

Family and Friends

What are the consequences of being born poor or being born rich?

Does there exist a permanent underclass in the US or Britain?

What effects do families have on individual outcomes?

What is the influence of peers on labour market outcomes?

Intergenerational Effects

Suppose there exists the following relationship:

$$E_{t+1} = a + BE_t + e_{t+1}$$

This is a difference equation, not a regression
t is the father and t+1 is the son

E is the “endowment gap” = $END_i - \bar{END}$

This may reflect income, genetics, family effects,
etc.

$$\text{Average Value } (E_{t+1}) = a = 0$$

The Grandson

$$\begin{aligned} E_{t+2} &= a + BE_{t+1} + e_{t+2} \\ &= a + B(a + BE_t + e_{t+1}) + e_{t+2} \\ &= a + Ba + B^2E_t + Be_{t+1} + e_{t+2} \end{aligned}$$

The Great Gandson

$$\begin{aligned} E_{t+3} &= a + BE_{t+2} + e_{t+3} \\ &= a + B(a + Ba + B^2E_t + Be_{t+1} + e_{t+2}) + e_{t+3} \\ &= a + Ba + B^2a + B^3E_t + B^2e_{t+1} + Be_{t+2} + e_{t+3} \end{aligned}$$

Case 3 makes much more sense. But consider B=.9 versus B=.1.

If B=.1 grandchildren acquire only 1 percent of their grandfather's endowment

If B=.9 grandchildren acquire 81 percent of their grandfather's endowment

Put differently: In the second scenario it would take 43 generations to attain the same income dissipation as occurred in 2 generations in the first scenario.

A mechanism to explain the above

Human capital investment

Supply and demand for human capital.

Demand – function of endowments

Supply cost of funds – interest rates

1) perfect capital markets

2) capital market imperfections

Intergenerational transmission of outcomes

Case 1) intergenerational transmission of endowments

Case 2) intergenerational transmission of endowments and higher cost of education for the poor

More intergenerational mobility in case 1 than case 2

This is the case that the NUS makes for subsidised higher education

Evidence

Studies tend to estimate regression equations of the form:

$$Y_S = a + BX + bY_F + e$$

**Estimates of b tend to range from .1 to .6
Mixed implications for underlying questions**

One study looks at relationship between sons and grandfathers

Sacerdote – links black males in the 1860, 1880 and 1920 US censuses

**Within 2 generations descendents of ex-slaves had caught up with descendents of ex-freemen.
Consistent with b between .1 and .2**

Peer Effects

Determinates of labour market qualifications

Production function approach

Education = f (individual, family, neighbourhood, friends)

Why do friends and neighbourhoods matter?

Peers study together

Networks

establish standards

Applicable to other outcome variables: drug use, teenage pregnancy, etc.

$$E_{t+1} = a + BE_t + e_{t+1}$$

In this model peer effects show up in the error term

How do we measure the effect of friends?

1. Regress

**Education = a + b₁sex + b₂family income + b₃
father's education + b₄ mother's education + b₅
neighbourhood income + b₆ friends' education +
.... + e**

Individual effects: sex, race, IQ,

**Family effects: family income, education of
other family members, birth order**

**Neighbourhood effects: measured by
neighbourhood income, unemployment rate,
average education level**

**May reflect: local opportunities,
information, demonstration effect**

**Peer effect: b₆ (use peers education, intentions
for education, test scores, etc)**

**A positive coefficient implies that having smart
friends makes you more likely to undertake
education (peer pressure, joint study, etc.)**

Problem: One does not choose family, race, sex. These are truly exogenous. One does choose one's friends.

Example, smart kids chose smart friends. Estimated peer effect is positive, but no causal relationship.

How do we handle this problem?

1.2 stage estimation (2SLS)

**Stage 1 estimate the determinates of peer group
Stage 2 use estimated peers as the independent variable in the first regression**

Results (Evans, Oates, Schwab):

OLS – large peer group effect

2SLS – estimated peer group has no effect

conclusion: the causal relationship goes the opposite direction. Youth with a proclivity for education seek out friends with similar proclivities.

Second Approach: Random assignment of peer groups

Peers determined by factors unrelated to the outcome that is being analysed – no reverse causation

2 studies

1. Random assignment of room-mates at an elite American University

Main findings

The SAT score of your room-mate (particularly verbal) has a small effect on University grades

The ethnicity of your room-mate has a larger effect

Your room-mates age 17 drinking habits have a large effect on your University drinking

2. Re-assignment of workers at an Italian Bank between branches

Main findings

Absenteeism more common at southern branches than northern branches

Individual characteristics (ex: education) and location characteristics (ex: days of sunshine, distance to coast) has an effect

The average absentee rate at your branch has an effect, independent of the location effect

Individuals moving from one branch to another experience a small change in absentee rate