2	2,254,040,054	192.72	532,874	954,697		
2001	2,368	4,382	9,504,158.8	1,831,356,359	192.69	417,918	773,377		In the end of 2001, according to "Directions to Taiwan Province Compensation for Revocation of Tobacco Plantation Permits", withdrew farming licenses for tobacco leaf.
2002	2,165	2,929,14	7,730,953	1,503,438,430	194.47	513,261	694,429		
2003	2,119	2,196.1	5,243,409.3	871,664,688	166.24	396,915	411,357		According to Government Procurement Act, apply "limited tendering procedures to a procurement"
2004	2,083	2,196.1	5,490,248.6	911,293,488	165.984	414,960	437,491		According to Government

								Procurement Act , apply "limited tendering procedures to a procurement"
2005	2,065	1,112.22	2,742,820.7	455,259,113	165.984	409,325	220,464	Open Tendering Procedure
2006	1,893	878.97	2,193,100	370,598,810	168.984	422,590	195,773	Open Tendering Procedure
2007	1,811	702.71	1,671,935.6	299,735,926	179.27	426,543	165,509	Open Tendering Procedure
2008	2,020	702.75	1,724,529.7	321,914,213	186.67	457,934	159,363	Open Tendering Procedure
2009	1,967	702.79	1,753,296	359,425,814	205	511,427.	182,728	Open Tendering Procedure

※In 1999, 2000, and 2001, national stripped tobacco for exportation caused a deficit of 3.0962 billion Yuan, and in 2001 and 2002, it caused a deficit of 1.12571 billion Yuan, amounting to 4.21633 billion Yuan.

Table 2: Important events and policies regarding tobacco plantation in Taiwan

ERA	TIME	POLICY OF THE GOVERNMENT	RELATIONSHIP WITH TOBACCO FARMERS	RELATED RULES
Japanese Colonial Era	1905	Governor-General's Office in Taiwan announced the incorporation of tobacco production, processing and marketing etc. into its scope of monopoly.	Introduce "Tobacco Farming Permits" scheme	The Japanese government in attempt to encourage tobacco farming in Taiwan, promulgated the "Tobacco crops Incentives/Rewards Order" and established the "Tobacco portfolio, which subsidize the costs for growing the crops.
The Era of Taiwan Provincial Tobacco and Wine Monopoly Bureau	1945	Restructured and renamed "the Governor-General Monopoly Bureau" to "Taiwan Provincial Monopoly Bureau"	State monopoly scheme	
	1947	It was reorganised to "Taiwan Tobacco and Wine Bureau"	State monopoly scheme	In order to strengthen the tobacco monopoly , promulgated the "Taiwan Provincial Tobacco Crops Exclusive Sales Provision"
	1986	Signed the "Taiwan-U.S Tobacco and Liquor Agreement" with the U.S in 1986, agreeing to open up the market for the importation and sales of American Tobacco products, beers, red wines, and other liquors.	With opening up for foreign importations, the monopoly Bureau only promised to keep purchasing for a certain period. Thereafter, tobacco farmers must negotiate prices with Taiwan Tobacco and Wine Bureau every year.	

	1993 1994	The Bureau in an attempt to lessen the pressure of tobacco stocks would encourage tobacco farmers to abandon farming through promulgating the "Key Points of Application to Abandoning and Terminating Tobacco Plantation by Current Regional Tobacco growers Compensation Proceeding" where growers were compensated N.T. 600,000 for every hectare of tobacco land.		Promulgated the "Key Points of Application to Abandoning and Terminating Tobacco Plantation by Current Regional Tobacco growers Compensation Proceeding"
	2001	Monopoly Bureau attempted one last time at the requisition of the permits of 4394.4 hectares as accorded by the "Key points to the Rescind of Tobacco Farmers' Permits Compensation Proceeding", where the permit scheme was abolished through special payout price of 1.05 million Yuan per hectare	After the compensation for rescinding of tobacco farmers' permits, the quantity of purchase and the price will be decided according to actual requirements by complying with Government Procurement Act in the future.	" Directions to Taiwan Province Compensation for Revocation of Tobacco Plantation Permits "
	Jan. 1, 2002	Abolished State Monopoly scheme	Tobacco farmers no long possessed the interests of state monopoly.	Promulgated "The Tobacco and Alcohol Administration Act" and "Tobacco and Alcohol Tax Law". Levy formal taxes on tobacco and alcohol

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