

# **Impact of the Work-Style Reform on Overtime Hours and Self-Training Time: Evidence Using Japanese Time Use Data**

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# 1. Motivation

- **Very preliminary, comments appreciated**
- **Our paper focuses on the time-use of**  
**“Learning, self-education and training”**

## **This activity . . .**

- can be categorized as leisure (tertiary activities)
- however, it can be also considered as an investment for future production
- different from other leisure activities such as watching TV, chatting with friends, etc.
- thus, can also be categorized as (quasi-) work (secondary activities)

## ➤ Two research questions

**(1) how much time have Japanese spent for learning, self-education and training over the last four decades?**

- by using information obtained from the **two questionnaires** incorporated in the Japanese time-use survey, we observe trend of time use for learning, self-education and training.
  - ➡ 1) using time-diary data surveyed during a certain period of a year (October)
  - ➡ 2) participation rate in those activities in the past one year

➤ **Two research questions (cont.)**

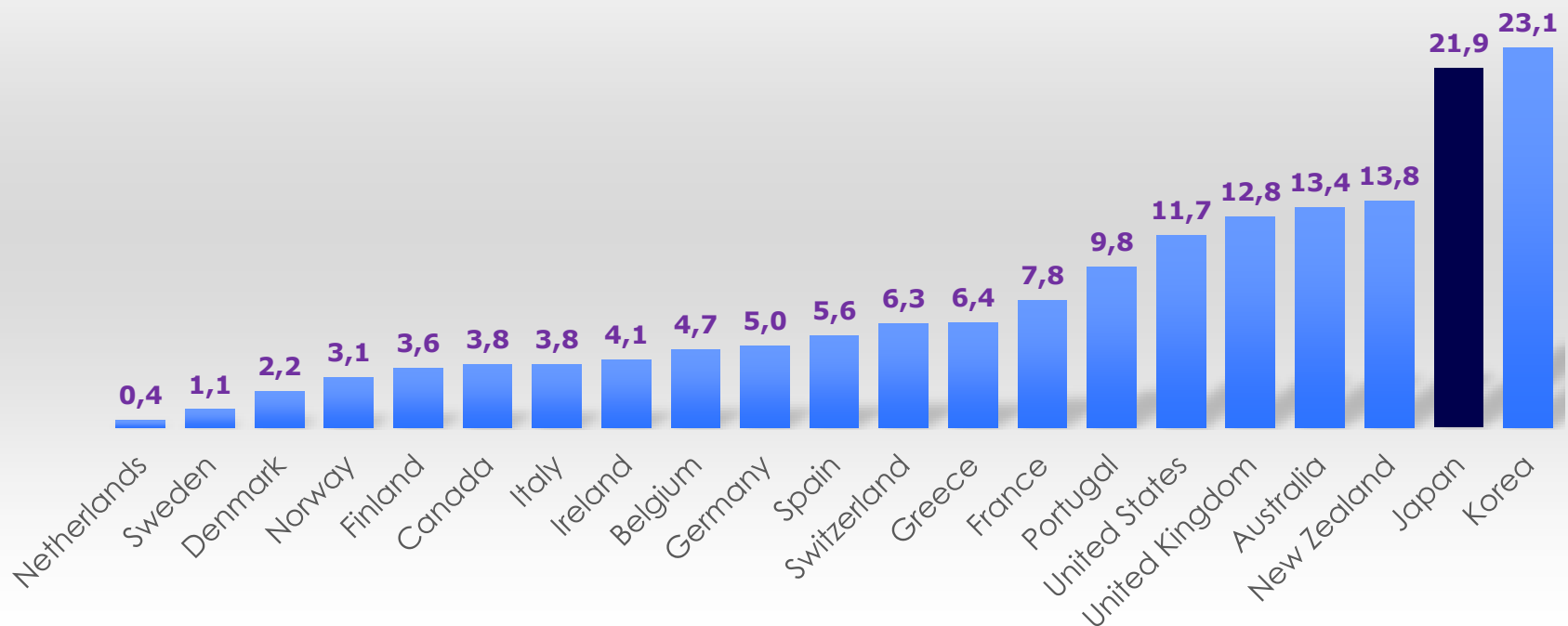
**(2) relates to the recent “work-style reform” introduced by Japanese government since 2016**

**Before that, should explain the typical practices taken in the past:**

- Many Japanese firms have provided on-the-job training (OJT) to incumbent workers to accumulate skills necessary for production.
- As a consequence, time spend in office (i.e., working hours) tended to be long.
- spending long hours in office had been largely taken for granted since people believe that at least a part of the time is also a time for learning and training

- **International Comparison:**  
**Japanese workers work relatively long hours**

Percentage of employees working more than 50 hours a week for selected countries  
(From OECD Better Life Index)



## ➤ **Two research questions (cont.)**

- however, recently Japanese government started to promote "**Work Style Reform**" which encourages both workers and firms to alter the bad habit of workaholism and shorten long working hours
- during the last two years since 2016, many firms started to prohibit workers to work overtime and encourages workers to go home earlier

## **(2) do people spent time on learning, self-education and training when there is a **windfall** of time? (cont.)**

- ☞ Using original longitudinal data, we see whether any effect on time-use on learning activities can be observed due to the recent "Work-Style Reform".

## **2. Analysis (1)**

**How much time have Japanese spent for learning, self-education and training over the last four decades?**



## ➤ **Survey on Time Use and Leisure Activities (STULA) --- Japanese Time-use Survey**

- The survey has been conducted every five years since 1976, and the 2016 survey is the 9<sup>th</sup> survey.
- Pre-coded survey.
- Survey for two straight days within the nine-day period during October.
- about 200,000-400,000 household members of 10 years old and over are surveyed.

Use two types of questionnaires in STULA.

- 1) using time-diary data during the surveyed period (October)
- 2) Participation rate in those activities in the past one year

# Time-diary from STULA: 20 precoded activities

Kind of activities	Time (hours)												6 o'clock				
	0 o'clock	30	1	30	2	30	3	30	4	30	5	30					
1 Sleep																	1
2 Personal care																	2
3 Meals																	3
4 Commuting to and from school or work																	4
5 Work																	5
6 Schoolwork																	6
7 Housework																	7
8 Caring or nursing																	8
9 Child care																	9
10 Shopping																	10
11 Moving (excluding commuting)																	11
12 Watching TV, listening to the radio, reading newspapers or magazines																	12
13 Rest and relaxation																	13
14 Learning, self-education, and training (except for school work)																	14
15 Hobbies and amusements																	15
16 Sports																	16
17 Volunteer and social activities																	17
18 Social life																	18
19 Medical examination or treatment																	19
20 Other activities																	20

Time spent for learning, self-education and training (excludes school education of students)

## Percentage of people who did/ did not spent time for learning, self-education and training (samples are limited to full-time workers) during the survey period

	1976	1981	1986	1991	1996	2001	2006	2011	2016
<b>Male</b>									
none at all	90.7	92.6	93.3	94.0	95.3	94.4	95.1	95.3	95.4
less than an hour	1.3	0.7	1.3	1.2	1.1	1.4	1.2	1.3	1.2
more than an hour	8.0	6.6	5.4	4.8	3.6	4.3	3.7	3.5	3.5
<b>Female</b>									
none at all	93.2	94.5	94.4	94.0	95.2	93.9	94.3	94.8	95.7
less than an hour	1.1	0.8	1.2	1.4	1.2	1.6	1.6	1.3	1.0
more than an hour	5.7	4.7	4.4	4.6	3.6	4.5	4.1	3.9	3.3

➔ Percentage of workers who did not spent time on learning activity has been increasing over the last four decades.

# Another questionnaire in STULA

19 Learning, self-education, and training	(1) How many days over the year did you pursue your learning, self-education, and training? (Please choose one from the nine categories shown in the box below)	(2) For what purpose did you pursue your learning, self-education, and training? (Please fill in the circles all applicable answers)				(3) Through which means did you pursue your learning, self-education, and training? (Please fill in the circle all applicable answers)								
<ul style="list-style-type: none"> <li>Please indicate the item you aimed to enhance your Knowledge or level of culture, or to use for your current work (including acquisition of know-how or qualifications) by pursuing the following activities, excluding those activities at work or school.</li> <li>Excludes those activities directly related to regular courses in school, or employee training courses.</li> <li>Includes club activities within or outside school.</li> </ul>	<p>0: None at all                      1: 1 to 4 days                      2: 5 to 9 days                      3: 10 to 19 days (1 day a month)                      4: 20 to 39 days (2 or 3 days a month)                      5: 40 to 99 days (1 day a week)                      6: 100 to 199 days (2 to 3 day a week)                      7: 200 days or more (4 days or more a week)                      8: Do not know how many days</p>	Self improvement	To gain employment	To use for current work	Other	Classes, Courses or workshop, etc.	Lecture meetings, etc.	Correspondence course	Television or radio	Outside or working hours at workplace	Miscellaneous schools or vocational schools	"Hello Work" (public employment office), etc.	Vocational training through	Other
English language Other foreign language Computing etc. Commerce or business Caring Home economics or housework (cooking, sewing, or home management, etc.) Humanities, social or natural science (history economics, mathematics, or biology, etc.) Art and culture Other Please indicate either Yes or No	<p>Yes No</p>													

Please fill out (2) and subsequent questions if you answered 1 or more days.

Whether participated in learning activities, over last year, if so, what kind of activity and by what means?

## Participation rate by type of learning activities over the past year (samples are limited to full-time workers)

	English language	Other foreign language	Computing etc.	Commerce or Business	Caring	Cooking, sewing, home management	Humanities, Social, and Natural Science	Art and Culture	Other
2001	8.9	2.4	22.8	13.6	3.3	5.8	8.5	7.9	7.7
2006	9.1	3.2	16.9	14.2	3.6	6.1	8.6	9.7	8.1
2011	8.9	3.1	14.0	10.1	3.3	5.1	5.7	6.5	6.4
2016	10.6	2.7	13.3	7.1	3.1	8.9	8.2	10.2	8.7
01→16	1.73	0.29	-9.55	-6.50	-0.20	3.04	-0.35	2.29	0.94

➔ Participation rate of those directly related to business use (such as commerce or business) has dropped tremendously.

## Through which means did the respondents pursued in Learning, self-education and training activities on “commerce or business” ?

		2006	2011	2016	06→16
Classes, courses or workshop	municipalities	2.1	2.0	1.8	-0.29
	private institutions	14.4	14.1	14.7	0.28
	University, etc.	1.4	1.9	3.4	1.95
Lectures		13.3	10.8	10.0	-3.29
Correspondence course		12.1	16.1	7.4	-4.69
TV or Radio		8.5	2.8	4.1	-4.38
Outside working hours at office		29.0	30.4	19.0	-10.02
Vocational schools		2.7	4.3	3.4	0.73
Vocational training by “hellowork”		3.4	1.4	1.0	-2.41
Other		45.8	40.6	46.4	0.59

➔ Percentage of workers who spent time on learning at office before or after work has decreased considerably. Means have also changed.

### **3. Analysis (2)**

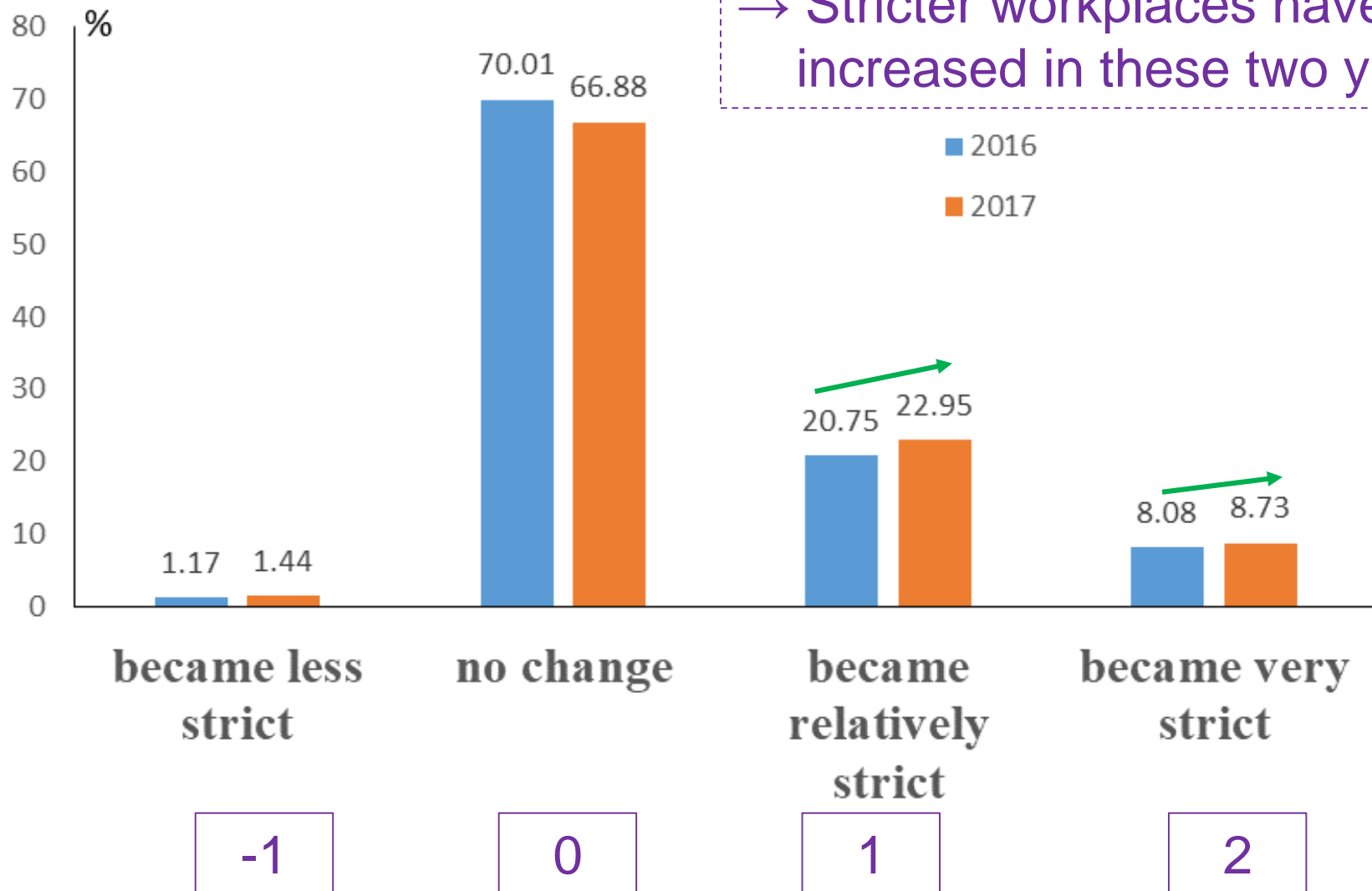
**Do people spent time on learning, self-education and training when there is a windfall of time?**

## ● Data

- **Original survey conducted both toward firms and employees (6-year panel survey: 2012-2018)**
- Research Institute of Economy, Trade and Industry (RIETI; government think-tank under METI)
- Employee survey
  - six-year panel (no attrition biases): use 5<sup>th</sup> and 6<sup>th</sup> wave
  - samples: 2,220 full-time white-color employees in total
- Two sets of information
  - Information of **the amount of time spent on self-training** (learning, self-education and training) over the last year
    - A discrete variable :1 (zero hour) to 10 (more than 200 hours)
  - Information on **“work-style reform” taken at workplace**
    - A discrete variable based on the answer to the question: “do working overtime become stricter at workplace”



# Category and distribution of the answer to the question “Do working overtime become stricter than before at your workplace?”



# Estimation results: association of self-training and strictness of overwork

Fixed effect ordered logit model (BUC estimator)

VARIABLES	(1)	(2)	(3)	(4)	(5) under 40	(6) over 40
strictness of overtime work	0.2802* (0.1644)	0.3102* (0.1738)	0.3104* (0.1745)	0.4029** (0.1743)	-0.1369 (0.3148)	0.6159*** (0.2110)
exempted dummy	0.2383 (0.1647)	0.1975 (0.1662)	0.1840 (0.1651)	0.2057 (0.1713)	0.0461 (0.2684)	0.3347 (0.2076)
tenure	0.0001 (0.0159)	-0.0063 (0.0175)	-0.0067 (0.0179)	-0.0016 (0.0175)	0.0883 (0.0600)	0.0010 (0.0184)
wage rate	-0.2211 (1.8670)	-0.3115 (1.8944)	-0.0129 (1.9644)	0.0388 (1.9530)	4.1422 (5.7883)	-1.8685 (2.2877)
spouse dummy	-0.0721 (0.4949)	0.1969 (0.5482)	0.1920 (0.5271)	0.4715 (0.7319)	0.1706 (1.0636)	1.0899 (1.0144)
year dummy	-0.3844*** (0.1253)	-0.4079*** (0.1299)	-0.4039*** (0.1313)	-0.4028** (0.1847)	-0.4632 (0.4289)	-0.4462** (0.2235)
occupation dummies	yes	yes	yes	yes	yes	yes
scores of tasks	no	yes	yes	yes	no	no
IT skills	no	no	yes	yes	no	no
changes occurred during previous year (job and private event)	no	no	no	yes	yes	yes
Observations	2220	2052	2030	2030	530	1420

→ Workers spent at least some amount of windfall time to self-training. However, it is only for workers above 40.

## 4. Summary

## ➤ **Main findings:**

(Time-use survey)

- Observed a declining trend of time-use in learning, self-education and training.

(Original panel survey)

- Workers spent at least some amount of windfall time to self-training.
- However, such observation was only confirmed for workers above 40 years old.

## ➤ **What remains for the future:**

- Need to identify the driving factors that decrease people's use of time for learning and training.
- Need to investigate what kind of activities does young workers use for the windfall time.

**Thank you!**