

Trends in the Socioeconomic Disparities of Smoke-Free Families in Taiwan

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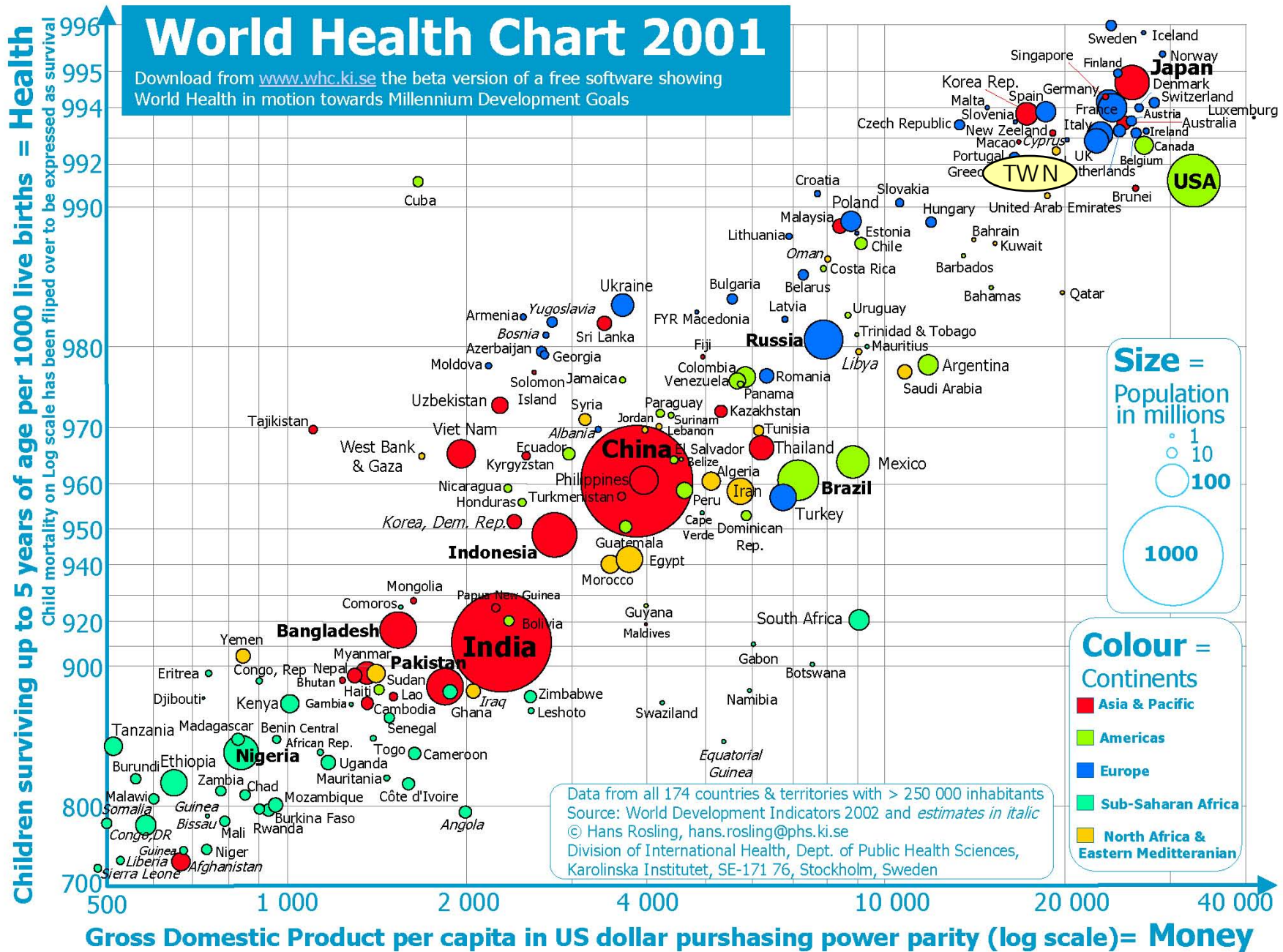
TAIWAN - 2005

- Socioeconomic background

- population 23 million
- density 630 persons per square km
- GNP US\$15,676 per capita
- education 32% received higher education
- aging 9.7% population

- Population health

- life expectancy M/F: 74/80 yrs
- major killers cancer, stroke, accident
heart disease, diabetes



Why Smoke-Free Families?

- Increasing concerns on the health damage of passive smoking
- Trends in the global movement toward a smoke-free environment for all under FCTC Article 8
- Family as a research unit and campaign target
 - the most important setting to protect people of all ages from passive smoking
 - few researches have targeted at familial level

Tobacco Control in Taiwan

- 1984 1st tobacco control NGO was founded
- 1987 Cigarette market was forced open
- 1989 1st anti-smoking initiative of the government
- 1997 Enactment of Tobacco Hazard Control Act
- 2002 Implementation of Health and Welfare Tax
- 2005 Ratification of FCTC by the President
- 2007 Amendment of THCA on smoke-free public indoor place (to be enforced by Jan, 1st .2009)

Social Disparities in Smoking

- Smoking patterns are contextualized by socio-economical and cultural environments
- Well-known evidence of reversed gradient relationship between smoking and social economic status in high-income countries
- Groups with higher social status or in better economic conditions are early adopters in quitting and non-smoking preference

Objectives

- Describe the changing social patterns of smoke-free families (SFF) in Taiwan over the past 30 years.
- Identify the different effects of income and education on smoke-free families.

Method and Measurement

Data source

- Secondary data came from the Family Income and Expenditure Survey (FIES) conducted annually by the Directorate-General of Budget, Accounting and Statistics (DGBAS) in Taiwan.

Data collected in the survey

- family composition and basic information of household members
 - age, gender, education, occupation, sector of employment....
- household facilities and conditions
- individual income and family expenditure

Study subject

- study years: 1976, 1990, and 2003
- nationally representative samples
 - 9,461, 16,434, 13,681 households for index year 1976, 1990 and 2003, respectively.

SES indicators

- Household Income
 - household disposable income quintile
- Education of the household head
 - primary (0-6 years), junior (7~9), senior (10~12), college (13+)

Smoke-free family measures

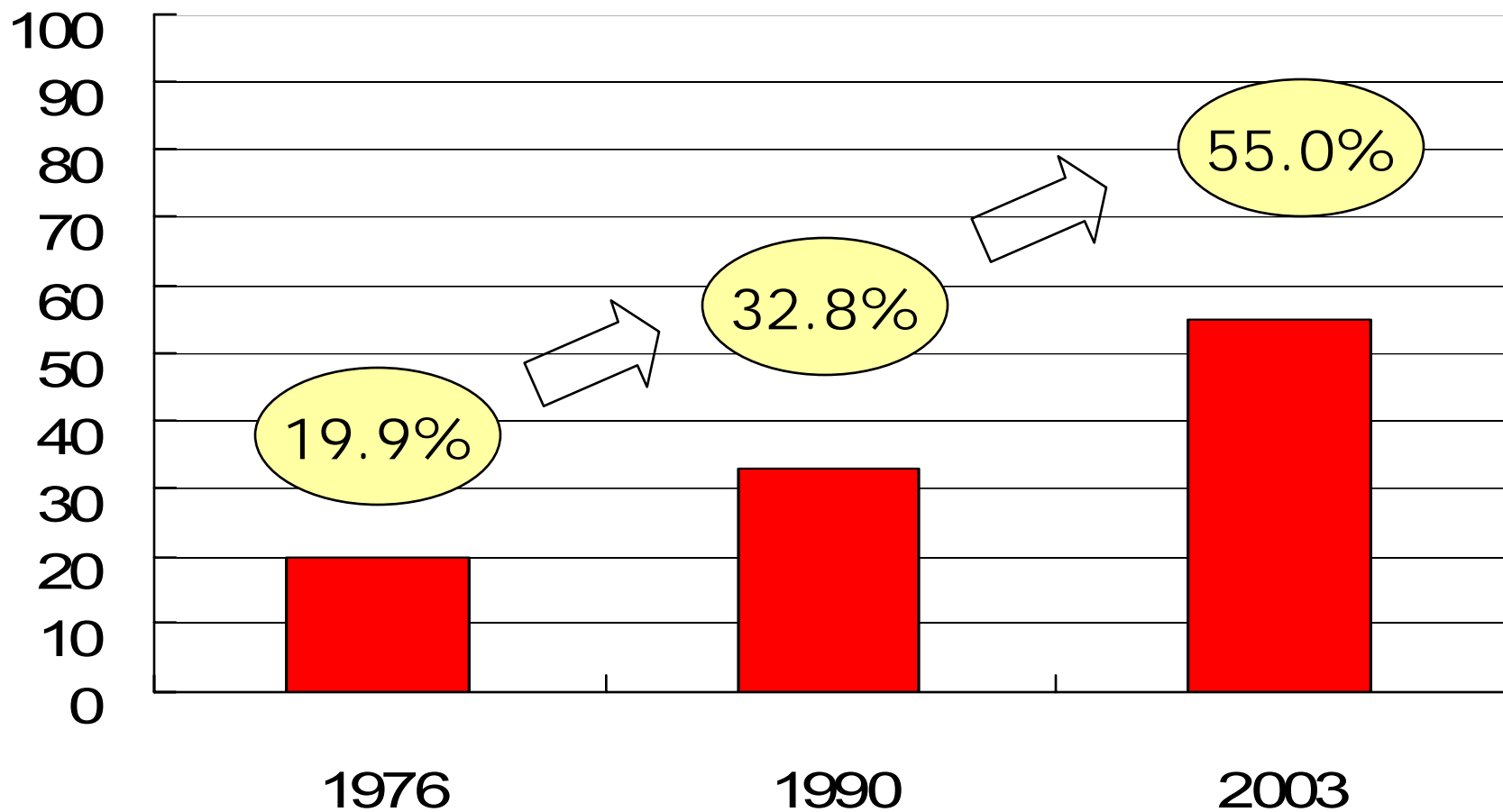
- An item in the FIES questionnaire regarding the **annual tobacco consumption** of all family members was chosen
- When the item is reported as “0”, then we define the family as a smoke-free family

Statistics analysis

- Trends in the prevalence of smoke-free families over the 30 years
- Logistic regression of each study year
 - To compare the partial effect of income and education on SFF across different study years after adjustment for family composition

Results

Fig1. SFF in 1976, 1990, 2003



Text Description for Fig.1

- The prevalence of smoke-free family in Taiwan has increased from 19.9% in 1976, 32.8% in 1990, to 55.0% in 2003.

Table 1. partial effect of SES on SFF in 1976 (n=9461)

	OR		95% C.I.	P value
• Income				
➤ poorest	1			
➤ near poor	0.72	↑	0.61 0.86	<0.001
➤ middle	0.67		0.56 0.80	<0.001
➤ near rich	0.57		0.47 0.69	<0.001
➤ Richest	0.51		0.41 0.63	<0.001
• Education				
➤ Primary	1			
➤ Junior	1.47	↓	1.24 1.24	<0.001
➤ Senior	1.99		1.70 1.70	<0.001
➤ College	2.81		2.32 2.32	<0.001

Table 2. partial effect of SES on SFF in 1990 (n=16,434)

	OR	95% C.I.		P value
• Income				
➤ poorest	1			
➤ near poor	0.86	0.78	0.99	0.03
➤ middle	0.83	0.73	0.94	0.003
➤ near rich	0.75	0.66	0.86	<0.001
➤ Richest	0.80	0.69	0.93	0.002
• Education				
➤ primary	1	1	1	
➤ junior	1.12	1.00	1.26	<0.001
➤ senior	1.54	1.39	1.72	<0.001
➤ college	2.38	2.10	2.70	<0.001

Table 3. partial effect of SES on SFF in 2003 (n=13,681)

	OR	95% C.I.		P value
• Income				
➤ poorest	1			
➤ near poor	0.95	0.83	1.07	0.40
➤ middle	0.99	0.87	1.15	0.98
➤ near rich	0.95	0.82	1.10	0.46
➤ Richest	1.08	0.92	1.27	0.35
• Education				
➤ primary	1	1	1	
➤ junior	1.21	1.07	1.38	0.003
➤ senior	1.71	1.52	1.93	<0.001
➤ college	3.44	2.98	3.97	<0.001

Table 4. partial effect of SES on SFF- 1976, 1990, 2003

	1976	1990	2003
• Income			
➤ poorest	1	1	1
➤ near poor	0.72***	0.86*	0.95
➤ middle	0.67***	0.83**	0.99
➤ near rich	0.57***	0.75***	0.95
➤ Richest	0.51***	0.80**	1.08
• Education			
➤ primary	1	1	1
➤ junior	1.47***	1.12***	1.21**
➤ senior	1.99***	1.54***	1.71***
➤ college	2.81***	2.38***	3.44***

Summary¹

- The SFF prevalence in Taiwan has been increasing from 20% in 1976 to 55% in 2003.
- Families of higher SES were early adopters to become smoke-free.

Summary²

- Education of the household head has become more important in determining the smoke-free status, compared to the diminishing effect of family income.
- Educational disparities of SFF have become worse, along with the overall improvement of SFF in Taiwan.

Thanks for your kind attention!

