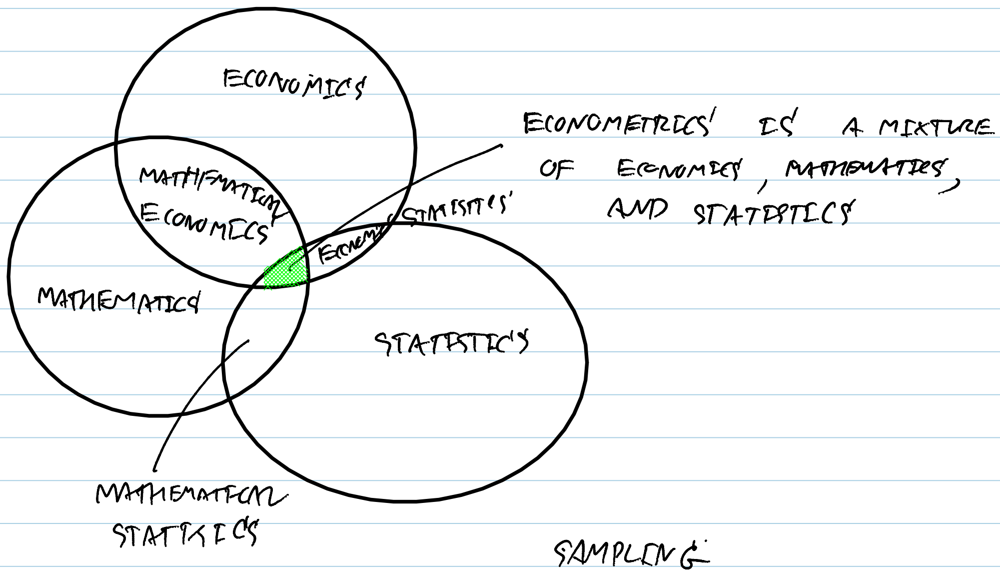
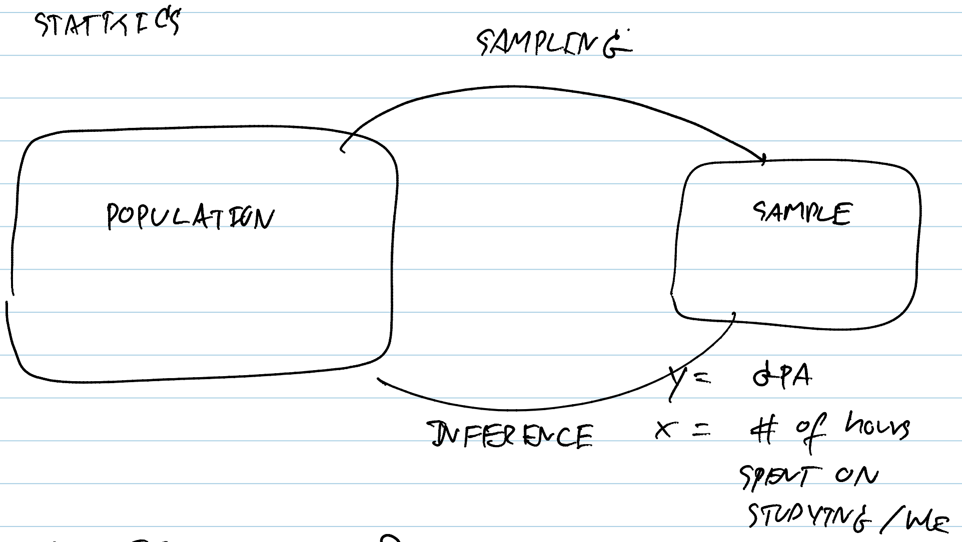
08 January 2013
10:00

WEEK 1 : INTRODUCTION





- WHAT IS ECONOMETRICS ?

→ COMBINATION OF STATISTICAL METHODS, ECONOMICS AND DATA TO ANSWER QUESTIONS IN ECONOMICS

EX:
- WHAT IS THE PRICE ELASTICITY OF CIGARETTES ?
- WHAT IS THE EFFECT ON EARNING OF A YEAR OF EDUCATION ?
- WHAT IS THE EFFECT ON REVENUES OF P&G INVEST 1 MILLION IN ADVERTISEMENT CAMPAIGN ?
- WHAT WOULD HAPPEN TO ECONOMIC GROWTH IF INTEREST RATE RISE BY 0.25 PERCENT ?

TYPE OF DATA :

① TIME SERIES DATA: CONSISTS OF OBSERVATION ON A VARIABLE OR SEVERAL VARIABLES OVER A PERIOD OF TIME.

EXAMPLE:
- $GDP = C + I + G + X - M$
- INFLATION, EXCHANGE RATE, INTERES RATE
- STOCK PRICES, RETURNS
- UNEMPLOYMENT RATE

FREQUENCIES → DAILY, WEEKLY, MONTHLY, QUARTERLY, ANNUALLY

ANNUAL DATA

	C	I	G	X	M
1970					
⋮					
2011					

- WWW.WORLDBANK.ORG
- WWW.ADB.ORG
- WWW.BOT.OR.TH

② CROSS-SECTIONAL DATA: A SAMPLE OF INDIVIDUALS, OR HOUSEHOLDS, OR FIRMS, OR CITIES, OR COUNTRIES, ..., TAKEN AT A GIVEN POINT IN TIME.

YEAR 2011

OBS	INCOME	FEMALE	# HRS STUDYING	GPA	FAMILY INCOM	# MEMBERS IN FAM
1		0				
2		0				
3		0				
4		1				
⋮		1				
⋮		1				
⋮		0				
⋮		1				
⋮		0				
280		1				

WE USE 'RANDOM SAMPLING' TO GATHER DATA SET.

③ PANEL DATA OR LONGITUDINAL DATA

IN PANEL DATA, WE HAVE A GROUP OF INDIVIDUALS (OR HHs, FIRMS, COUNTRIES, ...) WHO ARE OBSERVED AT SEVERAL POINTS IN TIME

THAT IS, WE HAVE TIME SERIES DATA FOR EACH INDIVIDUAL IN THE SAMPLE.

Ex: EXAMPLE OF PANEL DATASET: 4 COUNTRIES OVER

20 YEARS

COUNTRIES : CAMBODIA LAO THAILAND VIETNAM

TIME PERIOD : 1990 Q1 – 2010 Q4 (QUARTERLY DATA)

VARIABLES OF INTEREST : GDP GROWTH, INTEREST RATE, M2, GOVEXP, EXPORTS

Q: IS THERE ANYTHING IN COMMON AMONG THE 4 COUNTRIES?

- EXPORTS IN A MAIN ENGINE OF GROWTH?
- SOURCE OF VARIATION IN ECONOMIC GROWTH?

		x_1	x_2	x_3	x_4	x_5
C	1970. Q1					
C	1970 Q2					
C	⋮					
C						
C						
C						
⋮						
C	2010Q4					
L	1970 Q1					
L	⋮					
L						
L						
L						
L						
L	2010. Q4					
T	1970. Q1					
T	⋮					
T						
⋮						
T	2010 Q4					
V	1970. Q1					
V	⋮					
V						
V						
V	2010 : Q4					