RURU (JUAN RU) HOONG

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EDUCATION

Harvard University — **Cambridge, MA**
PhD Candidate in Business Economics (joint with Harvard Business School) — *2020 – Present*
- Third year candidate with fields in labor, public and behavioral economics

Stanford University — **Stanford, CA**
B.A. Economics with Honours and Distinction [GPA: 4.05/4] [GRE: Q: 169, V: 167, W: 5.5] — *2015 –2019*
- Phi Beta Kappa (elected as a junior), Firestone Medal for "The Behavioral Economics of Social Media" (awarded to top 10% of theses university-wide)
- Study abroad: Stanford in Oxford (April – June 2017) and Stanford in Washington (April – June 2018)

St Joseph's Institution International — **Singapore, Singapore**
International Baccalaureate Diploma [45/45] — *2010 –2014*
- Awarded Principal's Award, Economics & Theory of Knowledge Award, SJII Scholarship, Cambridge Top in World for Intl Mathematics

PUBLISHED PAPERS

"Self Control and Smartphone Use: An Experimental Study of Soft Commitment Devices." — *Nov 2021*
European Economic Review, Vol 140

WORK EXPERIENCE

Harvard Department of Economics — **Cambridge, MA**
Teaching Fellow — *2022 – Present*

Harvard University — **Cambridge, MA**
Resident Tutor – Eliot House — *2022 – Present*

Boston Consulting Group — **London, United Kingdom**
Associate — *2019 –2020*
- Associate in London office, summer associate in Boston office June-August 2018

Stanford Institute for Economic Policy Research — **Stanford, CA**
Research Assistant — *2017 –2019*
- Assisted Professor Muriel Niederle, Professor Matthew Gentzkow, and Professor Paul Oyer in their respective research

World Bank — **Washington, DC**
Intern — *2018*
- Interned with the Mind, Behavior, & Development Unit (eMBeD): using behavioral sciences to fight global poverty and reduce inequality

Stanford Department of Economics — **Stanford, CA**
Teaching Assistant — *2017*
- Taught as a teaching assistant for Economic Analysis I (introductory microeconomics), under Professor Christopher Makler
- Led 3 section classes over two terms (~70 total students), covering consumer/firm behavior, role of markets, and optimization techniques

GIC (Government of Singapore Investment Corporation) — **Singapore, Singapore**
Fixed Income Department Summer Analyst — *2017*
- Conducted detailed analysis of Fed policies and developed a forward-looking indicator for forecasting China CPI
- GIC is Singapore's largest sovereign wealth fund, with well over US$100 billion in assets in over 40 countries worldwide

Ministry of Finance — **Singapore, Singapore**
Social Programmes Research Intern — *2015*
- Presented research on the financial sustainability of long-term care in Singapore to the Social Programs unit
- Attended conferences on behalf of the Ministry, to network with healthcare professionals and gain relevant policy insight

Ministry of Education — **Singapore, Singapore**
School Planning and Placement Division Intern — *2015*
- Researched and compiled best practices on student integration in local schools for the International Students Integration Section
- Organised a conference that brought teachers from around the country together for programming and networking

The world is rapidly changing, and mobility is on the decline: models that have worked before no longer generate the same opportunities. Investigating how new digital technologies exacerbate or alleviate these issues underlies much of my research, be it on the impacts of AI-adaptive-learning on educational outcomes, or the impact of privacy regulation on the market for data and how it can be a source of digital inequality.

My main research project concerns the impact of AI technologies on education. Developments in AI and digital personalised-instruction technologies hold promise in helping to increase access to quality learning, equalise the learning process, and reduce the costs of human capital acquisition. How can the educational experience generated by AI-assisted educational technologies help close the achievement gap? Through what channels do they help? Moreover, given that new data from any additional or existing student updates the prediction algorithm, additional information helps improve predictions for the students that come after. Since AI-adaptive technologies depend on training on test data, the order in which students and schools are recruited to participate in such technologies matters towards the efficacy and equitability of the product – for example, rolling out to highly-motivated students and teachers first as opposed to going in a random order might make a difference. When forming predictions for new students, it is possible that the model may be more well-tailored to students who are more similar to existing students in the platform. By collaborating with a large AI-adaptive learning edtech firm, I aim to (i) evaluate the impact of AI-adaptive-learning education technologies on student achievement outcomes, (ii) understand the channels through which adoption of such a technology affects outcomes, and (iii) measure the spillovers of – or in other words, the bias generated by – early adoption of the technology on that who adopt it after.

I have been interested in the Economics of Digitisation since my undergraduate years: my undergraduate thesis sought to understand addiction in the digital space. Existing economic literature has documented many mechanisms relating to self-control that lead people to make suboptimal choices, but behavioral economics research specifically on smartphone or social media use has been sparse. Under the guidance of Professor Matthew Gentzkow, I designed and implemented a randomised intervention, encouraging 600+ participants recruited over Facebook ads to adopt a voluntary soft commitment device (iOS “Screen Time” app limits) to limit their phone and social media usage. I found that individuals: (i) spend more time on phones than they expect and profess to desire; (ii) willingly set application limits in the absence of incentives; and (iii), significantly reduce use after adopting these limits, suggesting that they are significantly overusing smartphones due to their limited ability to exercise self-control. My paper won the Firestone Medal and was published in the European Economic Review. I've continued this work in grad school: arising from my thesis and work on digital addiction (Allcott, Gentzkow and Song, 2022) is the following puzzle -- if commitment is so widely available and social media users are so willing to take-up commitment when it is offered to them in experiments, then why is the natural use of commitment in the general marketplace so low? To answer this question, I sought a collaboration with a large social media platform and ran an experiment with them. We document the demand for, and effectiveness of soft commitment devices in a naturalistic setting amongst 13 million active users, orders of magnitude larger than any previous experiment on commitment. In contrast with previous findings, we find that 4.8% of users opt to set an alarm. We consider three main reasons for the low take-up rate: self-

control problems, sensitivity to the timing and nature of the ask, and low effectiveness of the offered commitment device.

I am also furthering my work on the digital space by exploring the main policy instrument over the market for digital data: privacy regulation. In joint work with Andrew Kao and David Yang, I've been working on a large-scale survey and experimental elicitation of privacy preferences and valuations of data privacy across the world. Through a series of surveys and experimental methods, we aim to empirically measure, describe, and understand citizens' preferences for privacy around the world, which could shape data-related regulations and the supply of data, a key input in the data-intensive economy. Preferences for privacy can differ depending on the structure of the political institutions that operate in different countries, as well as the perception people have of private firms as opposed to the government, and we aim to shed light on within and cross-country heterogeneity in preferences. In parallel, we are also in the process of coding up historical privacy regulations across the world and looking at the impact of their adoption on AI output. Some preliminary results show that some aspects of privacy regulations (e.g., extraterritoriality) do have a potentially large impact on AI innovation. I would love to be able to work on the next step of this as part of my academic research: how privacy regulation should be shaped. Should data privacy regulation treat different populations differently? Moreover, how does price discriminatory behavior on platforms change when stricter consumer data privacy regulations are adopted? These are all questions that I am incredibly interested in continuing to pursue: I am particularly interested in the market for data and how it can be a source of digital inequality. It would therefore be a joy and an honour to participate in the Tutorial on the Economics of Digitisation, not only to learn directly from the leading researchers in this space, but also to meet and develop relationships with other students and faculty interested in questions such as these.