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Sustainable Funding of Health Initiatives in Wonju, Republic of Korea via a Tobacco Consumption Tax

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SUMMARY

Wonju is the first municipality in the Republic of Korea to fund the Healthy City project through municipal revenues from the local tobacco consumption tax. We investigated the process of the local tobacco consumption tax being approved as the main source of financing for the local Healthy City project. We also examined the sustainability and sufficiency of the funding by looking at the pricing policies instituted for cigarettes, smoking prevalence, cigarette consumption and revenues from local tobacco consumption as well as the budgetary allocations among programs in the city. The strong initiative of the mayor of Wonju was one of the factors that enabled the earmarking of the local tobacco consumption tax for the Healthy City Wonju project. He consulted academic counselors and persuaded the municipal government and the City Council to approve the bill. Despite the increasing price of cigarettes in Korea, adequate funding can be sustained to cover the short-term and mid-term programs in Wonju for at least 5 years of the mayor's term, because the smoking rate is persistently high. Analyzing the effects of strong leadership on the part of local authorities and the balance between revenues from the tobacco tax and the prevalence of smoking in the face of anti-smoking policies would be helpful for other countries and communities interested in developing sustainable Healthy Cities projects.

Key words: Healthy Cities; funding; local tobacco consumption tax; Republic of Korea

INTRODUCTION

The World Health Organization (WHO) initiated the Healthy Cities Project in Europe in 1986 to trial and implement strategies originally outlined by the Ottawa Charter for Health Promotion (WHO, 1986). The Healthy Cities Project spread rapidly beyond Europe and has been implemented in a number of municipalities worldwide (Hancock, 1993). The Healthy Cities approach is underpinned by the principles of the WHO Health for All strategy (WHO Regional Office for Europe, 1991) and the Rio and Agenda 21 Principles for Sustainable Development (United Nations, 1992). The Healthy Cities project is regarded as an

extraordinary accomplishment and a credit to both WHO and cities taking part in the movement (de Leeuw, 2009).

The Healthy Cities projects aim to create and improve physical and social environments and to expand community resources (Hancock and Duhl, 1988). This is a multi-sector initiative, integrating and addressing issues not only in the areas of public health and medical services but also in other sectors such as environment and forestry, road traffic safety and industrial development. One of the major challenges facing Healthy Cities projects is how to secure sustainable sources of adequate funding. In Europe, some Healthy Cities projects gradually became independent and obtained competitive grants, after receiving financial support from federal or state governments in their initial phases (Twiss *et al*., 2000; Baum *et al*., 2006).

In the Republic of Korea, the first Healthy Cities project was launched in Kwachon in 1998 (Kim, 2000). As of August 2010, there were 53 Healthy Cities in Korea (Alliance for Healthy Cities, 2010). Many Korean Healthy Cities have had substantial difficulty in generating sufficient funds because existing health promotion programs at public health centers receive priority in the budgetary process. However, this is not the case for the Healthy City project in Wonju, which is located in the center of the Korean Peninsula and has a population of approximately 310 000. The Healthy City Wonju project, which was launched in 2004 and is financed by municipal revenues generated by a local tobacco consumption tax, is the first case of its kind in this country. Sin taxes could be a useful source for funding other Healthy Cities project. It is important for officials involved in other existing and planned Healthy Cities projects to understand how this financing was achieved and to examine whether such funding would be adequate to maintain the operation of the Healthy City Wonju project in the long term.

Earmarked taxes on tobacco and alcohol have been used to raise fund for health promotion foundations in several countries. The states of Arizona, California and Massachusetts in the USA use tobacco taxes to finance projects that promote health (Limwattananon, 2006). A portion of national revenues from tobacco consumption taxes has been allocated to the health promotion fund in the Republic of Korea since 1998 (Nam and Engelhardt, 2007). A portion of the tobacco taxes is sent to the central government and allocated to the general education and health promotion fund in Thailand (Limwattananon, 2006), this is a dedicated tax from Thai Health (namely Thai Health Promotion Foundation) (Hu *et al*., 1998; The International Network of Health Promotion Foundations, www.hp-foundation.net).

One of the major reasons for using tobacco consumption tax for health promotion fund is that smoking causes substantial problems related to health. One hundred million deaths were attributed to tobacco smoking worldwide during the twentieth century, and most of them occurred in developed countries. Tobacco smoking is the second leading cause of death in developed countries and in low-mortality developing countries, and it is the sixth leading cause of death in high-mortality developing countries. Tobacco smoking also accounts for a large portion of the disease burden in developing countries and is the fourth major contributor to years of life lost in the world (WHO, 2005).

Rate price policies have been adopted in some countries, where funds from tobacco taxes are used for health promotion. Currently, a number of countries in Asia and the Pacific such as Fiji, French Polynesia, Malaysia, Philippines and Vanuatu are considering the use of tobacco tax as a way to increase funds for health promotion activities (WPRO, 2003). In Taiwan, starting 1 June 2009, the price of a pack of cigarettes increased by 30 cents USD. Thirty percent of the tobacco surcharge goes to tobacco and cancer-control projects, health and welfare programs for the disadvantaged, for medical treatment of rare diseases and the general improvement of the quality of medical care in Taiwan (Bureau of Health Promotion Department of Health, R.O.C., 2009). In Thailand, countrywide research conducted in 2006 to evaluate the impact of increasing tobacco taxes concluded that higher cigarette prices encourage people to smoke less or even motivate them to quit completely. This was found to be especially true in the case of lower income people (Thai Health Promotion Foundation, 2009, http://en.thaihealth.or.th, 28 November 2009).

Several studies have documented reductions in smoking rates after increases in tobacco consumption taxes (Peterson et al., 1992; Hu and Mao, 2002; SEA, 2006). The effective use of tobacco taxes earmarked for health promotion purposes has been well documented, particularly for the establishment of national or

statewide health promotion agencies (Chaloupka *et al*., 2000; Slama, 2006). Taxing tobacco consumption contributes to the creation of knowledge, social movements and political mobilization against smoking (Wasi, 2000; Siwaraksa, 2005).

In the Republic of Korea, the smoking rate among adult male dropped from 57.8% in 2004 to 43.1% in 2009 (MoHW, 2010).

Chaloupka *et al*. demonstrate that health promotion through this tax funding brings about improvement in health for the population (Chaloupka *et al*., 2000). However, the earmarked Wonju tobacco tax is, as far as we know, a world first in local government health promotion funding.

There is increased recognition by the Healthy Cities themselves (i.e. their communities, political leadership and project operators) that research will in fact support their projects, and will not be a threat to the Healthy Cities activities (de Leeuw, 2003). Thus, it is important to resolve the issue of project sustainability resulting from lack of financial resource by studying alternative resources that can be used to support Healthy Cities activities.

The objective of the present study is to examine the events and factors that were necessary to bring about the earmarking of the local tobacco consumption tax for the Healthy City Wonju project and to investigate the sufficiency and sustainability of the funding source.

METHODS

The process involved in earmarking revenues from the local tobacco consumption taxes for Healthy City project is described to help foster an understanding of the history of the Healthy City Wonju project and to identify key factors that led to the successful funding of that project. Trends in the pricing policy of cigarettes and their outcomes, including the prevalence of smoking, sales of cigarettes and revenues from the local tobacco consumption tax were analyzed to determine how sufficient and sustainable such taxes are as funding sources.

Data were obtained from general accounting documents and other documents relating to the collection of the tobacco consumption tax in the Department of Tax, Wonju from 1995 to 2009. The budgeting of short-term and mid-term programs was also analyzed to discover how well the programs were covered by this funding source.

RESULTS

Funding the Healthy City Wonju project with the tobacco consumption tax

In the beginning of 2004, the mayor of Wonju announced a plan to initiate the Healthy City Wonju project. Wonju joined the WHO Alliance for Healthy Cities of the Western Pacific Region in June 2004, becoming one of its founding members. The mayor of Wonju declared the Charter of Healthy City Wonju on 7 April 2005. A team was appointed in the Division of Health, Sports and Knowledge Industry of the municipal government to oversee the systematic operation of the project. The team, consisting of three members from the municipal government and one from the Wonju public health center, produced a priority list of 40 programs through discussions with 11 researchers from universities and 18 public officials employed at a public health center or municipal government (Table 1).

To finance the Healthy City Wonju project, the mayor asked for advice from academics who were members of Wonju Healthy City Steering Committee. They proposed earmarking the local tobacco consumption tax for the project, and the mayor launched strong initiatives to develop support for this strategy. He instructed the local government to develop a resourcing agenda and submitted it to the City Council for legislative approval. In October 2005, the City Council passed the bill allocating all revenues from the tobacco consumption tax to the Healthy City Wonju project for the following 5 years. This amounted to USD 16 million in fiscal year 2006. This financing is guaranteed for the 5 years of the mayor's term.

Sustainability of funding with the tobacco consumption tax

The tobacco consumption tax had been a national tax until it became a city and county tax in January 1989. Retailers and importers of tobacco products are obliged to pay the tax, which is based on the sales of tobacco within a city or county, to the division of tax

Table 1: Budget of mid-term programs of the Healthy City Wonju project in 2007–2010 (unit: billion won)

Goals	Programs	Annual budget			
		2007	2008	2009	2010
1. Health promotion	Life style improvements	0.5	0.6	0.6	1.8
	Expanding life style improvement	0.1	1	0.8	0.9
	Nutritional improvements	0.5	0.5	0.7	0.7
	Smoke-free zones	0.1	0.1	0.1	0.2
	Bicycle paths	1.5	1.5	1.5	—
	Increased exercise facilities	0.6	0.6	0.6	0.6
	Community health promotion plan	0.95	—	—	0.1
	Reducing unequal access to health-care	0.5	0.5	0.5	1
	Operating target group and life phase specific health promotion programs	0.15	0.2	0.2	0.2
	Developing settings-based health promotion programs (e.g. in workplaces, hospitals and schools)	0.1	0.1	0.1	0.1
	Managing chronic disease programs	0.5	0.5	0.5	0.5
Sub-total		5.5	5.6	5.6	6.1
2. Healthy environments	Community education programs	0.2	0.2	0.2	0.3
	Prevention of accidents	1	1	1	1
	Healthy City Day in Wonju	0.1	0.1	0.1	0.1
	Building a Healthy Cities database	0.35	—	—	—
	Development of a monitoring and evaluation system	0.2	—	—	—
	Green city project	0.2	0.1	0.2	0.2
	Developing an environmentally friendly green eco-city	1.2	1.5	1.5	1.5
	Clean water supply	1.3	1.8	2.1	1.9
	Improvements of housing (improving the housing policies)	0.2	—	—	—
	Monitoring and evaluation system	0.15	—	—	0.1
	PR office for the Healthy Cities project	0.1	0.3	—	—
Sub-total		5	5	5.1	5.1
3. Identifying solutions to health-care-related problems	Survey for the elderly and the disabled	0.1	—	—	—
	Developing an information dissemination programe	0.2	0.1	0.2	—
	Financial programs to solve priority problems	0.5	0.8	0.8	0.7
	Supportive policies for the poor	1	1	1	1.1
	Prevention plan for communicable diseases	0.1	—	—	—
	Increased accessibility to health-care	0.5	0.55	0.6	0.6
	Support for rare or chronic diseases	0.5	0.5	0.5	0.5
	Continuous information dissemination	0.15	0.15	—	—
	Health maintenance programs for foreigners	0.15	0.15	0.2	0.2
	Free health examination for low-income families	0.6	0.55	0.4	0.3
Sub-total		3.8	3.8	3.7	3.4
4. Health industry development	Hosting exhibitions related to health care	0.05	0.05	0.05	0.05
	Hosting international Healthy Cities seminars	0.05	0.05	0.05	0.05
	Establishing networks	0.1	0.05	0.05	0.05
	Establishing the 'Wonju future Healthy Cities forum'	0.2	0.25	0.25	0.25
	Developing the traditional medicine industry	0.5	0.5	0.5	0.5
	Developing a biotechnology centred health-care industry	0.3	0.3	0.3	0.3
	Developing an IT-centred health-care industry	0.2	0.2	0.2	0.2
	Educational infrastructure	0.1	0.1	0.1	0.1
Sub-total		1.5	1.5	1.5	1.5
Total		15.8	15.9	15.9	16.1

Source: Wonju City.

administration under the provisions of the Tobacco Monopoly Act (Ministry of Finance and Economy, 2006).

To reduce one of the highest smoking rates among the member countries of the Organization for Economic Cooperation and Development (OECD, 2006a; OECD, 2006b), the Korean government has gradually increased the per-pack price of cigarettes since 1994. The price of one of the most popular national

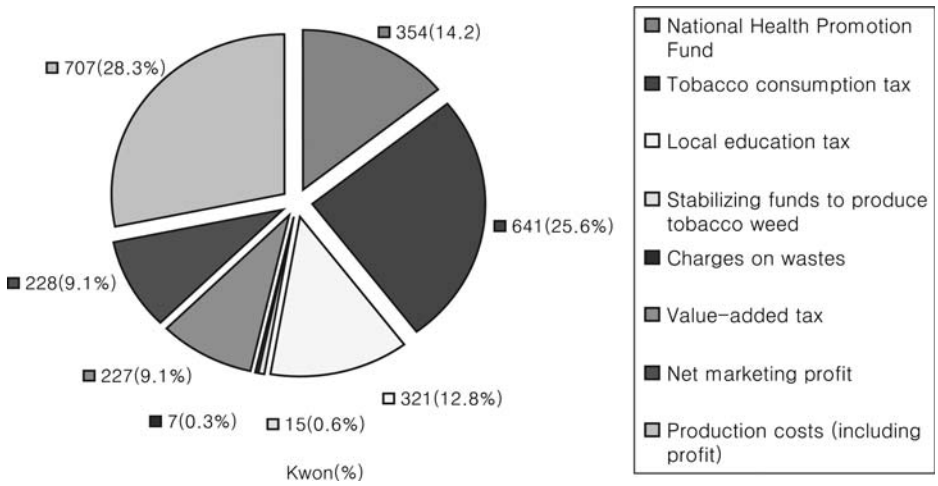

Fig. 1: Allocation of taxes and charges from the price per pack of cigarettes. *Source*: Ministry of Health and Welfare (2006), Tobacco Control Policy of the Republic of Korea.

brands of cigarettes was recently raised by 25% from 2000 Kwon (equivalent to USD 2.0 as of April 2008) to 2500 Kwon (USD 2.5) in December 2004. Consequently, annual sales of cigarettes in Wonju decreased by 4% from 27 million packs in 2003 to 26 million packs in 2005 with a temporary hike in purchases before the price increase. After that, annual sales of cigarettes increased continuously. In 2009, 20 million packs were sold.

For one of the most popular national brands of cigarettes, it is stipulated in Article 229 of the local tax law that 641 Kwon (26%) out of the price of 2500 Kwon per 20-cigarettes pack is levied as the tobacco consumption tax and is paid into local government revenue accounts (Figure 1). The revenue from the tobacco consumption tax in Wonju increased by 132% since 1995 to USD 22 million, comprising 20% of the general tax revenue of the city in 2009 (Figure 2).

While the smoking rate in Wonju is decreasing, the number of absolute smokers is increasing in Wonju due to population influx, increasing the floating population. We concluded that tobacco products in Korea were relatively inexpensive, this consideration was factored into the decision-making process to further increase the price with a similar phase in 2005 and afterward. As expected, demand for cigarettes was still price-inelastic and the tobacco consumption tax generated adequate revenues to sustain the Healthy City Programs at USD 15–16 million per annum from 2006 to 2010.

Budgeting

In 2006, 66 programs in 11 fields were implemented under the Healthy City Wonju project with a budget of USD 15 million. The areas of budget allocation were 'education for children and the youth' (a quarter), 'healthy lifestyles (exercise, sobriety, non-smoking)' (18%), 'culture and welfare' (17%) and 'food and nutrition' (16%).

Wonju developed a mid-term plan from 2007 to 2010 with an annual budget of USD 16 million. This plan consists of 40 programs with 4 major goals: 'health promotion', 'healthy environments', 'identifying solutions to health-care issues' and 'development of the health industry'. Table 1 shows the budgetary allocations to each program in the mid-term plan. The priority areas of the Healthy City project were 'support for the elderly and the disabled', 'provision of free health checkups for low-income families', 'supply of clean water', and 'improvement of access to health-care facilities'. These priority areas were based on public opinions obtained from a survey on public health issues in Wonju. However, the allocation of the budget by the City Council eventually favored building infrastructure for safe clean water and health-care facilities, giving them higher budgets than popular priority areas.

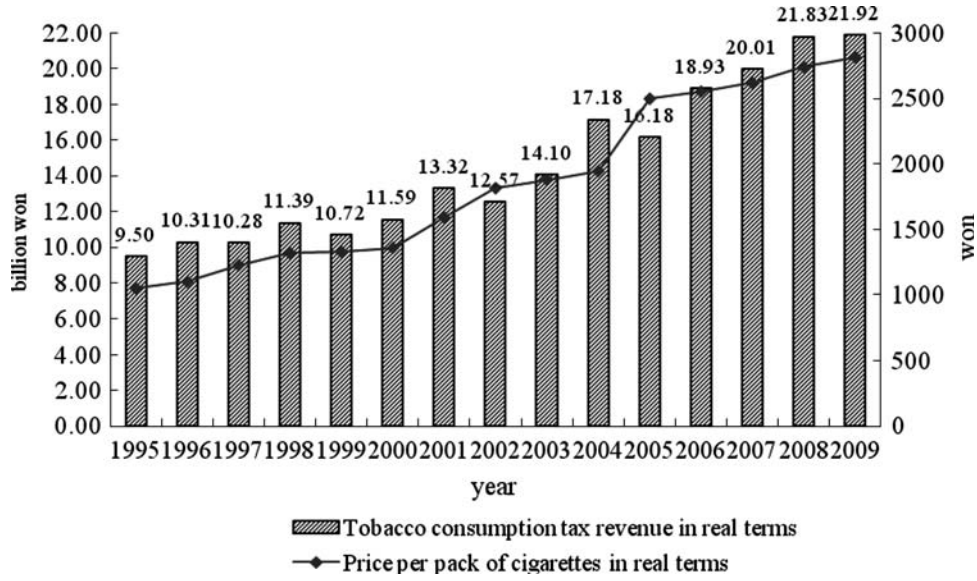

Fig. 2: Trends of prices per 20 pieces of cigarettes and revenues of tobacco consumption tax in real terms in Wonju during 1995–2009. *Source*: Wonju City Division of Tax Administration; 1 billion Kwon is USD 1 million (24 April 2010).

DISCUSSION

Dedicating the proceeds of tobacco taxes to health-promoting activities is not a new idea, and a number of countries and states have adopted this strategy since 1980s (WHO, 2004). The unique aspect of the Healthy City Wonju project is that it is financed in a sustainable and sufficient manner using all revenue from a local tobacco consumption tax. To the best of our knowledge, the financing of the Healthy City project with local tobacco consumption tax revenues is the first attempt of its kind in the Western Pacific Region.

The mayor invested all tobacco taxes, USD 16 million, in the Healthy City project under conditions set forth in legislation approved by City Council. This is a good example of how public policy aimed at promoting good health can be formulated (cf. Ottawa Charter) and is in accordance with the 2007 World Health Day theme of WHO: 'Invest in health, build a safer future'.

The experiences of other Healthy Cities have also shown the importance of leadership in sustainable Healthy Cities activities (OECD, 2006a; OECD, 2006b). Reliance on the Wonju mayor's support and commitment, however, implies that the sustainability of projects depends on a city's political circumstances. For new Healthy City projects, it is therefore necessary to plan adequate timelines for implementation under current leadership, and it will probably be necessary to reinitiate lobbying efforts when new leaders take office. Therefore, people who are in charge of Healthy City projects and supportive academics should immediately begin lobbying so as to secure unshakable support for sustained financing.

City government revenue from the local tobacco consumption tax in Wonju has been shown to be stable with regard to the financing of programs in the 5-year Healthy City project (Wonju City, Healthy City Research Center, 2004). Tobacco consumption tax revenue is not expected to decline quickly, because the increase in revenue due to the rising price and tax rate on cigarettes would offset the decline due to the decrease in smoking. However, it is expected that when the policies achieve significant reductions in smoking, a long-term decreasing trend would occur. The local tobacco consumption tax is sustainable and sufficient as funding source for the 5-year project of the Healthy City Wonju project (Wonju City, Healthy City Research Center, 2004).

Recent data showed that Wonju's smoking rate fell from 57.8% for males and 6.8% for

females in 2004 to 46.9% for males and 3.4% for females in 2008 (Wonju City and Healthy City Research Center, 2008). Such decreases may not be entirely the result of the Healthy City project, but it is believed that the project had impacts. Among those were the creation of smoke-free zones, community health promotion plan, operating target group and life phase specific health promotion programs and developing settings-based health promotion programs.

The tobacco consumption tax rate in Wonju is on the rise despite the rapid drop in smoking rate. This trend is attributable to the fact that the total smoking population has increased as the number of city residents grew by 45 274 during the past decade. But discussions are currently under way to address the problem of sustaining the Healthy City project in the face of falling tobacco consumption tax revenues. These discussions are focusing on the possibility of offsetting the drop in this revenue stream by levying local sin taxes on sales of unhealthy commodities (i.e. alcohol tax).

However, there are limitations to creating health-promoting funds and resources in the Republic of Korea. Most of the nation's health promotion programs are planned and executed by public health centers, and allocating budgets for the public health sector is difficult. According to the OECD in 2007, in Korea, the private sector spends significantly more for health-care services than the public sector by a ratio of 85:15 (OECD, 2007). Participation in new public health fields through conducting Healthy Cities projects can, in this regard, be seen as a new kind of public health movement.

Funding the Healthy City Wonju project with local tobacco tax revenue has provided lessons in how to finance other Healthy Cities projects, particularly with regard to the role of local leadership in earmarking the tobacco tax and the sustainability of tobacco tax as a funding source for the Healthy Cities projects in the Republic of Korea. Strong leadership from local authorities, in particular the mayor, was found to be the most important element in securing tobacco consumption tax revenues to fund the Healthy Cities initiative.

It would be useful to broaden this discussion to better reflect how this successful advocacy was achieved, particularly in terms of profiling health needs at the municipal level (beyond getting residents to identify priority issues) and mapping these to funding requirements. It would also be useful to discuss whether there was some projection of funding sufficiency related to the anticipated decrease in smoking, and what some of the expected outcomes might be. Consideration of these implications would be useful for cities and communities in the planning and development of sustainable and successful Healthy Cities projects.

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REFERENCES

Alliance for Healthy Cities. http://www.alliance-healthycities.com/htmls/members/index_members.html (30 August 2010, date last accessed).

Baum, F., Jolley, G., Hicks, R., Saint, K. and Parker, S. (2006) What makes for sustainable Healthy Cities initiatives?—a review of the evidence from Noarlunga, Australia after 18 years. *Health Promotion International*, **21**, 259–265.

Bureau of Health Promotion Department of Health, R.O.C. (TAIWAN) (2009) Taiwan's new tobacco tax increase allocated to tobacco and cancer control, and other health and social programs. http://www.bhp.coh.gov.tw/bhpnet/English/NewsShow.aspx?No=200907140003 (28 November 2009, date last accessed).

Chaloupka, F. J., Hu, T., Warner, K. E., Jacobs, R. and Yurekli, A. (2000) The taxation of tobacco products. In Jha, P. and Chaloupka, F. J. (eds), *Tobacco Control in Developing Countries*, Chapter 8. Oxford University Press, Oxford, pp. 237–272.

de Leeuw, E. (2003) Nurturing Healthy Cities: research responsibility and accountability. In Takano, T. (ed.), *Healthy Cities & Urban Policy Research*, Chapter 9, Spon Press, London, pp. 138–161.

de Leeuw, E. (2009) Evidence for Healthy Cities: reflections on practice, method and theory. *Health Promotion International*, **24**, i19–i36.

Hancock, T. (1993) The evolution, impact and significance of the healthy cities/healthy communities movement. *Journal of Public Health Policy*, **14**, 5–18.

Hancock, T. and Duhl, L. (1988) Promoting Health in the Urban Context. *WHO Healthy Cities Papers No 1*., Copenhagen.

Hu, T. W. and Mao, Z. (2002) Effects of cigarette tax on cigarette consumption and the Chinese economy. *Tobacco Control*, **11**, 105–108.

Hu, T. W., Xu, X. P. and Keeler, T. (1998) Earmarked tobacco taxes: lessons learned. In Abedian, I., Vander Merwe, R., Willins, N. and Jha, P. (eds), *The Economics of Tobacco Control: Towards and Optimal Policy Mix. Cape Town (South Africa): Applied Fiscal Research Centre*. University of Cape Town, Cape Town, South Africa.

Kim, H.J. (2000) Healthy City Kwachon 21 Project: a community health promotion programme in Korea. *Asia Pacific Journal of Public Health*, **12**(Suppl.), S67–S70.

Limwattananon, S. (2006) Innovative financing of health promotion. International Health Policy Program-Thailand, Chang Mai, Thailand 26 June 2006.

Ministry of Finance and Economy (2006) *Korean taxation 2006*. Ministry of Finance and Economy, Seoul. http://www.nts.go.kr/eng/default.html (19 November 2006, date last accessed).

Ministry of Health and Welfare (MoHW) (2010) *Weekly Report*. http://www.mw.go.kr (6 January 2010, date last accessed).

Nam, E. W. and Engelhardt, K. (2007) Health promotion capacity mapping the Korean situation. *Health Promotion International*, **22**, 155–158.

Organization for Economic Co-operation and Development (OECD) (2006a) *Briefing Note for OECD Health Data* (2006) *Korea [monograph on the Internet]*. OECD, Paris. http://www.oecd.org/dataoecd/30/40/36959256.pdf (19 November 2006, date last accessed).

Organization for Economic Co-operation and Development (OECD) (2006b) *OECD Health Data 2006: Statistics and Indicators of 30 Countries*. OECD, Paris.

Organization for Economic Co-operation and Development (OECD) (2007) *OECD Health Data 2007*. OECD, OECD, Paris.

Peterson, D. E., Zeger, S. L., Remington, P. L. and Anderson, H. A. (1992) The effect of state cigarette tax increases on cigarette sales, 1995 to 1988. *American Journal of Public Health*, **82**, 94–96.

SEA (2006) Regional Strategy for Health Promotion: Follow-up to the Sixth Global Conference on Health Promotion. Health Promotion and Dedicated Taxes, SEA7RC59/Inf.xx (draft), 18 April 2006.

Slama, K. (2006) Background information for adopting a policy encouraging earmarked tobacco and alcohol taxes for the creation of health promotion foundations. *Promotion & Education*, **13**, 30–80.

Siwaraksa, P. (2005) *The Birth of the ThaiHealth Fund*. Thai Health Promotion foundation, Bangkok.

Thai Health Promotion Foundation (2009) Cigarette tax increase will decrease number of smokers. http://en.thaihealth.or.th/print/75 (28 November 2009, date last accessed).

The International Network of Health Promotion Foundations. www.hp-foundations.net.

Twiss, J. M., Duma, S., Look, V., Shaffer, G. S. and Watkins, A. C. (2000) Twelve years and counting: California's experience with a statewide Healthy Cities and Communities program. *Public Health Reports*, **115**, 125–133.

Wasi, P. (2000) Triangle that moves the mountain? and Health systems reform movement in Thailand. *Human Resources for Health Development Journal*, **4**, 106–110.

Wonju City Division of Tax Administration (2010) *2009 Account and Financing*. Unpublished working paper, Wonju city (in Korean).

Wonju City, Healthy City Research Center of Yonsei University (2004) *Survey of Wonju City Community Diagnosis*. Unpublished working paper, Wonju city (in Korean).

Wonju City and City, Healthy City Research Center of Yonsei University (2008) *Evaluation of the Anti-Smoking Program in Wonju city*. Republic of Korea, Wonju city, Korea.

World Health Organization (1986) Ottawa charter for health promotion. *Journal of Health Promotion*, **1**, 1–4.

World Health Organization (2005) *The Millennium Development Goals and Tobacco Control: An Opportunity for Global Partnership*. WHO, Geneva, Switzerland.

World Health Organization Regional Office for the Western Pacific (WPRO) (2003) *Health Promotion Financing Opportunities in the Western Pacific Region*. WHO WPRO, Manila, Philippines.

World Health Organization Regional Office for the Western Pacific (WPRO) (2004) *The Establishment and Use of Dedicated Taxes for Health*. WHO WPRO, Manila, Philippines.