## Hideo AKABAYASHI's Seminar 赤林英夫 研究会

Economics of Education, Family, and Policy Evaluation using econometrics and experiments 計量分析と経済実験による 家族・教育・労働経済学

## Introduction

### Who am I?

### Work experiences other than Keio

- Ministry of Economy and International Trade (2 years as official)
- University of Miami (1 year as lecturer)
- World Bank (9 months as consultant economist)
- National Bureau of Economic Research (2 years as visiting scholar)
- National Graduate Institute for Policy Studies (2 years as visiting professor)
- Gaccom, Inc. (since 2010 as founder and CEO until June 2017)

### Education

- BA, MA (University of Tokyo)
- Ph.D. (University of Chicago)







Gaccom

Missior



## Fields of study

- We study
  - Applied microeconometrics, with special attention to topics in areas of education, family, and the policy evaluation using panel data.
  - Economic experiments on families and children.
- Why should economists care about education and family?

# Why should we study economics of family and education?

- <u>3 Key Challenges in Japanese Society</u>
- Increasing female labor force participation, Low fertility, Aging society
- Knowledge-based economy
- Globalization of labor force

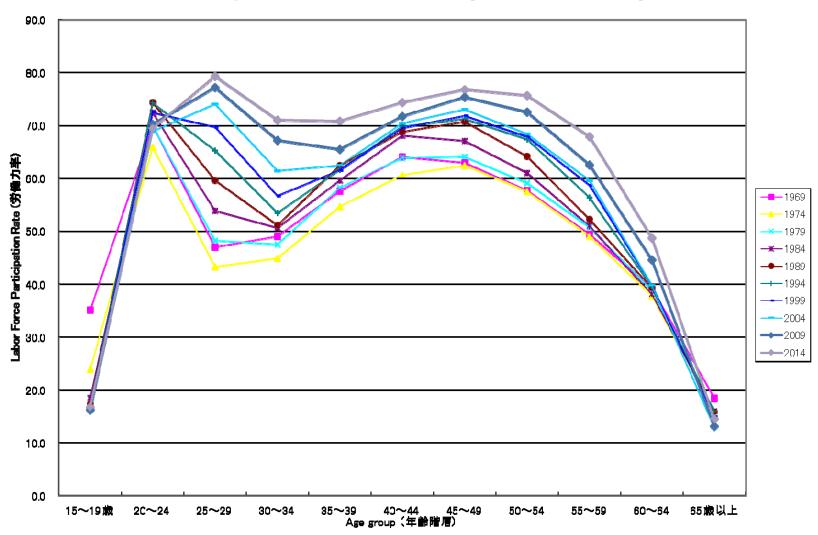
 $\Rightarrow$ 

- Increasing needs of child and family support
- Low marriage rate; late marriage
- Persistent inequality over generations, child poverty
- Restructuring public school education
- Economy depends on the quantity and quality of labor force
- What is social and economic mechanism that determines family behavior and education quality?
- How should we design policies regarding families and education?

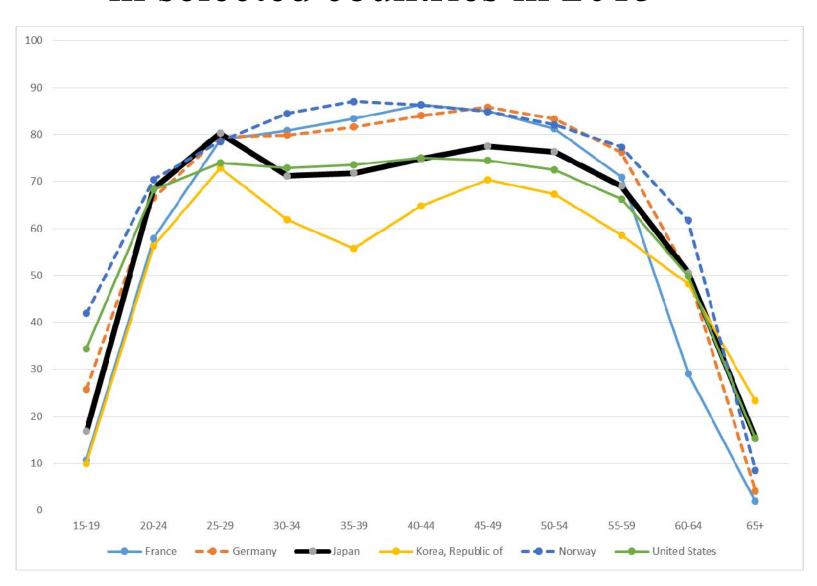
Economics is useful to think about these issues!

## Background

# Female labor market participation rate by age group in Japan



# Female labor market participation rate in selected countries in 2015

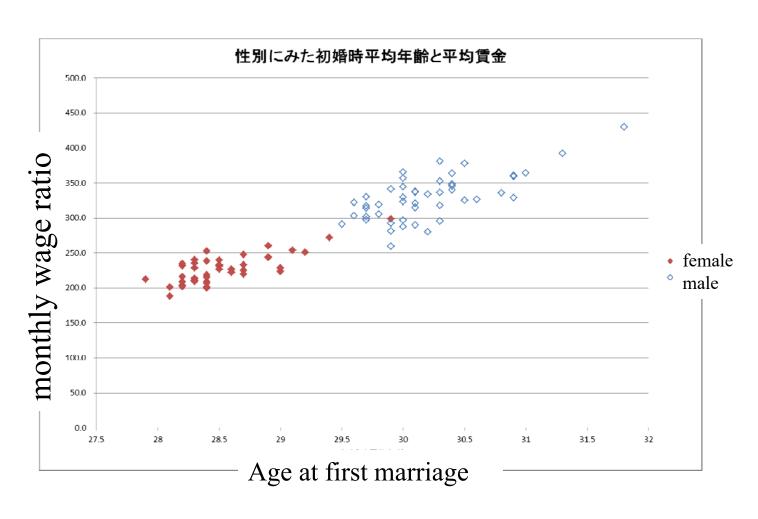


# Trend in the total fertility rate in selected countries

https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?end=2016&locations=JP-US-KR-FR-DE-NO&start=1988&view=chart



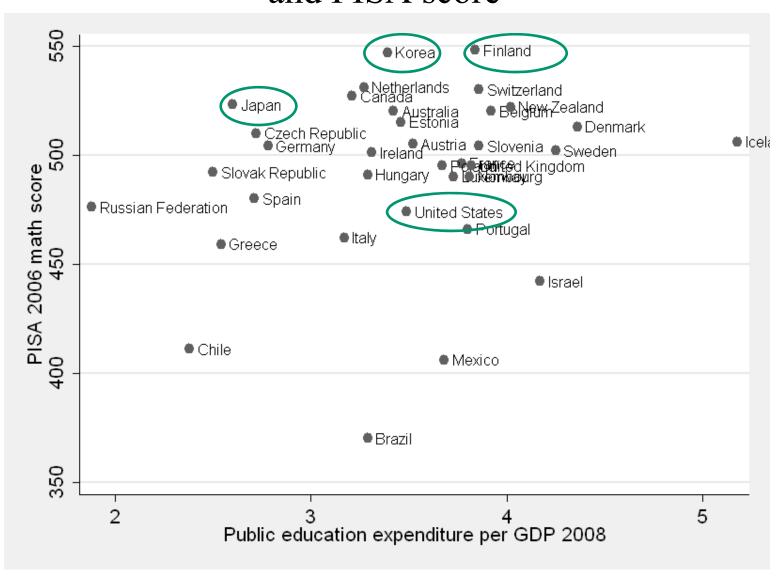
# Age at first marriage and monthly wage ratio by prefecture and sex (2010)



# PISA Math Score Ranking OECD

	PISA2000	Score	PISA2003	Score	PISA2006	Score	PISA2009	Score	PISA2012	Score	PISA2015	scor e
1	Japan	557	Hong Kong	550	Taiwan	549	Shanghai	600	Shanghai	613	Singapore	564
2	Korea	547	Finland	544	Finland	548	Singapore	562	Singapore	573	Hong Kong	548
3	New Zealand	537	Korea	542	Hong Kong	547	Hong Kong	555	Hong Kong	561	Macao	544
4	Finland	536	Netherlands	538	Korea	547	Korea	546	Taiwan	560	Taiwan	542
5	Australia	533	Liechtenstein	536	Netherlands	531	Taiwan	543	Korea	554	Japan	532
6	Canada	533	Japan	534	Switzerland	530	Finland	541	Macao	538	China	531
7	Switzerland	529	Canada	532	Canada	527	Liechtenstein	536	Japan	536	Korea	524
8	United Kingdom	529	Belgium	529	Macao	525	Switzerland	534	Liechtenstein	535	Switzerland	521
9	Belgium	520	Macao	527	Liechtenstein	525	Japan	529	Switzerland	531	Estonia	520
10	France	517	Switzerland	527	Japan	523	Canada	527	Netherlands	523	Canada	516
11	Austria	515	Australia	524	New Zealand	522	Netherlands	526	Estonia	521	Netherlands	512
12	Denmark	514	New Zealand	523	Belgium	520	Macao	525	Finland	519	Denmark	511
13	Iceland	514	Czech	516	Australia	520	New Zealand	519	Canada	518	Finland	511
14	Liechtenstein	514	Iceland	515	Estonia	515	Belgium	515	Poland	518	Slovenia	510
15	Sweden	510	Denmark	514	Denmark	513	Australia	514	Belgium	515	Belgium	507

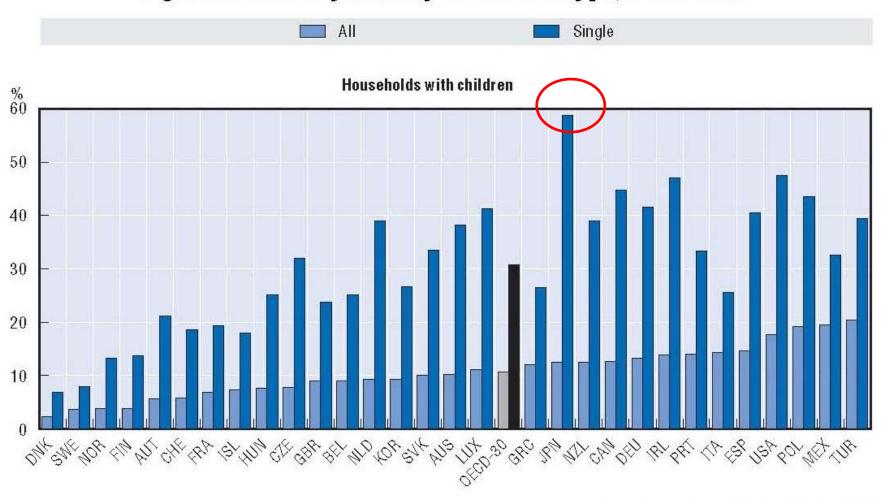
# Public expenditure to education per GDP and PISA score



### Poverty rate of single parents

("Growing unequal?" OECD 2008)

Figure 5.7. Poverty rates by household type, mid-2000s



## Summary: Social Situation for Future of Japan

- 1. Need to enhance the quality of future labor force through education.
- 2. Increasing threats to equal opportunity for next generation.
- 3. What is the bottle-neck for low income families to give children an equal chance for high-quality education?

## My Own Research

## Research in my lab

### Japan Child Panel Survey

- The only research oriented longitudinal survey of children and parents with both cognitive and non-cognitive outcome measures in Japan.
- Panel Data Research Center at Keio University

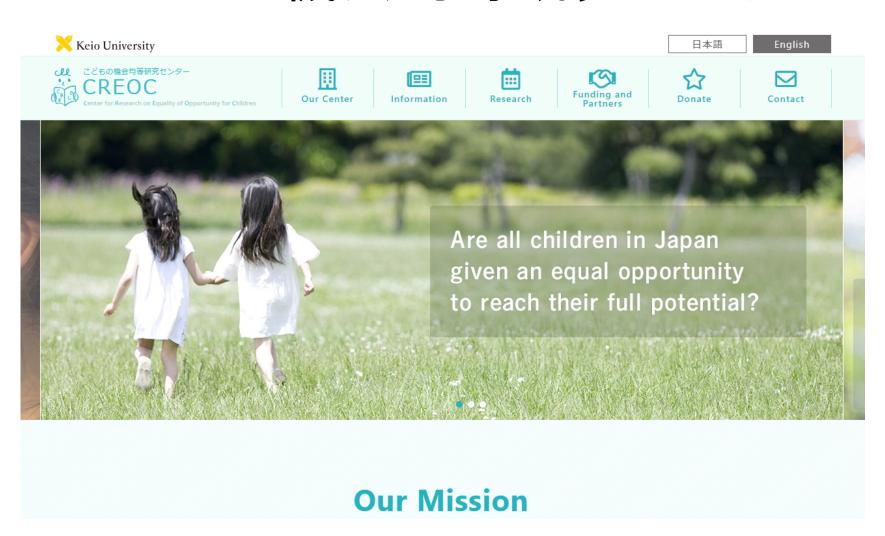
### • Education and Family Policy Evaluations

- Center for Research on Equality of Opportunity for Children.
- Evaluation of the effectiveness of policies at various level of education.

### • Economic experiments on the parents and children

- Investigation into fundamental mechanism of family education.
- Several places in Japan and one place in the U.S.
- Students can participate to support this research.

## Research Center at Keio 子どもの機会均等研究センター



# Japan Child Panel Survey

- 1. Education environment: commute time to school, number of students per class, examinations taken in all levels of schooling, extracurricular lessons and amount of time and money spent, preparatory education, etc.
- **2. Child-rearing:** methods of discipline, praise, frequency of eating out, etc.
- 3. Cognitive and Social development of children: using Math and Japanese tests, and the Strengths and Difficulties Questionnaire (SDQ) scale used by research institutions in over 50 countries.
- **4. Children's physical stature:** height, weight, etc., current and at birth

### **JCPS**

Home > Panel Data > List of data sets > JCPS

### Japan Child Panel Survey (JCSP)

### **Survey Objectives**

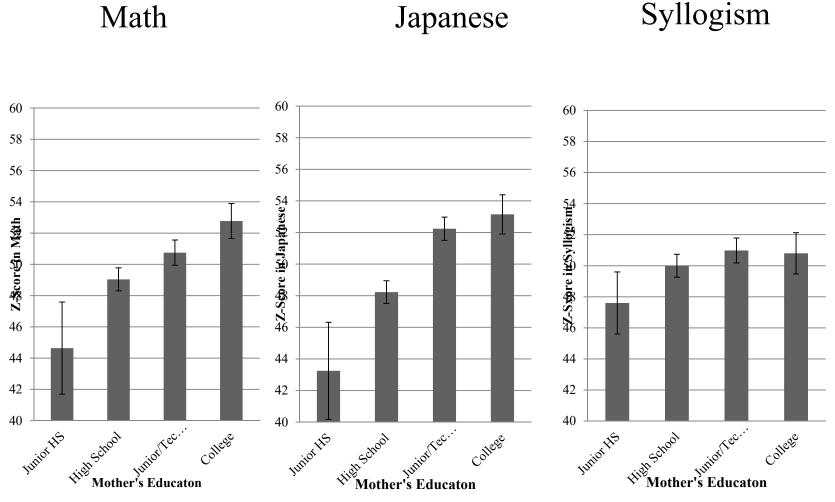
Japan Child Panel Survey (JCPS) aims to examine the association between changes in society and child rearing by conducting a survey on the conditions of child rearing at home and the children's learning. The social circumstances surrounding child rearing and education have changed dramatically in recent years. Acknowledging this, various surveys have been conducted on the relation between children's academic ability and living conditions. However, children change and grow even faster than





### Cognitive Test Scores by Mother's Education: Japan Child Panel Survey 2010

Akabayashi et al (2011)



Introduction
Institutional Background
Model, Identification, and Data
Results
Conclusions
References

# The Rate of Return to Early Childhood Education in Japan: Evidence from the Nationwide Expansion

Hideo Akabayashi<sup>1</sup> Ryuichi Tanaka<sup>2</sup>

<sup>1</sup>Faculty of Economics Keio University

<sup>2</sup>Institute of Social Science University of Tokyo

June 10, 2017 China Meeting of Econometric Society, Wuhan



## My opinion and comments in the recent news articles.



になったパブロ・アユマダさん

高等教育機関に対する支出の私費負担割合

ければ入学を想像することはなか、 たもり でんして、あの学校で学ばなければ、外交官になることはなかに、 まの制度がない。 そして、あの制度がない。 雑民の家庭に生まれ、低所 世帯用の住宅で育ったパブ ンスで外交官になれたの ンスで外交官になれたの なぜか。

「進学」の選択肢 消さぬために

200~400万円 400~600万円 600~800万円 800~1000万円

### 私見真見

処)として使われる。しかし、

OPINION

しその目的は曖昧で、何が達 早期に実現するという。 しか 政府は幼児教育の無償化を 政策が作られようとしていった大義名分だけが先行して 成できるのかもほとんど議論 「人への投資

は主に50年前の米国で、教育 長の違いを無視している。 長の違いを無視している。 ノーベル賞受賞者のヘックマ済成長への寄与が高いという ノ氏の研究がエビデンス(根 幼児教育「無償化」は意味がない

い。従って4~5歳の幼児教上昇させる余地がほとんどな上昇させる余地がほとんどな はまさに社会的課題なのだ。 米国は39%。幼児教育の普及 至っては日本の69%に対し、 に通っている比率は8%。 (OECD) 統計によると、

接のリターンはゼロに近く 者が進んで行ってきた私的支 育を無償化することは、保護 肩代わりによる社会への直

育と保育の充実である。ここ 5歳で幼稚園や保育所に通っ 5歳の子どもへの支

米国は先進国の中で就学前 律の無償化は必要ないだけで 差は広がる可能性が高い。 中高所得家庭の教育支出の格 き、習い事や塾に通わせるた高所得世帯にはゆとりがで そう考えると、日本では

る。そして危惧するのは4~ 大をもたらす可能性すらあなく、教育格差のさらなる拡 なってしまうことである。 の充実や、保育の質を向上さ所の定員拡大のための補助金

当欄は投稿や寄稿を通じて読者の参考になる意見を紹介します。〒100-8066東京都干 代田区大手町1-3-7日本経済新聞社東京本社「私見卓見」係またはkaisetsu@nex.ni kkei.comまで。原則1000字程度。住所、氏名、年齢、職業、電話番号を明記。添付ファ イルはご遠慮下さい。趣旨は変えずに手を加えることがあります。電子版にも掲載します。

慶応義塾大学教授(教育経済学)

「二葉むさしが丘学園」で児童の進路

### International Collaboration

The development of inequalities in child educational achievement: a six country study



### Economic and Social Research Council **Shaping Society**





News, events and publications News News items Researchers from UK funded for collaborative project

### News, events and publications News Events Publications Impact case studies

Evidence briefings

### Researchers from UK funded for collaborative projects across Europe and Japan

6 November 2018

£15 million has been awarded to 16 teams of researchers to allow academics in Europe and Japan to collaborate on a range of exciting projects that will push the boundaries of our understanding of individual and social behaviour with a view to influencing policymaking and practice.

The funding has come from the Open Research Area for the Social Sciences (ORA); a scheme collaboratively delivered by the national funding organisations of France, Germany and the Netherlands, as well the Economic and Social Research Council, representing the UK. ORA is a well-established scheme that aims to strengthen international cooperation in the social sciences by minimising bureaucratic obstacles and restrictions that are usually associated with international funding. The four ORA agencies were pleased to associate with the Japanese Society for the Promotion of Science, as in the previous round, which has enabled Japanese researchers to participate in complementary projects alongside ORA-funded proposals. Three projects involving Japanese collaborations will be funded.

## Organization of the Seminar

## **Expectations**

- We learn to combine <u>simple price theory and</u> <u>econometric and experimental methods to interpret the</u> real world.
- Students are expected to learn and use statistical methods to link theoretical predictions and empirical evidence on the effects of various policies.
- Students are exposed to economic theories, statistical methods, and experimental methods that are used globally in government, business, and academia.
- Students are also expected to obtain general <u>data</u> <u>literacy</u>, experiences of <u>presentation in English</u>, and the skills with which you can analyze the new issues using <u>quantitative methods based on economic way of thinking.</u>

## 純日本人学生へ

- 「英語だけのゼミですか?」
  - 正直、英語だけでは全くありません。ゼミ論文、卒論の発表は、現在はほとんど日本語です。
- 「英語に全く自信がありません。」
  - 現時点での英語能力は一切不問です。 入ってくるゼミ生の中には、最初は、ほとんどひと言も英語がしゃべれない人もいます。
  - とにかく「大学の間に自分を変えたい」「大学でしかできない 勉強・チャレンジをしたい」と思ってくれれば歓迎です。
- 「日吉で必修のミクロ・統計を落としています。」
  - 事前に相談してください。配慮する場合があります。

# Contents of the seminar (2018)



### <Spring Semester>

- 4th year: Graduation thesis preparation. Assisting 3rd year students
- 3rd year: Learning Stata using a video. Reading and discussing recent representative texts/books.
- This year (2018):
  - Miles Corak (ed), 2004. Generational Income Mobility. Russell Sage.
  - Lavecchia, Liu, Oreopoulos, 2016. Behavioral Economics of Education: Progress and Possibilities. In Handbook of Economics of Education.

### <Autumn Semester>

- 4th year: Presentations about graduation theses, 3rd year: Preparation of group research papers
- "Joint-seminar" with two seminars at Waseda University.

### < Requirement>

- PEARL students: "Economics of Family and Education" taught by the instructor in fall semester.
- Domestic students: 3年春学期労働経済論I(赤林)
- Other requirements (such as intermediate microeconomics and econometrics)
- Students are required to purchase the statistical software called Stata. There will be a short <u>study</u> <u>trip in September (participation is strongly recommended).</u>

## Intellectual Challenge at Our Seminar



# Strong connection with former seminar students



# **Current Participants of the Seminar**

- 4th year students: 8 (1 student studying abroad), 1 female.
- 3<sup>rd</sup> year students: 4 (1 Pearl student studying abroad), 3 female.
- Japanese and foreign graduate/research students regularly participate in the seminar.
- Discussion in English is often <u>assisted by foreign students who are fluent English speakers.</u>
  - 2019 (expected) JICA scholarship research student from Brazil.
  - 2018 MEXT scholarship graduate student from Czech.
  - 2017 MEXT scholarship research student from Czech.
  - 2016 Bocconi DD graduate student from Italy.
  - 2015 Master program student from China.
  - 2014 Doctor program student from El Salvador.

# The group project topic of 3<sup>rd</sup> year students

- 障害者雇用が企業経営と同僚労働者に与える金銭的・非金銭的影響:企業パネルデータとフィールド調査・インタビューに基づく実証研究
- Monetary and Non-Monetary Effects of Employment of Handicapped Workers on the Firm and Coworkers: An Empirical Study based on the Firm-level Panel Data, the Field Survey, and Interviews.

### Thesis titles last year

- 幼少時の子どもに対する親のしつけ方の決定要因: JCPSを用いた実証分析
  - The determinants of parental discipline for children: An empirical analysis using the Japan Child Panel Survey
- 私立中学は教育機会の不平等をもたらしているのか?都道府県学力データを用いた実証研究
  - Do private junior high schools increase the educational inequality? An empirical analysis using prefectural national test score data
- 女性の出産数の決定要因は何か?KHPSを用いた実証分析
  - What determines the number of births? An empirical analysis using Keio Household Panel Survey
- 東日本大震災が日本人のリスク回避行動に与えた影響:震災特別調査データを用いたミク ロ計量分析
  - The effect of The Great East Japan Earthquake on Japanese people's risk aversion: A microeconometric analysis using Disaster Special Data
- 家族構成が子供の進学・成長に与える影響:JCPSを用いた実証分析
  - The effect of family structure on children's study and development: An empirical analysis using Japan Child Panel Survey
- 学生の「送り出し」への投資が生むリスクとリターン:海外進学支援奨学金制度の費用便益 分析
  - Is Increasing Government Expenditure on Outbound Student Mobility Really Beneficial? Cost Benefit Analysis of Outbound Student Scholarship
- ・ 上司と部下の良好な関係は仕事満足度を上げるのか:ワーキングパーソン調査を用いた実証分析
  - Do employee's good relationship with their boss improve the job satisfaction in workplaces? An empirical analysis using Working Person Survey 2014

# 2018 Seminar Schedule Wednesday class 4-5.

2018Spring 2018Fall 2019Spring 2019Fall 2020Spring 2020Fall Domestic (D) students

3rd year

3rd year

4th year

Assignment
Read&Present
Group work
Thesis proposal
Thesis research

Semester	Class 1	Class 2		
Spring	Read&Present (E)	Read&Present/Research Proposal (E)		
Fall	Group work (J/E)	Thesis research (J/E)		
Spring	Read&Present (E)	Read&Present/Research Proposal (E)		

# 2018- Seminar Schedule Wednesday class 4-5.

Domestic (D	) stu Assignment	PEARL (P) students	Assignment
3rd year	Read&Present	2nd year	Preparation
3rd year	Group work	3rd year	Read&Present
4th year	Thesis proposal	3rd year	Group work
4th year	Thesis research	4th year	Thesis proposal&Research
		4th year	Thesis proposal&Research

Semester	Class 1	Class 2	
2018 Spring	Read&Present (D)	Read&Present/Thesis	
		Proposal (D)	
2018Fall	Group work (D)	Thesis research (D)	
20101 all	Group Work (D)	/Read&Present (P)	
2019 Spring	Group work (P)	Read&Present	
ZOTO Spring	Group work (F)	/Thesis Proposal (D)	
2019 Fall	Group work (D)	Thesis research (D/P)	Timing of thesis research
2019 Fall	Group work (D)	/Read&Present (P)	is flexible for PEARL
2020 Spring	Group work (P)	Read&Present/Thesis	students
2020 Spring	Group Work (P)	Proposal (D) /Thesis	students

# Screening Process of domestic and PEARL students

### **Basics**

- Selections will be conducted only in the first round.
- We expect to select about 10 students.
- Domestic Type A/B students and PEARL students will be selected together.
- PEARL students quota is between 3-5 (if PEARL applicants are at sufficient level in both numbers and qualification.) Apply in a group!

### **Process**

- Applicants will be required to submit a short report to the instructor before the day for selections.
  - Language used for the report should be either in Japanese or in English.
  - The topics for the report will be announced on the seminar's Facebook Page around Jan 20, 2019.

### Evaluation

• On the basis of their application documents, their reports, their academic records at Keio, and interviews conducted in English (PEARL) or in Japanese (Domestic) by the instructor.

### Selection of domestic students

- 募集人数 10人。B募集はA募集で不足がある場合のみ若干名。
- 選考内容 事前レポート提出・教員面接・日吉の成績表の組み合わせ。
- 選考基準 1-2年で勉強している証拠があること、自分で問題を考え、明快に説明する努力を惜しまないこと。やる気と行動力。
- 経済学部以外は別枠、別の観点から許可。4年生も別枠。希望者は 連絡。
- 英語力は入ゼミ時には不問だが、強烈な向上心は必要。

2018/12/17

### For PEARL students

- Group work and thesis research may be presented using both English and Japanese.
- PEARL students who are accepted to this seminar are <u>required to study the</u> <u>prerequisite materials related to statistics software and background knowledge</u> <u>related to the seminar during the 2nd year spring semester.</u> If time permits, attending to the seminar during the spring seminar is encouraged.
- Since the timings of the job search period or studying abroad cannot be known and can vary among PEARL students, the timing of working on thesis research can be made flexible on person by person basis.
- D(omestic) students mentors are assigned to P students, and vice versa.
- Reading material for 3rd year P students may be the same as the materials for 3rd year D students in order to make the discussion fruitful.
- Ideally we would like to accept certain number of P students in order to make their group work productive.
- In the application interview, we ask P student applicants about the plan of the participation in the seminar. We do our best to fit the student's preferred plan to our seminar schedule.
- It is <u>strongly recommended</u> that you contact the instructor before making an application for this seminar in order to find out whether this seminar meets your expectations.

# Contacts and Further Information

- Watch our <u>FACEBOOK</u> Page for further information on the activities and application procedure of our seminar class.
- Sign up for MAILLIST for further information TODAY.
- Please visit our seminar ANYTIME!

### Email address:

- Instructor
  - hakab@econ.keio.ac.jp
- Ms. Yasuko Kuwahara (Student representative for recruiting new seminar participants.)
  - yasuko kuwahara@keio.jp

## Facebook Page of the seminar

Topics are posted in both Japanese and English now.



http://www.facebook.com/hideo.akabayashi.seminar.keio

Q&A