#### **CURRICULUM VITAE**

Name Marcel Bilger

Office address Signature Program in Health Services & Systems Research

Duke-NUS Graduate Medical School Singapore

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Work experience

2013 - present Assistant Professor & Assistant Director for Education Signature Program in Health Services & Systems Research

Duke-NUS Graduate Medical School Singapore

• head of the laboratory of health econometrics

• module coordinator for health economics

2011 - 2013 Research Assistant Professor

Signature Program in Health Services & Systems Research

**Duke-NUS Graduate Medical School Singapore** 

Research fields:

• health economics & econometrics

- experimental & behavioral health economics
- health financing & equity
- utilization of preventive care
- economics of obesity

2009 – 2011 Postdoctoral Research Scholar

Harris School of Public Policy, University of Chicago

Research fields:

- health econometrics
- healthcare costs analysis
- health insurance & financing

2009 Consultant

Development Research Group, The World Bank,

Washington, DC

Work activity:

- co-writing a book on health equity and financial protection
- developing the ADePT software health modules
- health system performance analysis of selected African and Asian countries

2005 - 2009

Teaching Assistant Department of Econometrics, University of Geneva Work activity:

- teaching seminars (4 hours weekly)
- preparation of teaching material and exercises
- student evaluation

### Seminars:

- Applied Economics Workshop (MA level)
- Mathematics (BA level)
- Microeconometrics (MA level)
- Statistics (BA level)

2002 - 2005

Research Assistant Laboratory of Applied Economics, University of Geneva Quantitative research in the following fields:

- Health Systems and Equity
- Labour Market
- Taxation and Social Welfare

## Professional affiliations and memberships

External affiliate of the Health, Econometrics and Data Group (HEDG), The University of York, UK.

Member of the ADePT development team for the health financing and health outcomes modules. Development Research Group, The World Bank.

Member of the International Health Economics Association (iHEA).

Member of the American Society of Health Economists (ASHEcon).

#### **Education**

2005 – 2009 PhD in Econometrics and Statistics

University of Geneva

*Thesis title:* Microeconomic Analysis of Healthcare Expenditures: Between Equity and Cost Containment

• obtained with the highest honours

| 2006 – 2007 | International Doctoral Program in Health Economics and Policy, Swiss School of Public Health+   |
|-------------|---|
|             | <ul> <li>Applied Welfare Analysis in Health</li> <li>Econometric Analysis in Health Economics</li> <li>Econometric Analysis of Healthcare Demand</li> <li>Economic Analysis of Healthcare Systems</li> <li>Empirical Methods in Health Economics</li> <li>Health Policy and Politics</li> <li>Inequalities in Health and Health Care</li> </ul> |
| 2002 – 2004 | Master in Econometrics<br>University of Geneva  |
| 1998 – 2002 | Bachelor in Quantitative Economics<br>University of Geneva  |
| 1992 – 1998 | Bachelor in Applied Physics<br>Engineering School of Geneva   |
|             | <ul> <li>4-month Internship in Engineering at CERN (European Organization for Nuclear Research) Analyzing the microstructure of the Large Hadron Collider's dipolar magnets during its development phase</li> <li>EIG award (first of promotion)</li> </ul>   |

# Articles published in refereed journals

**Bilger M**, Manning WG. Measuring overfitting and misspecification in nonlinear models: a new method and an application to health expenditures. Health Economics, forthcoming.

Farooqui MA, Tan Y-T, **Bilger M**, Finkelstein EA. Effects of financial incentives on motivating physical activity among older adults: results from a discrete choice experiment. BMC public health 2014;14; 141.

Tan KB, Tan WS, **Bilger M**, Ho CW. Monitoring and evaluating progress towards universal health coverage in Singapore. <u>PLOS Medicine</u> 2014;11; e1001695.

Jafar TH, Haaland BA, Rahman A, Razzak JA, **Bilger M**, Naghavi M, Mokdad AH, Hyder AA. Non-communicable diseases and injuries in Pakistan: strategic priorities. <u>The Lancet</u>, 2013;381(9884) 2137-2138.

**Bilger M**, Finkelstein EA, Kruger E, Linnan LA, Tate DF. The Effect of Weight Loss on Health, Productivity and Medical Expenditures among Overweight Employees. <u>Medical Care</u>, 2013;51; 471-477.

**Bilger M**, Carrieri V. Health in the cities: when the neighborhood matters more than income. Journal of Health Economics, 2013;1; 1-11.

Finkelstein EA, Zhen C, **Bilger M**, Nonnemaker J, Farooqui AM, Todd JE. Implications of a Sugar-Sweetened Beverage Tax When Substitutions to Non-Beverage Items Are Considered. Journal of Health Economics, 2013;1; 219-239.

Carrieri V, **Bilger M\***. Preventive care: underused even when free. Is there something else at work? <u>Applied Economics</u> 2013;45; 239-253.

Finkelstein EA, **Bilger M**. Hard Truths and a New Strategy for Addressing Childhood Obesity. Childhood Obesity 2012;8; 106-109.

Carrieri V, **Bilger M**. Place of residence and health: empirical evidence from Italy. <u>Rivista</u> Italiana degli Economisti 2011;16; 383-409.

Cavagnero E, **Bilger M**. Equity during an economic crisis: Financing of the Argentine health system. <u>Journal of Health Economics</u> 2010;29; 479-488.

**Bilger M**. Progressivity, horizontal inequality and reranking caused by health system financing: A decomposition analysis for Switzerland. <u>Journal of Health Economics</u> 2008;27; 1582-1593.

**Bilger M**, Chaze J-P. What Drives Individual Health Expenditure in Switzerland? <u>Swiss</u> Journal of Economics and Statistics 2008;144; 337-358.

## **Books and book chapters**

Wagstaff A, **Bilger M**, Sajaia Z, Lokshin M. Health Equity and Financial Protection: Streamlined Analysis with ADePT Software. World Bank; 2011.

**Bilger M**, Schauer N, Flores G. 2005. Équité et santé (Equity and health). In: Collectif (Eds.), Éloge de l'altérité. Défis de société: 12 regards sur la santé, la famille et le travail (Eulogy of otherness, societal challenge: 12 different perspectives on health, family, and work). Éditions de l'Hèbe: Grolley; 2005.

Chaze J-P, **Bilger M**, Schlesser C. Les Générations Face au Marché du Travail - Evolution de la Vie Active de 1970 à 2000 (Generations Facing the Job Market - Evolution of the Employment Status from 1970 until 2000). Swiss Federal Statistical Office: Neuchâtel; 2005.

#### **Presentations at international conferences**

**Bilger M**, Kruger E, Finkelstein EA. Measuring socioeconomic inequality in obesity: Looking beyond the obesity threshold. <u>Inaugural Conference of the Singapore Health</u> Economics Association, Singapore; 2014.

**Bilger M**. Overview of the Swiss Health System. <u>Inaugural Conference of the Singapore</u> Health Economics Association, Singapore; 2014.

**Bilger M.** Social Insurance – European Perspective and Comparison between the Swiss, Singapore and US modelsm. <u>Global Health Leadership Forum (Asia)</u>, Singapore; 2014.

Finkelstein EA, **Bilger M**. Building a Business Case: Examples from Weight Loss Interventions. <u>SMDM Asia-Pacific Conference</u>, Singapore; 2014.

**Bilger M**, Flynn T, Farooqui MA, Malhotra C, Finkelstein EA. Cognitive Burden in Discrete Choice Experiments: The case of preferences for end-of-life in Singapore. <a href="https://github.com/9th/World">9th World</a> Congress on Health Economics, Sydney; 2013.

<sup>\*</sup> Indicates senior (corresponding) author.

- **Bilger M**, Flynn T, Farooqui MA, Malhotra C, Finkelstein EA. Cognitive Burden in Discrete Choice Experiments: The case of preferences for end-of-life in Singapore. <u>International Choice Modelling Conferene</u>, Sydney; 2013.
- Wagstaff A, **Bilger M**, Bredenkamp C, Leander B. Who benefits from government spending on health care? A comparative study covering five continents. <u>Second Global Symposium on Health Systems Research</u>, Beijing; 2012.
- **Bilger M**, Kruger E, Finkelstein EA. Relationship Between Income and Childhood Overweight: Looking Beyond Prevalence. <u>30th Annual Scientific Meeting of the Obesity Society</u>, San Antonio, Texas; 2012.
- **Bilger M**, Carrieri V. Health in the cities: When the neighborhood matters more than income. Royal Economic Society Annual Conference, London; 2011.
- **Bilger M**, Manning WG. Measuring overfitting in nonlinear models: whatever your mistake, better make it twice! 8th World Congress on Health Economics, Toronto; 2011.
- Cavagnero E, **Bilger M**. Financial protection during hardships. <u>8th World Congress on Health</u> Economics, Toronto; 2011.
- Cavagnero E, **Bilger M**. Financial protection during hardships. <u>3rd international conference</u> on health financing in developing and emerging countries, Clermont Ferrand; 2011.
- **Bilger M**, Chaze J-P. Explaining individual health expenditure in the presence of high deductible insurance: An extended Box-Cox indirect censoring model. <u>3rd Biennial</u> Conference of the American Society of Health Economists, Ithaca; 2010.
- **Bilger M**, Chaze J-P. Explaining individual health expenditure in the presence of health insurance: an extended Box-Cox indirect censoring model. <u>Swiss Society of Economics and Statistics Annual Meeting</u>, Geneva; 2009.
- Cavagnero E, **Bilger M**. Equity during an economic crisis: the Argentine health system financing. <u>International Health Economics Association 7th World Congress on Health Economics</u>, Beijing; 2009.
- **Bilger M**, Antille Gaillard G, Fluckiger Y. Financement du Système de Santé Suisse et Inégalité (Health system financing and equity in Switzerland). <u>8ème Conférence</u> Internationale sur la Science des Systèmes en Santé, Geneva; 2004.
- **Bilger M**, Antille Gaillard G, Fluckiger Y. Variation of Income Inequality Caused by the Health Care Finance: an Application to the Data from the Household Income and Expenditure Survey in Switzerland. <u>28th General Conference of the International Association for Research in Income and Wealth</u>, Cork; 2004.

#### **Other Presentations**

- **Bilger M.** Overview of social health insurance systems with Germany as an example. Briefing to the Medishield Life Review Committee, Singapore; 2014.
- **Bilger M**. Health Economics for Health Services Research. <u>SGH 20th Annual Scientific Meeting</u>, Singapore General Hospital; 2013.
- **Bilger M**, Manning WG. Mesuring overfitting in nonlinear models: A new method and an application to health expenditures. <u>Quantitative Medicine Forum</u>, Duke-NUS Graduate Medical School Singapore; 2013.

**Bilger M**, Kruger E, Finkelstein EA. The Swiss Health System: Combining Universal Coverage with Competition, Cost-Sharing and Managed Care. <u>Briefing to Health Minister Gan Kim Yong</u>, Ministry of Health of Singapore; 2013.

Wagstaff A, **Bilger M**, Bredenkamp C, Buisman L. Who benefits from government spending on health care? A comparative study covering five continents <u>Duke Global Health Seminar</u>, Durham; 2013.

Wagstaff A, **Bilger M**, Bredenkamp C, Buisman L. Who Benefits From Government Health Spending? A Comparative Study Covering Five Continent. <u>Duke-NUS Public Lecture</u>, Singapore; 2012.

**Bilger M**. Equity in the health system and social health insurance. Two very different perspectives on a common issue. <u>Duke-NUS Public Lecture</u>, Singapore; 2011.

**Bilger M**, Chaze J-P. Explaining individual health expenditure in the presence of high deductible insurance. An extended Box-Cox indirect censoring model. <u>University of Chicago Health Economics Workshop</u>, Chicago, USA; 2010.

**Bilger M**. Health Policy Evaluation: Towards a Best Practice. <u>Lee Kuan Yew School of Public Policy Seminar Series</u>, Singapore; 2010.

## **Scientific reports**

**Bilger M**, Chaze J-P. Financement du système de santé et inégalité en Suisse (system financing and inequality in Switzerland). University of Geneva; 2005.

Antille Gaillard G, **Bilger M**, Candolfi P, Chaze J-P, Fluckiger Y. Analyse des déterminants individuels et institutionnels du départ anticipé à la retraite (Analysis of the individual and institutional determinants of anticipated retirement). Federal Social Insurance Office: Bern; 2003.

**Bilger M**, El May H, Vassiliev A, Fluckiger Y. Simulations des effets de l'adoption d'un nouveau revenu déterminant le droit aux prestations sociales cantonales (Simulating the effect of a new income definition giving right to cantonal social benefits). University of Geneva; 2003.

**Bilger M**, El May H, Antille Gaillard G. Etude Descriptive du Profil des Contribuables Recevant des Aides de l'Etat de Genève (Descriptive study of the taxpayers receiving social benefits from the State of Geneva). University of Geneva; 2002.

**Bilger M**, Voinov M. Microstructure et soudabilité d'un acier inoxydable austénitique moulé, application aux fonds d'aimants dipolaires pour le LHC (Microstructure and weldability of cast austenitic stainless steel: application to the Large Hadron Collider's dipolar magnets). European Organization for Nuclear Research (CERN); 1998.

## Research grants

**Bilger M, (PI)**, Bahadin J, (Co-I), Finkelstein EA, (Co-I), Tan NC, (Co-I), Nadkarni N, (Co-I). Randomized Control Trial to Improve Hypertension Outcomes using Wireless Home Blood Pressure Monitoring with Automatic Outcome-based Feedback and Financial Incentives. Health Services Research Competitive Research Grant, Ministry of Health, Singapore. Amount: SGD 490,285; duration: 2 years. Awarded; 2014.

**Bilger M, (PI)**, Finkelstein EA, (Co-I), Mitesh S, (Co-I), Tan NC, (Co-I), Lamoureux E, (Co-I), Chaiyakunapruk N, (Co-I). A Randomized Controlled Trial to Improve Diabetes Outcomes through Financial Incentives. Amount: SGD 249,880; duration: 2 years. Awarded; 2013.

Finkelstein EA, (PI), Ho TH, (Co-I), Gneezy U, (Co-I), **Bilger M**, (Co-I). TAKing Steps for Incentives (TAKSI) - Testing the effects of Financial Incentives to Increase Step Activity among Singaporean Taxi Drivers aged 50+. Amount: SGD 125,000; duration: 2 years. Awarded; 2013.

**Bilger M** (**PI**), Wong T (Co-I), Lamoureux E (Co-I). A Randomized Controlled Trial to Increase Glaucoma Medication Adherence using Value Pricing. Health Services Research New Investigator Grant, <u>Ministry of Health, Singapore</u>. Amount: SGD 100,000; duration: 2 years. Awarded; 2013.

Finkelstein EA, (PI), **Bilger M, (Co-I)**, Malhotra C, (Co-I), de Lima Lopes G, (Co-I), Do YK, (Co-I). Use of Conjoint Analysis to Estimate Cost-Effective Strategies for Increasing Screening Rates for Breast and Cervical Cancer Screening Programs. Health Services Research Competitive Research Grant, <u>Ministry of Health, Singapore</u>. Amount: SGD 159,500; duration: 18 months. Awarded; 2012.

**Bilger M, (PI)**. Healthcare demand and equity: towards new analytical tools. Prospective Researchers Grant, <u>Swiss National Science Foundation</u>. Amount: CHF 40,000; duration: 1 year. Awarded; 2010.

## Course portfolio and mentoring

<u>Health Services and Systems Research</u> (GMS695), Course Coordinator and Lecturer, PhD Program in Integrated Biology and Medicine, Duke-NUS Graduate Medical School Singapore

<u>Health Economics and Financing</u> (CO5204), Course Coordinator and Lecturer, Master of Public Health, Saw Swee Hock School of Public Health, National University of Singapore

<u>Economic Methods in Health Technology Assessment</u>, Lecturer, Executive Education, Duke-NUS Graduate Medical School Singapore

<u>Thesis Mentor</u> (2 PhD students), PhD Program in Integrated Biology and Medicine, Duke-NUS Graduate Medical School Singapore

<u>Thesis Advisory Committee Member</u> (2 PhD students), PhD Program in Integrated Biology and Medicine, Duke-NUS Graduate Medical School Singapore

# Journal refereeing

BMC Health Services Research Health & Place Health Economics Health Economics, Policy and Law Journal of Health Economics Social Science & Medicine

# Languages

French:

mother tongue fluent, oral and written working knowledge English: German: