



# Computation of standard errors - Japan case -

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# Japan Data – What survey do we use?



## MHLW "Comprehensive Survey of Living Conditions" (CSLC)

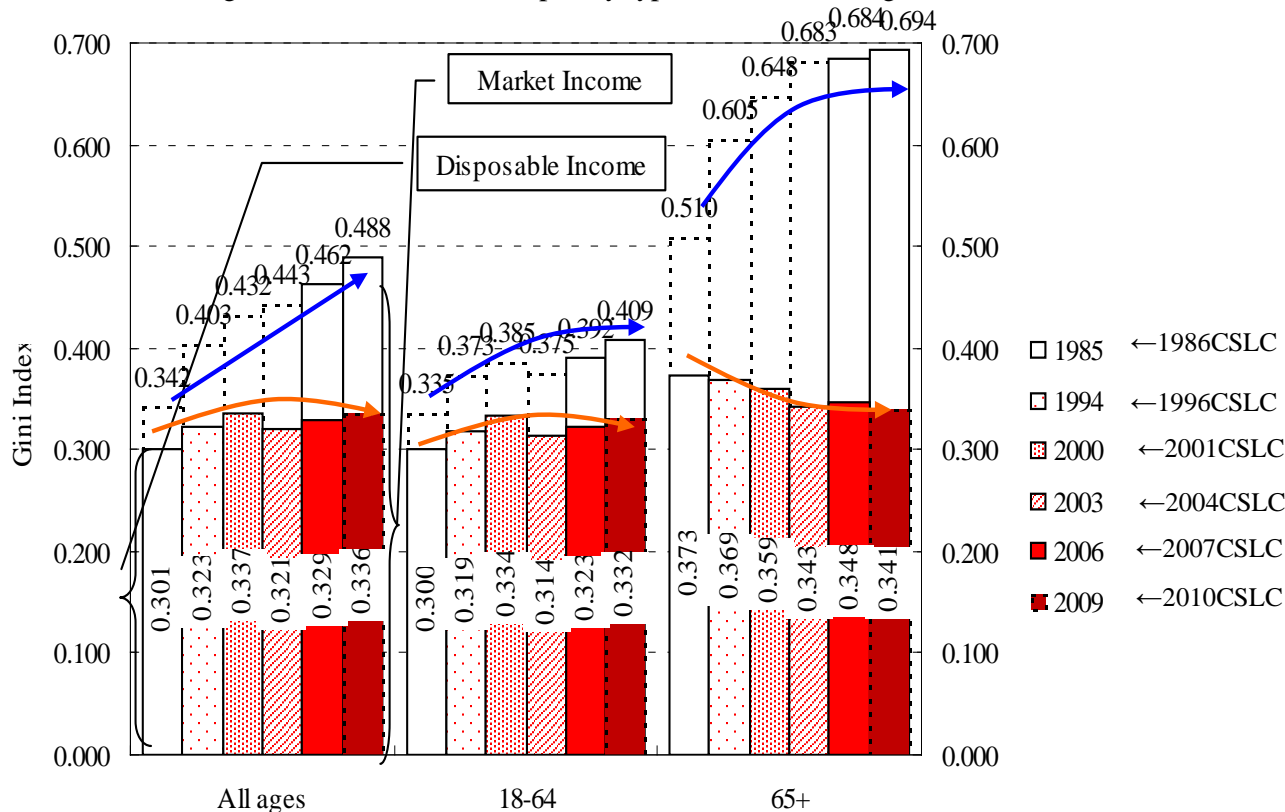
		Comprehensive Survey of Living Conditions (CSLS)	(Reference ) National Survey of Family Income and Expenditure (NSFIE)
Basic Information	Ministry	Ministry of Health, Labour and Welfare	Statistics Bureau (Ministry of Home Affairs)
	Frequency	Every Year (Large Sample Survey:Every Three Years)	Five Years
	Survey Design	Sample Survey	Sample Survey
	Object of the Survey (Exclude from Survey Object)	Private Households	Two or More Persons Households and some Single Households a. Students living alone b. Households which manage restaurants, hotels, using their dwellings c Foreigner households etc.
	Sample Size	About 36000 Households(Income Questionnaire)	About 60000 Households
Survey Item (Income)	Type of Market Income	Employment income, Business income, Agriculture income, Housing Rent, Interest, Private Pension and other private transfer	Employment income, Business income, Agriculture income, Housing Rent, Interest, Private Pension and other transfer
	Social Transfer	Public Pension, Other Social Transfer	Public Pension
	Tax and Premium	Income tax, Residence tax, Property tax, Social Insurance Premium	(NOT in Survey)
	Occasional Income	Include Income	Not Include Income

# Trend of Gini Coefficient in Japan (CSLC)



- Gini coefficient in Japan was 0.336 in 2009 (based on 2010 CSLs) with stable trend since 2000.
- Gini coefficient of the elderly in Japan is higher than that of all ages and 18-64 years old. It also has stable trend since 2003.

Figure Gini Coefficient in Japan by type of income and age



Gini coefficient of the equivalent income based on CSLs. In this investigation, the income one year at the time of the investigation ago is asked. That is, the income is an income one year ago at the time of the investigation.

Market income: Sum of income from working, property and private transfer

Disposable income: Sum of market income, social transfer minus direct tax and social security premium

Source: The tabulation of the micro-data of "Comprehensive Survey of Living Condition of the People on Health and Welfare (income questionnaires)" by authors under the permission of the Statistical Law.



# Computation of Standard Error

To Compute 95% Confident Interval of Gini Coefficient in Japan

(What indicator?)

Gini Coefficient

Disposable Income (OECD has asked)

Market Income

For All ages, Working age and Retirement age

(Data)

MHLW “Comprehensive Survey of Living Conditions”(CSLC)

2010 survey

(Method)

Bootstrap model

Most simple use of Stata command “ineqerr” with rep(500)

(Sampling structure of CSLC is too complex)

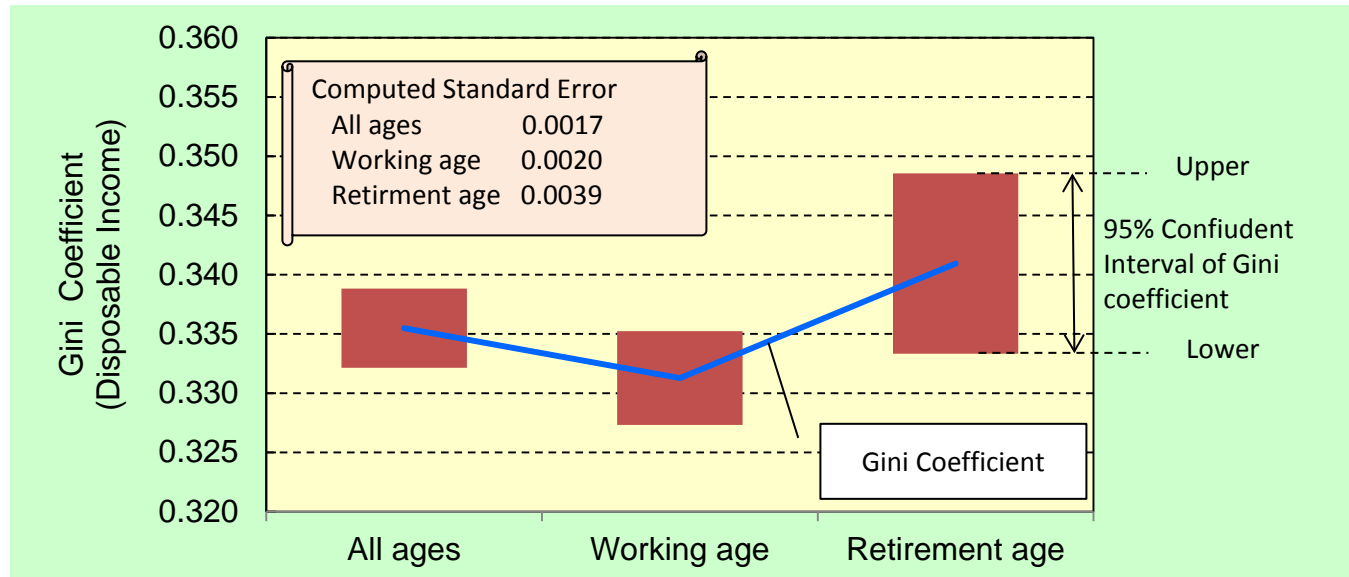
(What can we find?)

1. What extent can we have confidence on Gini coefficient?
2. Are there any income redistribution effects?



# 95% Interval and Standard Error (Japan)

CSLC 2010 Survey (2009 Income)



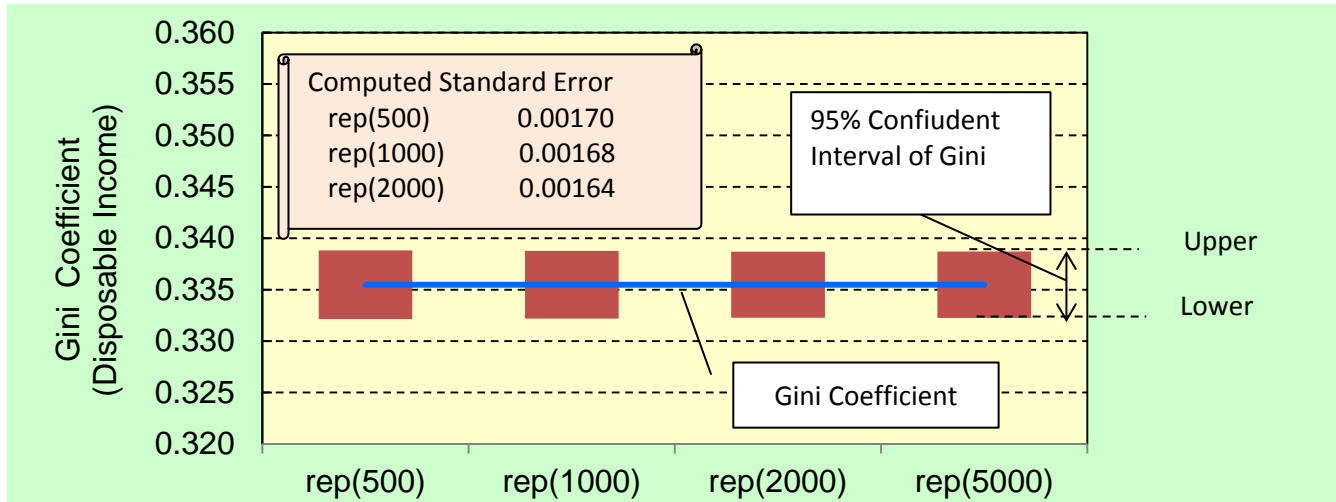
Market and Disposable Income

	Gini(Market Income)			Gini(Disposable Income)		
	Lower	Upper	Standard Error	Lower	Upper	Standard Error
All ages	0.484	0.492	0.0022	0.332	0.339	0.0017
Working age	0.403	0.413	0.0025	0.327	0.335	0.0020
Retirement age	0.685	0.703	0.0044	0.333	0.349	0.0039



# 95% Interval and Standard Error (Japan)

By number of rep( ) (CSLC 2010 Survey, Disposable Income)



With taking consideration of sampling structure (prefecture, trial)

