Dear Katharine,

This is Zhe Yang from Statistics Canada. I am very interested in the conference that will take place in Cambridge on July 15 and 16 regarding the income and wealth topics and would like to write to you to express my great interest and hope to get the chance to attend.

I have a Ph.D. in Economics from Queen's University and have extensive knowledge of income distribution and social benefits. Now, I am working at Statistics Canada as an Economist, mainly on the income distribution, social inclusion and life satisfaction related projects. In the most recent completed project, we developed an income-based index of social mixing --- the neighbourhood-level income mixing index to capture social inclusion. We future extended the work by studying what causes the difference between the neighbourhood-level income mix and the income mix in the metropolitan area. We especially studied the effect of Commuting Costs on the Neighbourhood-level Income Mixing. Essentially, the commuting costs can affect the inhabitation choice. The high commuting costs can lead to relocation, while the low commuting costs and convenient transportation are always associated with higher housing prices. This dilemma leads to a trade-off between the commuting costs and the space costs in family location decisions, and thus, affects the income mixing in the neighbourhood. The project is to investigate the relationship between the commuting costs and the Neighbourhood-level Income Mixing.

Prior joining Statistics Canada, I worked at Employment and Social Development Canada (ESDC) as a researcher. I completed several analytical projects. One of the projects is evaluating the performance of a social benefit program for seniors --- Guaranteed Income Supplement (GIS) benefit. The analysis helps the program team to assess the performance of the benefit program and develop outreach strategies to help targeted seniors, especially those who are eligible but are not receiving GIS.

The Conference for Research in Income and Wealth covers a variety of interesting topics on income, wages, productivity developments and wealth distributions. I believe it would be most helpful and valuable for me to attend and benefit from the presentations scheduled during the conference. Your conference would provide me with a great opportunity to meet and discuss relevant research with other professionals in these fields. As a professional researcher with over 5 years working experience in the income and social benefit fields, I also believe that I can be a valuable addition to the conference and that it will benefit both myself and others.

Please kindly consider and grant my request to attend this conference.

Sincerely,

Zhe Yang

ZHE YANG

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HIGHLIGHTS:

- Rich experience with Statistics Canada's public and Micro datasets, such as, CANSIM, CENSUS, NHS, LAD, SLID, CIUS, PIAAC .
- Extensive experience with data collection, data cleaning, format transformation, and data merging and extracting.
- Excellent statistical analysis skills and good knowledge of quantities analysis. Extensive experience with Macroeconomic and Statistical modeling.
- Good Computer Skills: SAS, STATA, R, RStudio, Tableau, KNIME, SPSS, Matlab, Excel, Word, Access, PowerPoint, Ox.
- Experience with data linkage and dataset generation.
- Experience with survey design and weights design.
- Experience with database maintenance and updating.

EXPERIENCE:

Statistics Canada — Nov.2018–Present

- Data linkage:
  - Using PCCF data to create a unique linkage between postal codes and geographic areas.
  - Generated harmonized geographic files to convert geographic information from different years to unified economic regions in 2011.
  - Prepared data dictionary.
- Measuring Neighborhoods income mixture.
  - Estimate income mixing using alternative measures at the Census Metropolitan Area and Census Tract levels, including across and within multi-unit apartment buildings.
  - Estimate the association between Census Tract level income mixing and varous correlates, such as population density, population turnover and dwelling composition.
  - Create a map to show income mixing.

ESDC — May. 2017 –Nov. 2018

- The E-vulnerability Index
  - Using three datasets: Canadian Internet Use Survey, Programme for the international assessment of Adult Competencies and National Household Survey and applying Principal Component Analysis and Markov Chain Monte Carlo Bayesian Methods to generate internet vulnerability index (or E-vulnerability Index) for each individual.
  - Evaluated average EVI by different geographic levels and segments of population.
  - Prepared decks for DG committee, FTP DM table and Canadian Economics Association annual meeting.

- Presented at Canadian Economics Association annual meeting.
- Update EVI using Census 2016 data.

➢ Multi-Channel Survey Project:
- Understand demographic information of our clients and how they move between channels (online, phone call and in person) to get the information and services they need from Service Canada Centre.
- Proposed two survey design methods. In each method, suggested feasible ways to select interviewees, to determine the right number of interviewees in varies locations.
- Provided numerical examples, discussed survey design methods with our clients, and updated methods according to their suggestions.
- Discussed questionnaires and pilot survey responses and feedbacks with colleagues and clients.
- Updated design methods based on pilot survey results.
- Built research tables based on questionnaire questions and discuss research targets with clients.
- PISC submission has been approved.
- Prepared interviewer manual and training deck. The data collection was conducted on April, 2018.
- Designed sample weights and applied them to do cross-section analysis.
- Presented at Research Morning.

➢ Language of Service
- Measure the impact of services delivery in non-official languages on the performance of ESDC's major programs/benefits.
- Define the eligibility for each of ESDC program using data sets: LAD, IMDB and LISA.
- Assessment of potential demand for services in non-official languages

➢ LAD Project:
- Studied who was missing out on the Guaranteed Income Supplement.
- Using data sets --- LAD, IMDB and GIS cutoff to define GIS eligible of immigrants
- Discussed and explored with team members to find interesting results from the data set.
- Built cross-sectional tables to study the demographic profile and medium term trends of immigrants' GIS eligibility status.
- Built longitudinal Probit models to study how significant will demographic and economic factors impact on the probability of those being eligible for GIS but did not
- Prepared PowerPoints and memos, and presented our model results to clients.
- Collected all table and model results, reviewed relevant research papers and collaborated with team members to finish up a research paper.
- The paper has been submitted to PRCC, CEA and Société canadienne de science économique meetings.

Statistic Assistant
Queen's Research Data Centre Feb. 2015–May 2017
- Monitored computer lab, prevented any activities that may cause potential risks of data leakage.
- Prepared documents for new contracts and contract amendments and mailed them to

Statistic Canada, set up account and access card for new researchers, recorded dataset updating information, transferred contracts through internal system, kept working environment clean and neat.
- Built, maintained and updated administrative databases.
- Regularly check the security and backup systems, reported to IT department if a issue is detected.
- Provide assistance on the use of computer and statistical software.

Researcher
Queen's Research Data Centre Dec. 2014 - Present
- Micro dataset: Survey of Labour and Income Dynamics.
- Statistical software: SAS and STATA
- Model: A duration model applies to study the unemployment duration.
- Using advanced quantitative analysis to study how home ownership and mortgage status affect individuals' labour market behavior.

Research Assistant,
Queen's University Feb. 2010 – Dec.2014
- Collected data from CANSIM, Bank for International Settlements, Board of Governors of the Federal Reserve, Bureau of Labor Statistics.
- Cleaned and merged multiple large data sets using SAS.
- Performed statistical analysis using STATA and Matlab.
- Quantitative Analysis: calibrated and simulated the complex, nonlinear, financial and statistical models.
- Generated visually appealing reports to my supervisor and delivered presentations.

Economist (student position), Centre for the Study of Living Standards Feb. 2014 - April 2014
- Collected information for major forestry genomics projects funded by Genome Canada and National Resource Canada. And collected data from CANSIM.
- Built a model to assess the potential economic impact of forestry genomics in Canada.
- Discussed ideas with team members and shared works with other researchers working in the same field.
- Managed and organized a CSLS project. Wrote report for Genome Canada.

Teaching Assistant, Queen's University Sept. 2007- April 2012
Carleton University Sept. 2006 - April 2007
- Courses: Microeconomic Theory (MA), Economic Development, Introductory Statistics, Mathematical Methods of Economics, Environmental Economics.
- Developed and delivered presentation every week, evaluated students' performance in assignments and exams, held office hours.

Office Assistant (summer position), Hebei Branch, Bank of China May. 2007 - Aug 2007
- Ensured office equipment ran smoothly and properly.
- Create electronic file for client, enter, maintain and update client's information.
- Communicated with users through a variety of means — by phone; by email, fax, or regular mail; or in person.

EDUCATION

Ph.D. Economics 2019
Queen's University, Kingston, ON, Canada
Major Courses: Macroeconomics, Empirical Methods, Monetary Policy, Housing and Business Cycles.

M.A. Economics 2008
Queen's University, Kingston, ON, Canada
Major Courses: Financial Theory, Money and Financial Market, Macroeconomics, Empirical Microeconomics.
Thesis: "Distortionary Taxation in a Search Model of Money and Banking"

B.A. Economics 2007
Carleton University, Ottawa, ON, Canada
Major Courses: Macroeconomics, Microeconomics, Econometrics, Public Policy Toward Business, Statistical Methods in Economics and Business, Intermediate Accounting, Mathematics, Operations Research.

CERTIFICATION AND ACHIEVEMENT

- **Certification**: SAS Certified Advanced Programmer Credential for SAS 9, SAS Certified Base Programmer Credential for SAS 9
- **Achievement**: Senate Medal for Outstanding Academic Achievement, Dean’s honor list, Ontario Graduate Award, Queen's Graduate Award, QED Special Fellowship, Special Assistantship, Victor S. Castledine Scholarship, Barkway Memorial Scholarship, General In Course Scholarship

Letter of Support

Dear Katharine,

This is Li, Director of Social Analysis and Modeling, Statistics Canada. I am writing to nominate Zhe Yang for the CRIW 2019 Summer Institute Fellowship.

Zhe is a recently recruited researcher in my division, specializing in the research areas related to income distribution and social benefits. He has a solid understanding of Canadian socio-economic trends affecting income mix and wealth dynamics, and data possibilities. He is now working with colleagues to measure social and economic inclusion at neighbourhood level.

Zhe is very passionate about new research including new methods in the areas of income and wealth, big data, innovation, social benefit programs, and always looking to learn. The CRIW Summer Institute provides an excellent opportunity for him to expand and deepen his knowledge on the many topics covered in the Summer Institute meeting, as well as to bring in a Canadian perspective. I am sure he will benefit greatly from the participation in the meeting, while making valuable contribution to the Conference.

Sincerely,

Li

Li Xue, Ph.D.

Director, Social Analysis and Modelling Division, Analytical Studies, Methodology and Statistical Infrastructure

Statistics Canada / Government of Canada
li.xue@canada.ca