The State of the Global Tobacco Epidemic, 2018

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How did this happen?
Tobacco

Any of numerous species of Nicotiana or the cured leaves of several of the species that are used after processing in various ways for smoking, snuffing, chewing, and extracting nicotine
The epidemiologic triangle and the tobacco epidemic

An addicting agent; a successful vector, and a supporting environment

An issue of globalization, rights, and development
The origins of the epidemic

- **1852**: Introduction of matches
- **1854**: Philip Morris begins making cigarettes in London
- **1874**: Washington Duke builds first factory
- **1880**: Bonsack machine patented
- **1913**: Newly independent R.J. Reynolds launched a massive campaign for Camel cigarettes
The modern cigarette: engineered for success

“What the [tobacco] industry wants people to believe is that a cigarette is nothing but a natural product grown in the ground, ripped out, stuffed in a piece of paper and served up. It's not. It's a meticulously engineered product. The purpose behind a cigarette . . . is to deliver nicotine—an addictive drug.”

— Jeffrey Wigand
Camel cigarettes

• October 13, 1913, R.J. Reynolds Tobacco Company introduced Camels, the first modern blended cigarette, and launched the first US cigarette-advertising campaign

• 1920s: women first became the targets of the tobacco companies
Camel cigarettes
Joe and Jose Camel

Smooth

CHARACTER OF THE YEAR

Un tipo suave.
Camel goes worldwide
"Camel. He grew up to be kind."

Poland
“Have an intense pleasure with your Camel”

Spain
RJ Reynolds VUSE
http://www.rjravapor.com/Pages/default.aspx
https://vusevapor.com

DREAMPOSSIBLE
The VUSE Digital Vapor Cigarette

VUSE is the only Electronic Cigarette that finally delivers a satisfying and great tasting vapor experience combined with consistent and reliable performance. VUSE is designed and assembled in the USA by tobacco experts.

Learn More
Camel Cigarettes

Camels are in a class by themselves—easily the most refreshing, the most likable cigarette you ever smoked. You can prove that! Simply compare Camel's puff-by-puff with any cigarette in the world at any price! Put quality, flavor and cigarette satisfaction to the utmost test!

Made to meet your taste, Camels never tire—no matter how liberally you smoke them! The expert blend of choice Turkish and choice domestic tobaccos makes Camels delightful—so full-bodied, yet so fascinatingly smooth and mellow-mild. Every time you light one you get a new and keener enjoyment.

Freedom from any unpleasant after taste or any unpleasant cigarette odor makes Camels as pleasant as they are enjoyable.

In fact, Camels appeal to the most fastidious smoker in so many cheerful ways you never will miss the absence of coupons, premiums or gifts. You'll prefer Camel Quality!

18 cents a package

R. J. Reynolds Tobacco Co.
Winston-Salem, N. C.
Smoking Kills
1950: Key case-control studies

- Morton Levin publishes a study linking smoking and lung cancer in JAMA
- Ernst L. Wynder and Evarts A. Graham publish study in JAMA in which 96.5% of lung cancer patients interviewed were smokers
- Richard Doll and Bradford Hill publish study in BMJ finding that heavy smokers are 50 times more likely to get lung cancer; follow-up in 1954
A Frank Statement to Cigarette Smokers

"We accept an interest in people's health as a basic responsibility, paramount to every other consideration in our business."

"We believe the products we make are not injurious to health."

"We always have and always will cooperate closely with those whose task it is to safeguard the public health."
1964 Surgeon General’s Report
“Involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers.”

C. Everett Koop, M.D.
Former U.S. Surgeon General
Active smoking

Cancers

- Oropharynx
- Larynx
- Esophagus
- Trachea, bronchus, and lung
- Acute myeloid leukemia
- Stomach
- Liver
- Pancreas
- Kidney and ureter
- Cervix
- Bladder
- Colorectal

Chronic Diseases

- Stroke
- Blindness, cataracts, age-related macular degeneration
- Congenital defects—maternal smoking: orofacial clefts
- Periodontitis
- Aortic aneurysm, early abdominal aortic atherosclerosis in young adults
- Coronary heart disease
- Pneumonia
- Atherosclerotic peripheral vascular disease
- Chronic obstructive pulmonary disease, tuberculosis, asthma, and other respiratory effects
- Diabetes
- Reproductive effects in women (including reduced fertility)
- Hip fractures
- Ectopic pregnancy
- Male sexual function—erectile dysfunction
- Rheumatoid arthritis
- Immune function
- Overall diminished health

Source: USDHHS 2014
Passive smoking

**Children**

- Middle ear disease
- Respiratory symptoms, impaired lung function
- Lower respiratory illness
- Sudden infant death syndrome

**Adults**

- Stroke
- Nasal irritation
- Lung cancer
- Coronary heart disease
- Reproductive effects in women: low birth weight

Source: USDHHS 2014
Judge Kessler speaks: “An immeasurable amount of human suffering”

The tobacco industry has “marketed and sold their lethal product with zeal, with deception, with a single-minded focus on their financial success and without regard for the human tragedy or social costs that success exacted.”
"These studies are inconclusive—so far we've only succeeded in giving cancer and heart disease to laboratory humans."
Industry challenge to non-smoker’s rights movement

• Industry promotes ineffective policies
  • Accommodation
  • Ventilation
• Industry claims causation cannot be established for SHS and disease, epidemiological studies are “junk science,” and controversy exists among scientists

“If smoking were banned in all workplaces, the industry’s average consumption would decline... and the quitting rate would increase... Clearly, it is most important for PM to continue to support accommodation for smokers in the workplace.”

- Philip Morris, 1992

Industry tactics go global: Asia ETS consultants

Introduction
This note describes the status regarding attempts to consolidate a group of scientific consultants in Asia that will be willing to contribute to the debate on ETS issues. A cursory assessment of those involved is given and possible future progress with this group discussed. Recommendations regarding BAT involvement are also given.

Source: Document No. 401686705

The industry playbook abides!
The Epidemic Goes Global
Stages of the global tobacco epidemic

The Global Tobacco Surveillance System (GTSS)

• Includes collection of tobacco-specific data through 4 surveys:

<table>
<thead>
<tr>
<th>Adults</th>
<th>Youth</th>
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</thead>
<tbody>
<tr>
<td>Global Adult Tobacco Survey (GATS)</td>
<td>Household survey, monitors tobacco use among adults ≥15 years</td>
</tr>
<tr>
<td>Global Youth Tobacco Survey (GYTS)</td>
<td>Collects information in schools, focuses on youths ages 13-15</td>
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<tr>
<td>Global School Professionals Survey (GSPS)</td>
<td>Surveys teachers and administrators from the same schools that participate in the GYTS</td>
</tr>
<tr>
<td>Global Health Professions Students Survey (GHPSS)</td>
<td>Focuses on third-year students pursuing degrees in dentistry, medicine, nursing and pharmacology</td>
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</tbody>
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Prevalence of current cigarette smoking in 16 GATS* countries, adults 15+ years, 2008-2010

*GATS = Global Adult Tobacco Survey

Lancet 2012; 380: 668-79
Global prevalence of daily cigarette smoking, males >10 years, 2015

Percent of DALYs attributable to tobacco use
Percentage of deaths due to tobacco use, males, 2016
Percentage of deaths due to tobacco use, females, 2016
Countries with the highest number of daily smokers: age ≥10, in millions, 2015

- **Bangladesh**
- **Brazil**
- **China**
- **Germany**
- **India**
- **Indonesia**
- **Japan**
- **Philippines**
- **Russia**
- **United States**

**Daily Smokers (millions)**

- **Male**
- **Female**

Over 400 million daily smokers live in three countries. One-third of all male daily smokers globally live in China.
Global Tobacco Control
Adult per-capita cigarette consumption and major smoking and health events, US, 1900-2012
Entry into force of the FCTC

• Required 100 signatures and 40 ratifications
• First 40 ratifications included France, Japan, India . . .
• February 28, 2005: treaty enters “force” (becomes binding on countries that have ratified the treaty)
• Now ratified by 174 nations (87.4% of the world), but not US and Indonesia

Ratification of the FCTC

Parties to the WHO FCTC: 181
Signatories to the WHO FCTC: 168

As of November 23, 2017
Two players in tobacco control

Source: New York Times, 07/24/08
WHO: MPOWER Report, 2017

PROGRESS IN TOTAL TAX ON CIGARETTES > 75% OF RETAIL PRICE (2008–2016)

Population protected (billions)

Total population: 7.4 billion
Total number of countries: 195

Number of countries

0  25  50  75  100  125  150  175  200

Population (billions)

0.5  0.5  0.5  0.7  0.8


Countries

Population protected (billions)

22  29  31  34  32
Tobacco industry remains active

• New product lines
• Electronic cigarettes
• Use of trade agreements
  • Intellectual property
  • GATT
• Creating doubt and controversy
The power of packaging

“In the absence of any other marketing messages, our packaging...is the sole communicator of our brand essence. Put another way, when you don’t have anything else – our packaging is our marketing”.

Hulit Philip Morris documents 1994
Plain packaging: Australia

- Rolled out October 2012, implemented since December 2012
- Upheld in the Australian courts
- Challenged through the WTO
Plain packaging: Australia
Plain packaging

https://www.tobaccofreekids.org/what-we-do/global/plain-packaging
Single representation: Marlboro “brands”

US & elsewhere

Uruguay
MOST ARE STRUGGLING TO QUIT.

ADVANCING GLOBAL PROGRESS IN SMOKING CESSTATION & HARM REDUCTION

NOVEMBER 13 STAKEHOLDER EVENT
Register for the event in London, or provide your questions, comments and concerns if you won't be able to join us.

LEARN MORE ➔

GLOBAL STATE OF TOBACCO HARM REDUCTION REPORT
A comprehensive look at the public health potential of tobacco harm reduction.

LEARN MORE ➔

AGRICULTURAL TRANSFORMATION INITIATIVE
See how we're helping to prepare smallholder tobacco farmers for a smoke-free future.

LEARN MORE ➔

LEARN MORE ➔
Learning from disruption

Thursday, October 11th 2018 • Island Shangri-la, Hong Kong
Island Ballroom, Level 5, Pacific Place, Supreme Court Road, Central, Hong Kong
8.00am – 8.45am Registration & breakfast | 8.45am – 10.30am Meeting & presentations

Disruptions in industry are remaking business and society.

In the field of energy, breakthrough technologies spurred on by the need to address climate change are unleashing new forms of cleaner, more sustainable power for everything from consumer goods to factory operations. Basic forms of transportation—from the humble bicycle to complex logistics systems—are being radically transformed by new forms of distributed ownership and ledger systems. Finance, the lubricant of market economics, is being remade by fintech and algorithms. China, notably, stands out for pioneering many of these industrial changes.

To benefit from rather than be victimised by such fundamental transformations requires learning lessons from disruption. Other than the rewards that investors and executives can reap, how can people in society gain as well? In other words, how can lessons from industrial disruption be applied to improving quality of life?

With support from the Foundation for a Smoke-Free World, The Economist Corporate Network in Hong Kong is hosting an executive breakfast forum that looks at how lessons from industrial disruption apply both to business in Asia as well as to creating a healthier Asia. This will be an informative, stimulating, and unconventional exploration of how disruption can deliver for the ‘double bottom line’.

Note: These meetings are limited to participation by senior-level executives and policymakers only. Per invitation only.

To register please email the events team at ecn_hongkong@economist.com
Noncommunicable diseases (NCDs)
• Cancer
• Cardiovascular diseases
• Chronic obstructive pulmonary disease
• Diabetes

The Four Risk Factors:

Unhealthy diet | Harmful use of alcohol | Tobacco use | Physical inactivity
The multinationals are coming

"Thinking about Chinese smoking statistics is like trying to think about the limits of space."

Robert Fletcher, Rothman's Regional Public Affairs Manager, 1992
Tobacco control faces great opposition. Tobacco control is not mentioned at all as a priority in the health reform plan, and the budget we have only accounts for 0.5% of the total budget for disease control and prevention.

Gonghuan Yang, MD, MPH
Deputy Director General of the Chinese Center for Disease Control and Prevention

“...tobacco control faces great opposition. Tobacco control is not mentioned at all as a priority in the health reform plan, and the budget we have only accounts for 0.5% of the total budget for disease control and prevention.”
CONCLUSIONS

1. The impact of tobacco control has been insufficient and smoking prevalence in male remains at the top level;

2. The health consequences of the tobacco epidemic are very serious and tobacco smoking has become the ‘Top Killer’ of the Chinese population;

3. China is doing poorly in implementing the FCTC with a performance score of only 37.3 points of 100 possible points; and see a large gap from the FCTC requirements; and

4. Intervention of the tobacco industry is the underlying causes of the poor impact of tobacco control.
Prevalence of current cigarette smoking in 14 GATS* countries, adults 15+ years, 2008-2010

52.9%

2.4%

*GATS = Global Adult Tobacco Survey
**Global Adult Tobacco Survey (GATS) China 2010 Country Report**

**Secondhand Smoke**

- 7 in 10 nonsmoking adults were exposed to secondhand smoke in a typical week.
- 6 in 10 adults noticed smoking at the workplace.

*Source: GATS Country Report - China: 2010*
China is the largest cigarette producer
Domestic production of cigarettes (billions)
9.5% of DALYs and 16.4% of deaths attributable to tobacco smoking in 2010 in China (1.37 million deaths)

Mortality Attributable to Smoking in China

Dongfeng Gu, M.D., Ph.D., Tanika N. Kelly, M.P.H., Xigui Wu, M.D., Jing Chen, M.D., M.Sc., Jonathan M. Samet, M.D., M.S., Jian-feng Huang, M.D., Manlu Zhu, M.D., Ji-chun Chen, M.D., Chung-Shiuan Chen, M.S., Xiufang Duan, M.D., Michael J. Klag, M.D., M.P.H., and Jiang He, M.D., Ph.D.

ABSTRACT

BACKGROUND
Smoking is a risk factor for many diseases and has been increasingly prevalent in economically developing regions of the world. We aimed to estimate the number of deaths attributable to smoking in China.

METHODS
We conducted a large, prospective cohort study in a nationally representative sample of 169,871 Chinese adults who were 40 years of age or older. Investigators for the China National Hypertension Survey collected data on smoking and other risk factors at a baseline examination in 1991 using a standard protocol. Follow-up evaluation was conducted in 1999 and 2000, with a response rate of 93.4%. We used multivariable-adjusted relative risk, prevalence of smoking, mortality, and population size in each age group, stratified according to sex, to calculate the number of deaths attributable to smoking in 2005.

RESULTS
There was a significant, dose–response association between pack-years smoked and death from any cause in both men and women after adjustment for multiple risk factors (P<0.001 for trend). We estimated that in 2005, a total of 673,000 deaths (95% confidence interval [CI], 564,700 to 781,400) were attributable to smoking in China: 538,200 (95% CI, 455,800 to 620,600) among men and 134,800 (95% CI, 108,900 to 160,800) among women. The leading causes of smoking-related deaths were as follows: cancer, 268,200 (95% CI, 214,500 to 321,900); cardiovascular disease, 146,200 (95% CI, 79,200 to 213,100); and respiratory disease, 66,800 (95% CI, 20,300 to 113,300).

CONCLUSIONS
Our study documents that smoking is a major risk factor for mortality in China. Continued strengthening of national programs and initiatives for smoking prevention and cessation is needed to reduce smoking-related deaths in China.

Figure 1. Number of Deaths Attributable to Smoking in 2005 in China, According to Sex and Urbanization.

The absolute number of deaths attributable to smoking in 2005 in China in urban areas were 280,100 (95% CI, 245,700 to 314,600) among men and 65,400 (95% CI, 51,000 to 79,800) among women; in rural areas, the numbers were 258,100 (95% CI, 146,200 to 370,000) among men and 69,400 (95% CI, 47,400 to 91,500) among women.

Gu et al. NEJM 2009; 360: 150-9
“With every box of Zhongnanhai Cigarettes you buy, you are contributing a bit of kindness to Project Hope”

“Uses Chinese medicinal additive technology”
“Uses active charcoal filter technology”
“Uses free radical elimination technology”
“Luxury Cigarettes” and gift cigarettes
China is home to 300 million smokers—the world’s largest total—and a newly minted academician who studies “low-tar” cigarettes.

Tobacco Scientist’s Election Tars Academy’s Image

Science 2012; 335: 153-4
China smoking rates

**Adult Smoking (15+ Y.O.)**
% using tobacco daily: 2015

**Male**
47.6%
More men smoke in China than on average in high-HDI countries.

**Female**
1.8%
Even though fewer women smoke in China than on average in high-HDI countries, there are still more than 144,216,000 women who smoke cigarettes each day, making it an ongoing and dire public health threat.

**Children Smoking (10-14 Y.O.)**
% using tobacco daily: 2015

**Boys**
1.51%
More boys smoke in China than on average in high-HDI countries.

**Girls**
0.32%
Even though fewer girls smoke in China than on average in high-HDI countries, there are still more than 110,900 girls who smoke cigarettes each day, making it sign of an ongoing and dire public health threat.
China smoke-free polices

Current Policy in China

Protect from Smoke
All public places completely smoke-free is the best practice

Smokefree

- Healthcare Facilities
- Educational Facilities
- Universities
- Government Facilities
- Indoor Offices
- Restaurants
- Pubs and Bars
- Public Transport
- All Other Indoor Public Places
- Funds for Smokefree Enforcement

N/A
China gift-giving

Figure 1. Have you or your family ever given cigarettes as a gift?
A look at the cigarette epidemic in China