

# Yan Song

Department of Economics, McGill University – Montreal – Canada

Version : November 9, 2015 • Mobile : +1-(514)-549-6070

Email: yan.song@mail.mcgill.ca • Website: <http://yansong.org>

## Field of Interests

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Health Economics, Applied Microeconomics

## Desired Teachings

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Health Economics, Labor Economics, Applied Econometrics

## Dissertation Title

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Essays in Health Economics

## Expected Completion Date

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May 2016

## Education

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**McGill University**

*PhD, Economics,*

**Montreal, Canada**

2011–2016 (*Expected*)

**University of Toronto**

*M.A, Economics,*

**Toronto, Canada**

2010–2011

**Sun Yat-sen University**

*B.A, Economics,*

**Guangzhou, China**

2006–2010

## Awards and Scholarships

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**2014-2015:** Heller Family Fellowship

**2011-2015:** Grad Excellence Award

**2011-2012:** WYNG Trust Fellowship

## Teaching Experience

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**2015 Fall:** Labor Economics, Professor Fabian Lange

**2014 Fall, Winter:** Intermediate Macroeconomics, Professor Daniel Barczyk

**2013 Fall:** Development Economics, Professor Sonia Laszlo

**2012 Fall, Winter:** Intermediate Macroeconomics, Professor Francisco Alvarez Cuadrado and Professor Markus Poschke

## Research Experience

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**2013-2015:** Research Assistant for Prof. Fabian Lange

## **Presentations**

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- CIREQ Lunch seminar, McGill University, November 2015
- Brown Bag Seminar, HEC Montreal, October 2015
- CPS Graduate Research Development Conference Participants, June 2015
- CAHSPR Conference May 2015
- CIREQ Seminar, McGill University, August and April 2015

## **Research (Working Papers)**

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- The Power of Not Asking: How Do Drug Substitution Laws Affect Consumer's Demand for Generic Drugs? (Joint work with Douglas Barthold)
- How Does the New Cooperative Medical Scheme Vary Cross Counties and Over Time?
- Mortality Belief, Individual Health Shocks and Smoking Decision

## **Language**

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Chinese (Native), English (Fluent), French (Working Proficiency).

## **Programming Skills**

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Python (Scientific Computing), MATLAB, STATA, SQL, LaTeX.

## **References**

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Prof.Fabian Lange	Prof.Erin Strumpf	Prof.Laura Lasio	Prof.Robert Clark
Leacock Room 511 855 Sherbrooke 514-653-0020  fabian.lange@mcgill.ca	Leacock Room 418 855 Sherbrooke 514-398-2880  erin.strumpf@mcgill.ca	Leacock Room 538 855 Sherbrooke 514-398-4400  laura.lasio@mcgill.ca	Office 4.125 3000, Chemin Côte- Sainte-Catherine 514-340-7034  robert.clark@hec.ca

## **Dissertation Abstracts**

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In my dissertation, I examine topics related to health, health insurance, individuals' consumption behavior of pharmaceutical products and risky behaviors. My job market paper uses micro panel data from the Medical Expenditure Panel Survey to estimate how state drug substitution policies affect consumers' demand for generic drugs. My second paper looks at the variations in the rural health insurance design in China. Past literature evaluating the impacts of this health insurance treat the insurance as homogeneous across counties and time. I collect policy documents released by county governments and create a novel NCMS policy data set. The third paper investigates the relationship between individuals subjective estimate of their susceptibility to smoking and their decisions to smoke.

- **The Power of Not Asking: How Do Drug Substitution Laws Affect Consumers' Demand for Generic Drugs? (Joint work with Douglas Barthold)**

**Abstract:** Substituting generic for brand drugs whenever possible has been proposed as an effective way to control prescription drug expenditure growth in the United States. This work

investigates whether mandatory switching and presumed consent laws are effective in increasing generic drug use. The analysis uses plausibly exogenous changes in states' drug substitution policies for identification. The Difference-in-Difference regression results indicate that mandatory switching laws have little effect. However, presumed consent laws, whereby the pharmacists could assume patients' consent to switch to generic drugs, reduce consumers' probability of purchasing brand drugs by 4.1 percentage points. We construct and estimate a bounded rationality model to explain why presumed consent laws work. In the model, consumers in states with presumed consent laws incur a cost when asking pharmacists for brand drugs. We find that presumed consent laws' effect in decreasing brand drug use is equivalent to increasing the brand drug price by 3 dollars. The average marginal effect of the policy is to reduce the probability of purchasing brand drugs by 6 and 11 percent. A welfare calculation indicates that consumers' surplus loss exceeds the insurers' gain by 7.5 dollars per person per purchase when states switch from explicit to presumed consent laws.

#### ◦ **How Does the New Cooperative Medical Scheme Vary Cross Counties and Over Time?**

**Abstract:** China initiated the New Cooperative Medical Scheme (NCMS) in 2003. The NCMS is a health insurance for rural residents risk pooled at the county level. The literature has evaluated NCMS's impacts on enrollees' health-care service utilization, medical expenditure and health status. However, the existing works ignored the heterogeneity of the NCMS's crucial characteristics, for instance the deductible and co-payment level. Ignoring these variations prevent researchers from providing a complete and convincing statement of NCMS's impacts. I collect policy documents released by county governments and create a novel NCMS policy data-set. The data-set covers eight provinces in China that vary substantially in geography and economic development. It spans from 2003 to 2014 and includes about 1800 unique county year observations. Using this data-set, I present evidences of the heterogeneity of the NCMS. I find that the plans differ greatly in several dimensions: the level of deductible, reimbursement rate and maximum reimbursement amount. To deal with the non-linear features of most NCMS plans, I simulate 100 draws from a distribution fitted to the actual medical expenditure in rural China. I calculate the average reimbursement rate by applying the NCMS plans to these simulation draws. I find that the average reimbursement rates vary greatly over different types of hospitals and cross counties. These findings imply that future research evaluating the NCMS should caution against treating it as a homogeneous insurance and incorporate its heterogeneities.

#### ◦ **Mortality Belief, Individual Health Shocks and Smoking Decision**

**Abstract:** This paper tries to understand the relationship between individuals subjective estimate of their susceptibility of smoking and their decisions to smoke. It investigates how individuals' smoking related health shocks affect their subject belief of susceptibility of smoking and promote cessation behaviour. I develop a three period decision model of smoking. Based on the model, I derive two testable hypotheses about private health shocks and individuals' belief of susceptibility to smoking. They are: (1) Smokers update their subjective estimate of own susceptibility of smoking when receiving smoking related disease diagnoses. (2) An increase in the awareness of own susceptibility will promote quitting. I use data from the Health and Retirement Study (HRS) to test these hypotheses. I implement an approach similar to the Difference-in-Difference (DID) to test the first hypothesis. The dependent variable is the change in the survival belief to age 75 in two adjacent waves of HRS survey. I find that the

difference in this variable between smokers who received smoking related health shocks or not is significantly larger than that of non-smokers. The joint F test for smoking related shocks is significant at 5 percent level. This provide supportive evidence for hypothesis one. For the second hypothesis, I implement a probit regression. The dependent variable is whether a smoker quits smoking in the next wave of survey. The regression finds that the onset of smoking related diseases promotes cessation. This supports hypothesis two since these shocks increase the awareness of own susceptibility. Combining the two results together, I find individuals' health shocks promote smoke cessation and the mechanism is that smokers could get a more precise understanding of their own susceptibility to smoking. Policy makers can mandate preventative health check-ups for smoking related health shocks to promote cessation behaviors.