Simon Fraser University
Department of Economics
Short course in Health Economics
by
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The course will cover 4 selected selected topics in health economics. It will focus on the empirics but will covering methods, empirical applications/replication using micro data sets. Some of the applications will be replications and other will be new empirical prepared for this course.

In this course will also be using AI to text whether AI can help in replicating results from the papers covered in class. In doing so we will learn how prompt provide to the Chat GPT matters in the quality of the results we get when using AI.

Environment and Cognitive Abilities

- Almond, D., Edlund, L., & Palme, M. (2009). Chernobyl's subclinical legacy: prenatal exposure to radioactive fallout and school outcomes in Sweden. *The Quarterly journal of economics*, *124*(4), 1729-1772.

- Archsmith, J., Heyes, A., & Saberian, S. (2018). Air quality and error quantity: Pollution and performance in a high-skilled, quality-focused occupation. *Journal of the Association of Environmental and Resource Economists*, *5*(4), 827-863.

- Bedi, A. S., Nakaguma, M. Y., Restrepo, B. J., & Rieger, M. (2021). Particle pollution and cognition: Evidence from sensitive cognitive tests in Brazil. *Journal of the Association of Environmental and Resource Economists*, *8*(3), 443-474

- Bharadwaj, P., Gibson, M., Zivin, J. G., & Neilson, C. (2017). Gray matters: Fetal pollution exposure and human capital formation. *Journal of the Association of Environmental and Resource Economists*, *4*(2), 505-542.

- Carneiro, J., Cole, M. A., & Strobl, E. (2021). The effects of air pollution on students' cognitive performance: evidence from Brazilian university entrance tests. *Journal of the Association of Environmental and Resource Economists*, *8*(6), 1051-1077.

- Chang, T., Graff Zivin, J., Gross, T., & Neidell, M. (2016). Particulate pollution and the productivity of pear packers. *American Economic Journal: Economic Policy*, *8*(3), 141-169.

- Chen, X., Zhang, X., & Zhang, X. (2017). Smog in our brains: Gender differences in the impact of exposure to air pollution on cognitive performance.

- Sanders, N. J. (2012). What doesn't kill you makes you weaker: Prenatal pollution exposure and educational outcomes. *Journal of Human Resources*, *47*(3), 826-850.

- Sheldon, T. L., & Sankaran, C. (2017). The impact of Indonesian forest fires on Singaporean pollution and health. *American Economic Review*, *107*(5), 526-529.

Empirical Approach: Instrumental Variables
Empirical Application: Replication for Particle pollution and cognition: Evidence from sensitive cognitive tests in Brazil.

<u>Employment and Health</u>

- Jung, D., Tang, K.K. and Yazbeck, M., 2022. Poor Job Conditions Amplify Negative Mental Health Shocks. *Labour Economics*, *79*, p.102257.

- Ravesteijn, B., Kippersluis, H.V. and Doorslaer, E.V., 2018. The wear and tear on health: What is the role of occupation? *Health economics*, *27*(2), pp.e69-e86.

- Defebvre, É. (2018). Harder, better, faster… Yet stronger? Working conditions and self-declaration of chronic diseases. *Health economics*, *27*(3), e59-e76.

- Frijters, P., Johnston, D. W., & Shields, M. A. (2014). The effect of mental health on employment: evidence from Australian panel data. *Health economics*, *23*(9), 1058-1071.

- Moscone, F., Tosetti, E., & Vittadini, G. (2016). The impact of precarious employment on mental health: The case of Italy. *Social Science & Medicine*, *158*, 86-95.

- Bünnings, C., Kleibrink, J., & Weßling, J. (2017). Fear of unemployment and its effect on the mental health of spouses. *Health economics*, *26*(1), 104-117.

Empirical Approach: DID and Matching methods
Empirical Example: Replication

<u>Laws and Health</u>

- Abouk, R., & Adams, S. (2013). Texting bans and fatal accidents on roadways: do they work? Or do drivers just react to announcements of bans? *American Economic Journal: Applied Economics*, *5*(2), 179-199.

- Wright, Nicholas A., and Ernest Dorilas. "Do cellphone bans save lives? Evidence from handheld laws on traffic fatalities." *Journal of health economics* 85 (2022): 102659.

- Myers, C. and Ladd, D., 2020. Did parental involvement laws grow teeth? The effects of state restrictions on minors' access to abortion. *Journal of health economics*, *71*, p.102302.

- Paton, D., Bullivant, S. and Soto, J., 2020. The impact of sex education mandates on teenage pregnancy: International evidence. *Health economics*, *29*(7), pp.790-807.

- Clarke, D. and Mühlrad, H., 2021. Abortion laws and women's health. *Journal of Health Economics*, *76*, p.102413.

Empirical Approach: Causal identification framework, RCTs and Natural Experiments
Empirical Application: Replication for Texting bans and fatal accidents

Measures of health and Health inequality measurement

- Madden, D., 2010. Ordinal and cardinal measures of health inequality: an empirical comparison. Health Economics, 19(2), pp.243-250.

- Makdissi, P. and Yazbeck, M., 2014. Measuring socioeconomic health inequalities in presence of multiple categorical information. Journal of health economics, 34, pp.84-95.

- Makdissi, P and M. Yazbeck, 2016. Avoiding Blindness to Health Status in Health Achievement and Health Inequality Measurement, Social Science and Medicine Volume 171, 39-47.

- Makdissi, P., & Yazbeck, M. (2017). Robust rankings of socioeconomic health inequality using a categorical variable. Health economics, 26(9), 1132-1145.

- Van Doorslaer, E. and Koolman, X., 2004. Explaining the differences in income related health inequalities across European countries. Health economics, 13(7), pp.609-628.

- Van Doorslaer, E. and Jones, A.M., 2003. Inequalities in self-reported health: validation of a new approach to measurement. Journal of health economics, 22(1), pp.61-87.

- Wagstaff, A., Van Doorslaer, E. and Watanabe, N., 2003. On decomposing the causes of health sector inequalities with an application to malnutrition inequalities in Vietnam. Journal of Econometrics, 112(1), pp.207-223.

- Wagstaff, A., Paci, P. and Van Doorslaer, E., 1991. On the measurement of inequalities in health. Social science & medicine, 33(5), pp.545-557.

- Zhang, Q. and Wang, Y., 2004. Socioeconomic inequality of obesity in the United States: do gender, age, and ethnicity matter? Social science & medicine, 58(6), pp.1171-1180.

- Ziebarth, N., 2010. Measurement of health, health inequality, and reporting heterogeneity. Social Science & Medicine, 71(1), pp.116-124.

Empirical application: Using Egyptian data (R codes will be provided)