



# Why is there so little income mobility in the US and Britain?

The role of education and cognitive ability for intergenerational income persistence in the US, Britain, and Sweden

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# Intergenerational mobility and persistence

- Intergenerational mobility an indicator of societal openness, or inequality of opportunity
- Measuring the association between an individual's characteristic of the family of origin and the same characteristic as 'destination', i.e., as adult
- Indicators of mobility/persistence, e.g., social class, occupational prestige, income
- Partly overlapping, partly indicating different kinds of processes (Breen, Mood, Jonsson 2016)

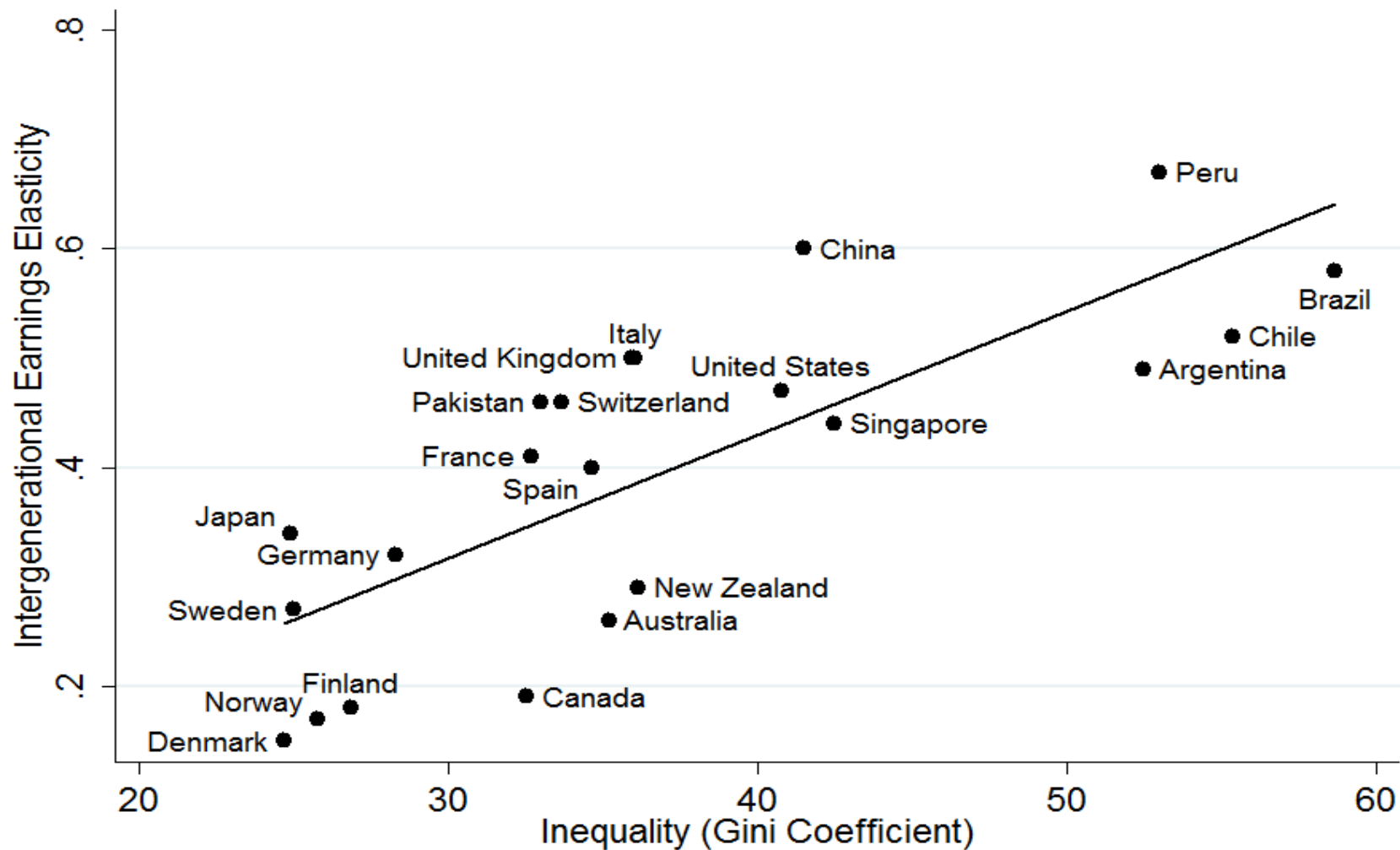
# Comparing intergenerational associations

- A measure of intergenerational persistence is most meaningful in relation to something
- Comparison over time or across countries
- One goal is to address the issue of the importance of institutional and other characteristics of countries in creating or inhibiting opportunities
- The degree of inequality of living conditions and the function of the educational system are characteristics that figure prominently in theory

# Aim of the study

- Our aim is to work out the relation between intergenerational associations and education across three countries (institutional settings)
- What role does education have for intergenerational income persistence?
- We study two countries renowned for low income mobility - **USA** and **Great Britain**
- As a contrast, we compare them with **Sweden**, one of the most equal societies studied

# The Great Gatsby curve



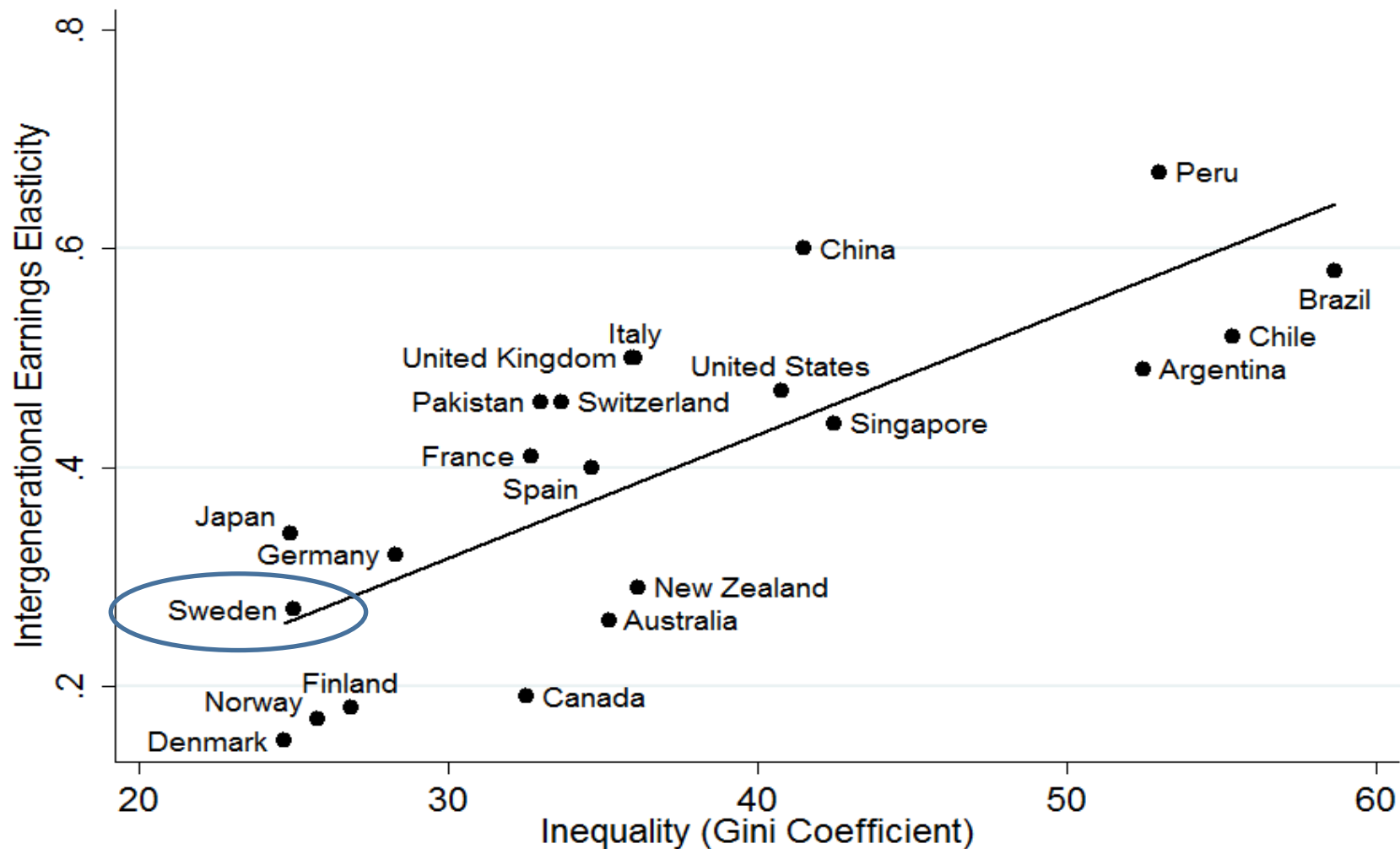
Source: Corak (2012)

# The Great Gatsby curve: UK & US



Source: Corak (2012)

# The Great Gatsby curve: Sweden



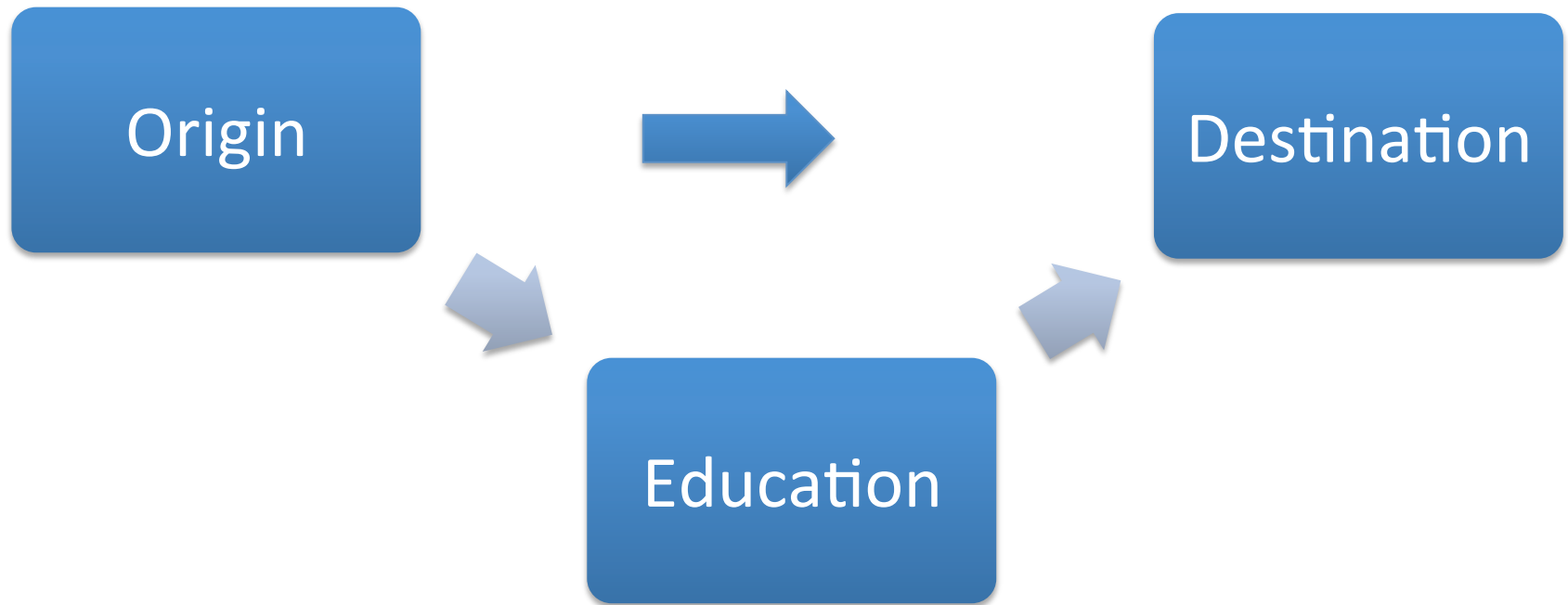
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# A new form of stratification?

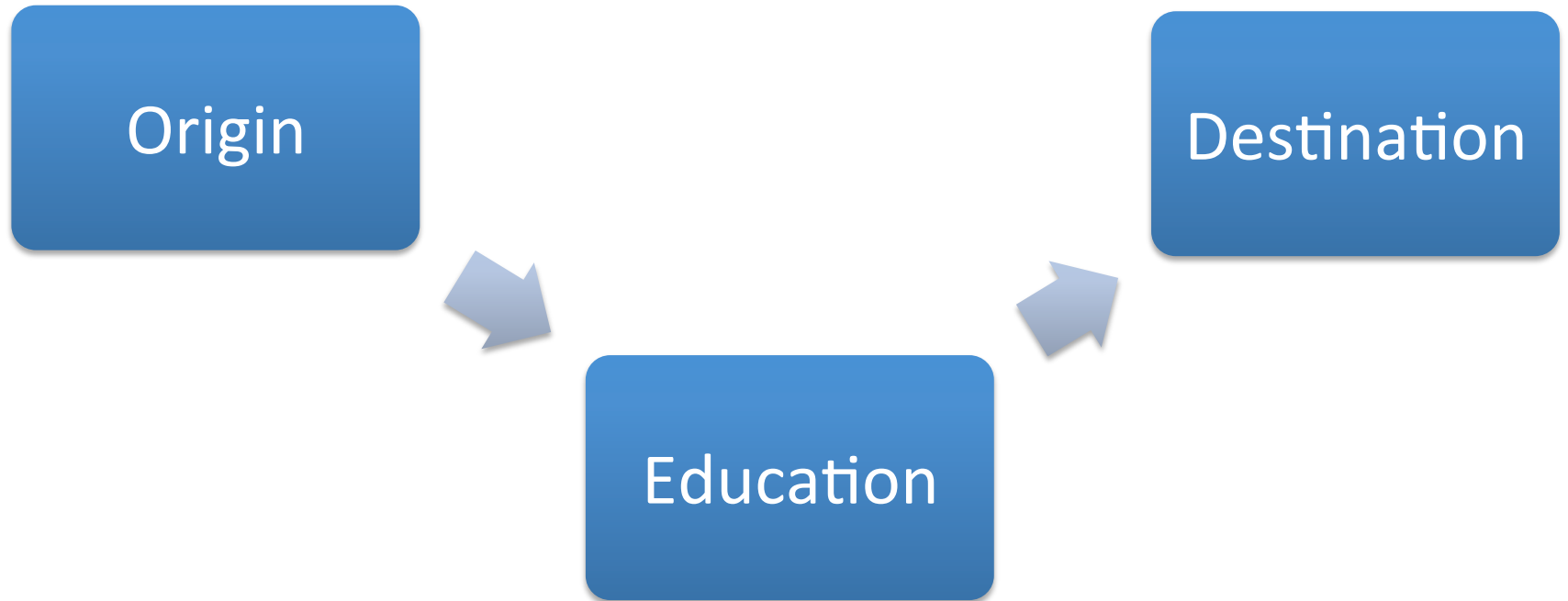
- We return to a classical sociological question about the form of stratification
- Blau and Duncan (1967) posited that modern societies move from **ascription** to **achievement**
- The advantages of the family of origin more and more expressed through formal merits
- Often seen as a more “just” form of stratification – the **Meritocracy** (Bell 1973)
- And analysed in path-analytical terms by B & D



# The traditional type of stratification



Meritocracy: stratification based on achievement only



# Different forms in different countries?

- Whatever the evidence for a move from ascription to achievement, it does focus our interest also on the **form** of stratification
- Does the US derive its high intergenerational associations from strong correlations involving education?
- Is Britain – as in the image of a traditional class society – characterized by more traditional “direct” origin effects?

# Intergenerational processes: Strength and form

	Strength of intergenerational persistence	
Dominating form of intergenerational persistence	Weak	Strong
Achievement	Equality – Sweden	Meritocracy - US
Ascription	---	Class society - Britain

# Measures of income association

➤ Parent-to-son income elasticities (regression coeff):

➤  $\ln Y_i^{Child} = \alpha_1 + \beta \ln Y_i^{Parent} + \varepsilon_{i1}$

➤ Straight-forward interpretation as the percentage of income differences among parents that persists to the child generation

➤ We also use rank-correlations (percentiles):

➤  $\text{rank } Y_i^{Child} = \alpha_2 + \beta \text{rank } Y_i^{Parent} + \varepsilon_{i2}$

# Analytical strategy

- We calculate parent-to-son income elasticities and rank-correlations
- Address life-cycle bias and ME in parents' income
- Two-stage process – decomposing the associations
  1. What is the relationship between education and parents' income across countries?
  2. How do the returns to education vary across countries?
- How much of the persistence is due to ('ascriptive') mechanisms **not** mediated by education?

# Data

## ➤ US

- National Longitudinal Survey of Youth (NLSY 79)
  - Born 1957-1965

## ➤ Britain

- British Cohort Study (BCS)
  - Born 1970

## ➤ Sweden

- Swedish Register Data
  - Born 1965

# Variables

## **US 1957-65**

### *Parents*

Gross family income at age 16 and 17

### *Sons*

Gross annual earnings at 27, 33 and 39

- 1) Drop out / GED
- 2) HS graduate
- 3) Associates degree
- 4) Bachelors Degree

N at 39 = 985

## **UK 1970**

### *Parents*

Gross banded parental income at age 10 and 16

### *Sons*

Gross earnings at time of survey at 26, 34, 38, 41

- 1) < O-levels
- 2) O-levels
- 3) A-levels
- 4) Bachelors Degree

N at 38 = 1,014

## **Sweden 1965**

### *Parents*

Gross parental income age 3 to 18

### *Sons*

Gross annual earnings at 27, 34 and 41

- 1) Comprehensive
- 2) Short upper sec
- 3) Long up/short post sec
- 4) University

N at 41 = 50,000



# Results – Measurement error

Table1: Intergenerational elasticities ( $\beta$ ) across countries for sons' earnings observed at 38/41 averaging across parental income measures

	US 1957-65	UK 1970	Sweden 1965
<b>Earnings at 38/41</b>			
Parental inc 16	0.372 (.029)		
Av. inc 16, 17	0.427 (.043)		
Av. inc 10, 16			
Av. inc 3-18			

# Results – Measurement error

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<b>Earnings at 38/41</b>			
Parental inc 16	0.372 (.029)	0.307 (.026)	
Av. inc 16, 17	0.427 (.043)		
Av. inc 10, 16		0.444 (.040)	
Av. inc 3-18			

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	US 1957-65	UK 1970	Sweden 1965
<b>Earnings at 38/41</b>			
Parental inc 16	0.372 (.029)	0.307 (.026)	0.213 (.005)
Av. inc 16, 17	0.427 (.043)		0.236 (.005)
Av. inc 10, 16		0.444 (.040)	0.268 (.006)
Av. inc 3-18			

# Results – Measurement error

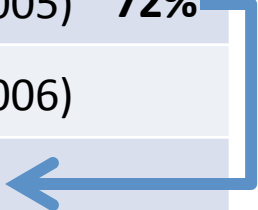
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Av. inc 16, 17	0.427 (.043)		0.236 (.005)
Av. inc 10, 16		0.444 (.040)	0.268 (.006)
Av. inc 3-18			0.330 (.006)

# Results – Measurement error

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<b>Earnings at 38/41</b>			
Parental inc 16	0.372 (.029)	0.307 (.026)	0.213 (.005)
Av. inc 16, 17	0.427 (.043)		0.236 (.005) <b>72%</b>
Av. inc 10, 16		0.444 (.040)	0.268 (.006)
Av. inc 3-18			0.33



# Results – Measurement error

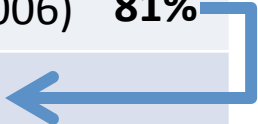
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Av. inc 16, 17	0.427 (.043)		0.236 (.005) <b>72%</b>
Av. inc 10, 16	<b>72%</b>	0.444 (.040)	0.268 (.006)
Av. inc 3-18	0.60		0.33

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Av. inc 16, 17	0.427 (.043)		0.236 (.005)
Av. inc 10, 16		0.444 (.040)	0.268 (.006) <b>81%</b>
Av. inc 3-18	0.60		0.33



# Results – Measurement error

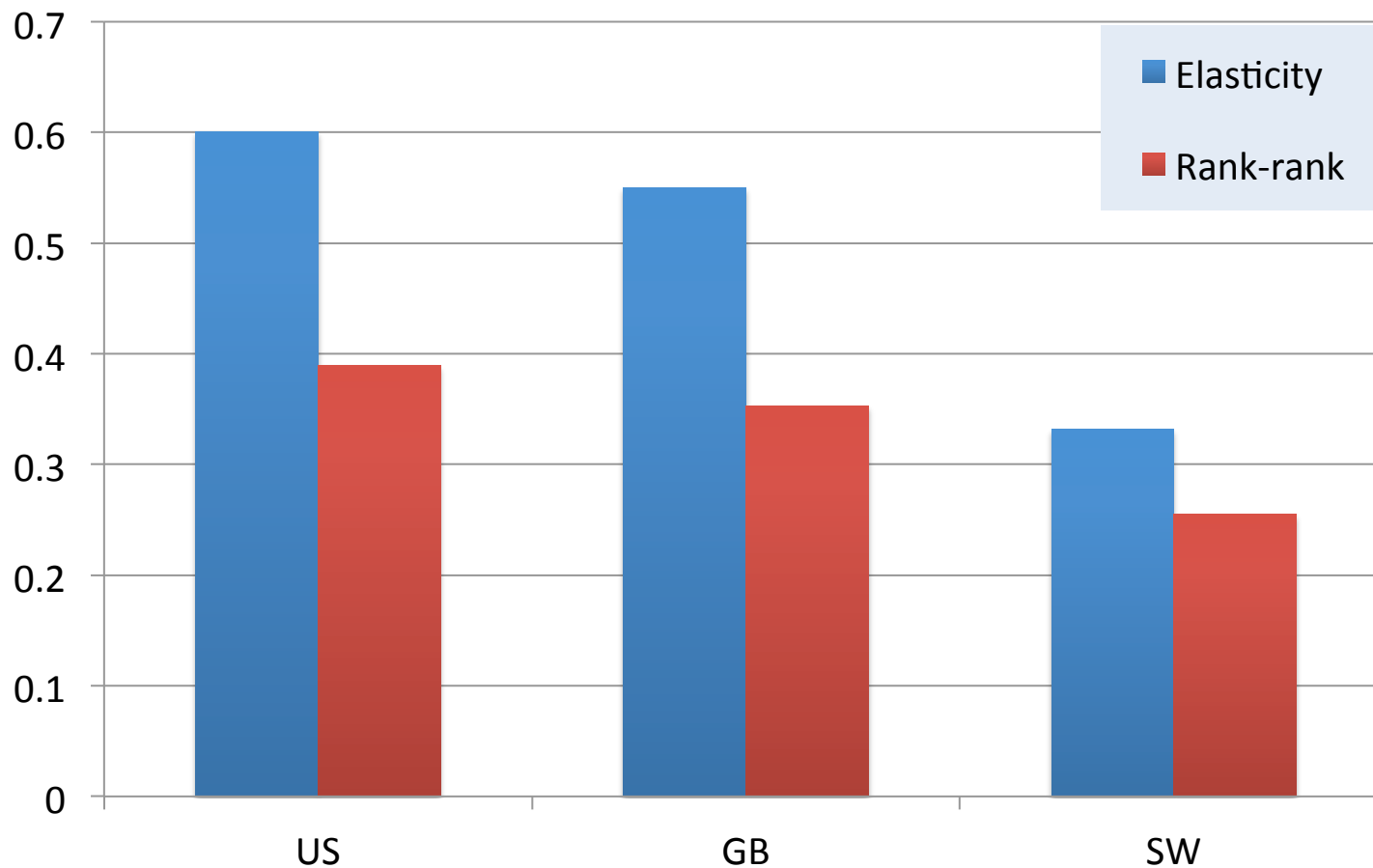
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Av. inc 16, 17	0.427 (.043)		0.236 (.005)
Av. inc 10, 16		0.444 (.040)	0.268 (.006) <b>81%</b>
Av. inc 3-18	0.60	0.55 <b>81%</b>	0.33



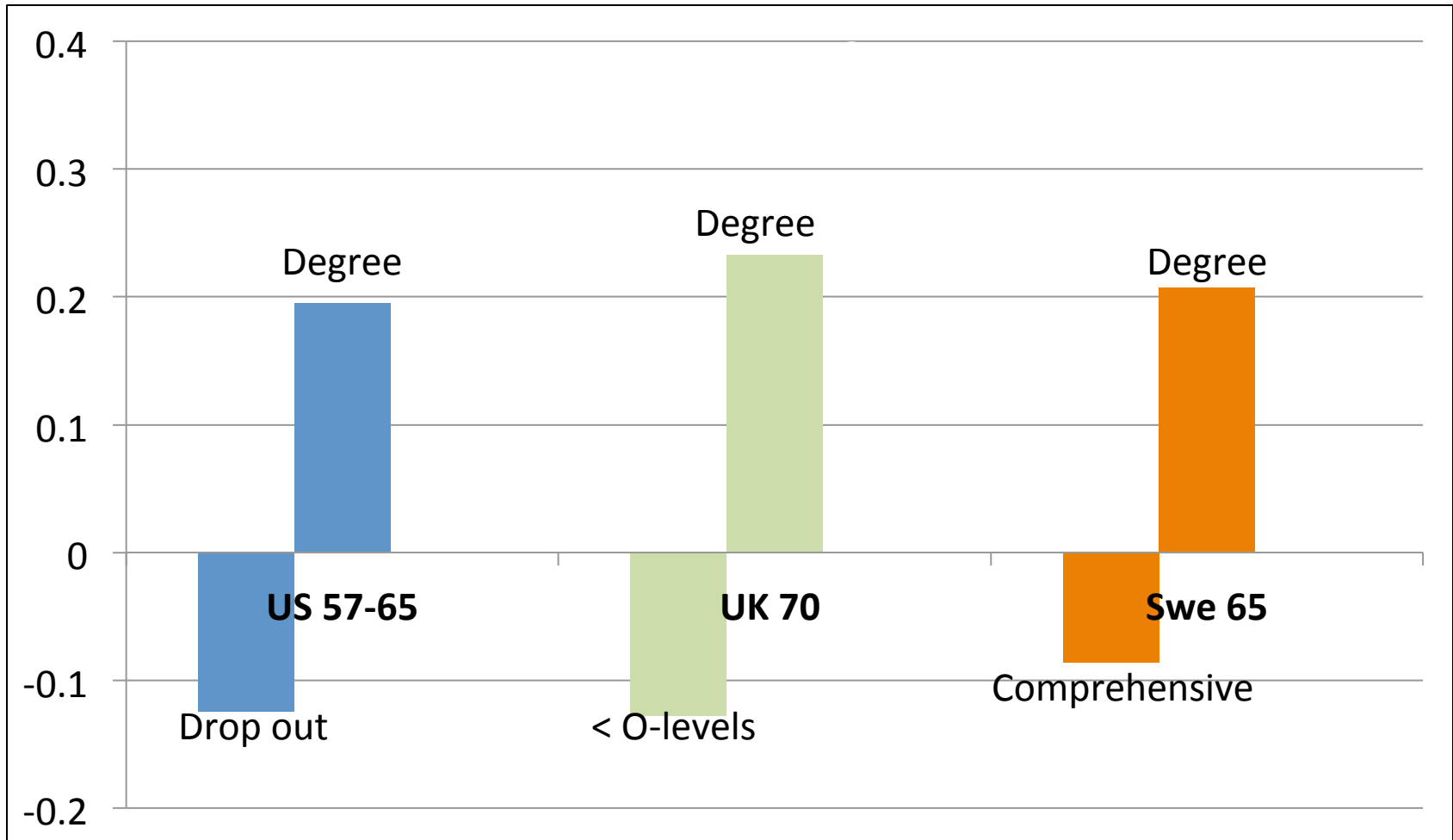
# Results – Intergenerational persistence

Figure 1: Estimated parent-son income associations in terms of elasticities and rank-correlations, for US, Great Britain, and Sweden (son's age around 40)



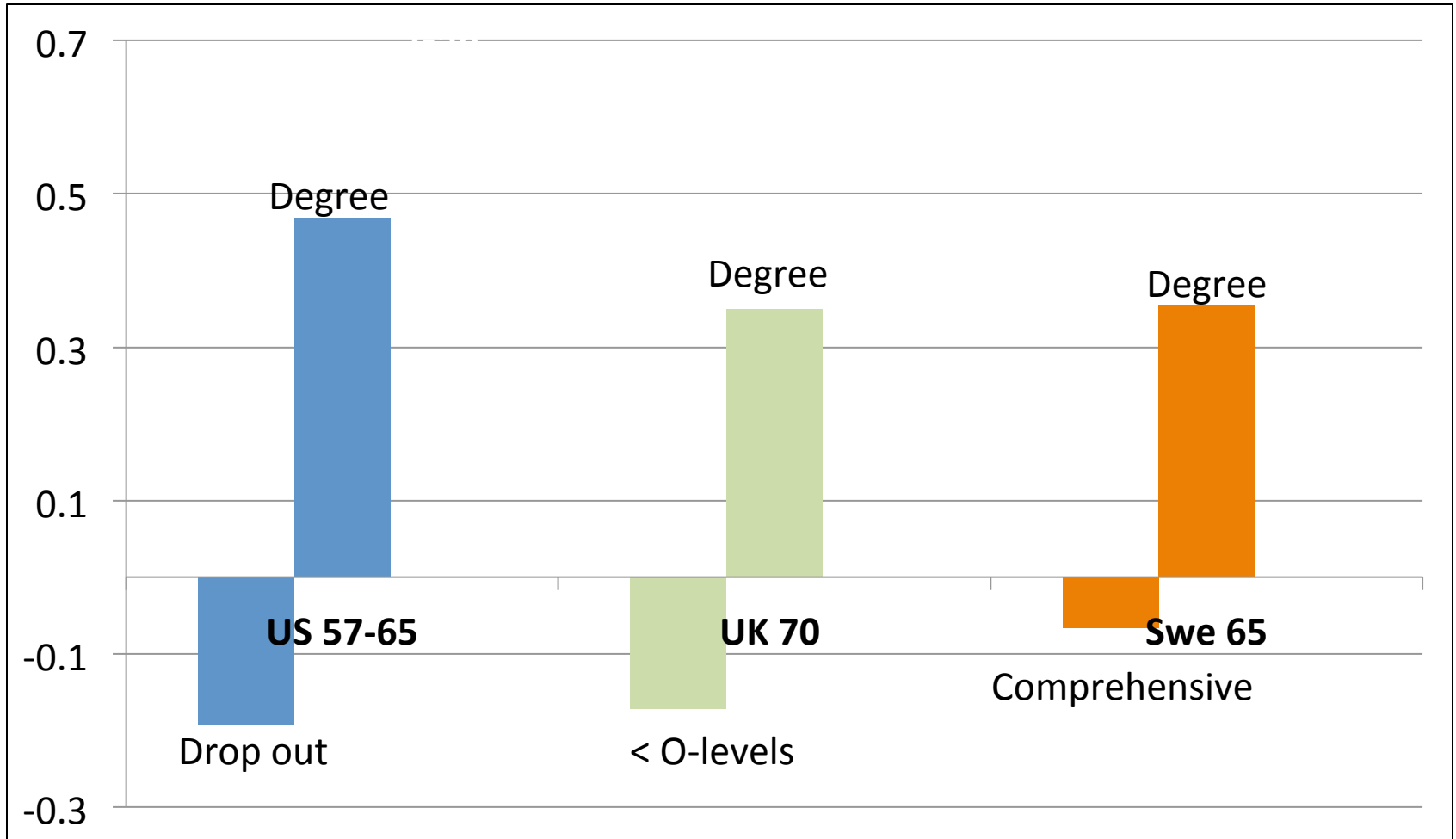
# Results – Gaps in educational inequality

Figure 2: Average parental income gradients in lowest and highest educational attainment groups and income gaps in this attainment



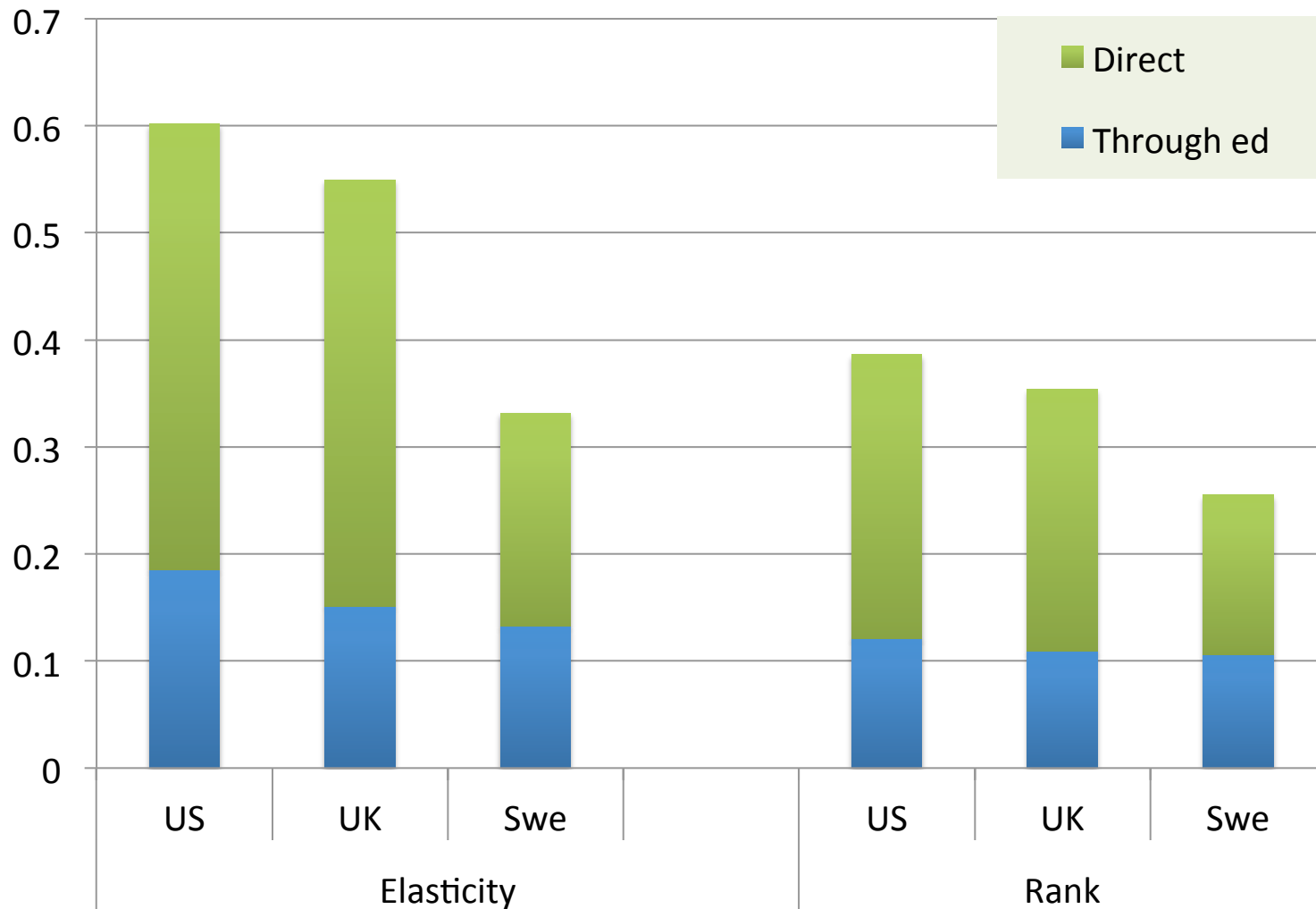
# Results – Gaps in returns to education

Figure 3: Differences in the returns to lowest and highest educational attainment across countries for sons' earnings observed at 38/41



# Results

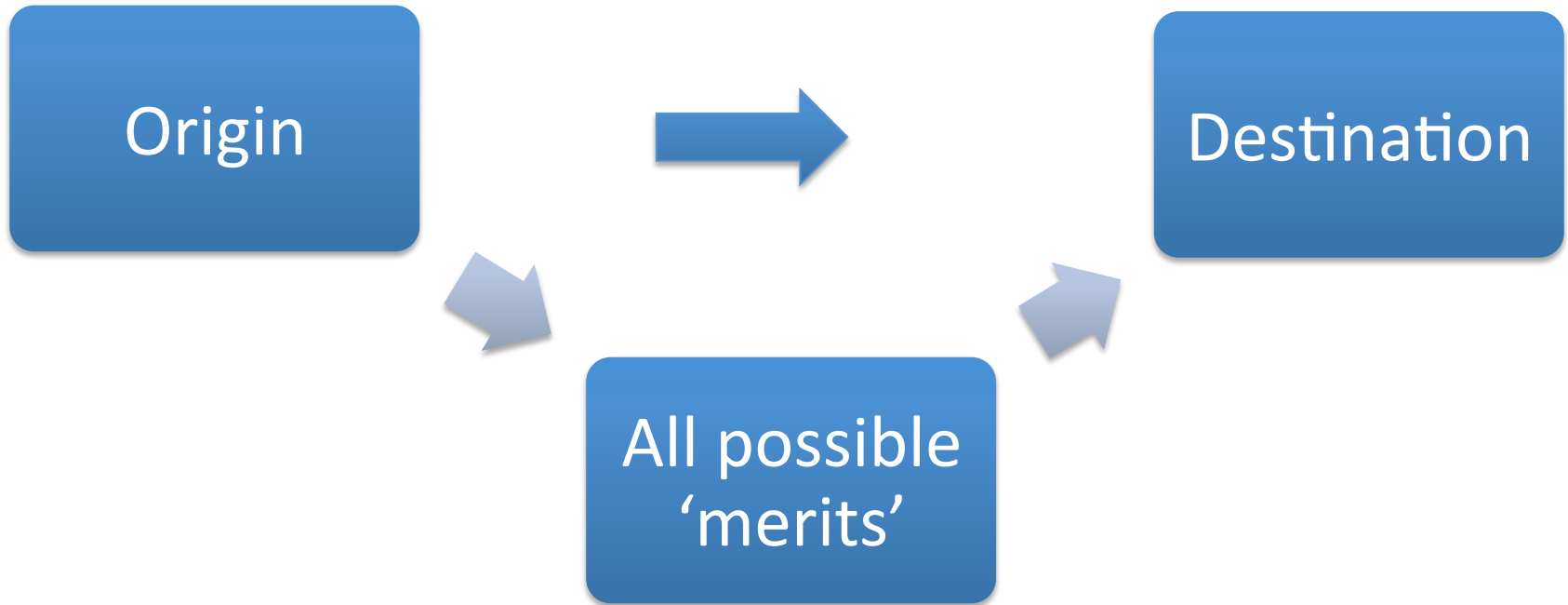
## Decomposing intergenerational mobility (age 38/41)



# Scrutinizing the mediating effect of 'merit'

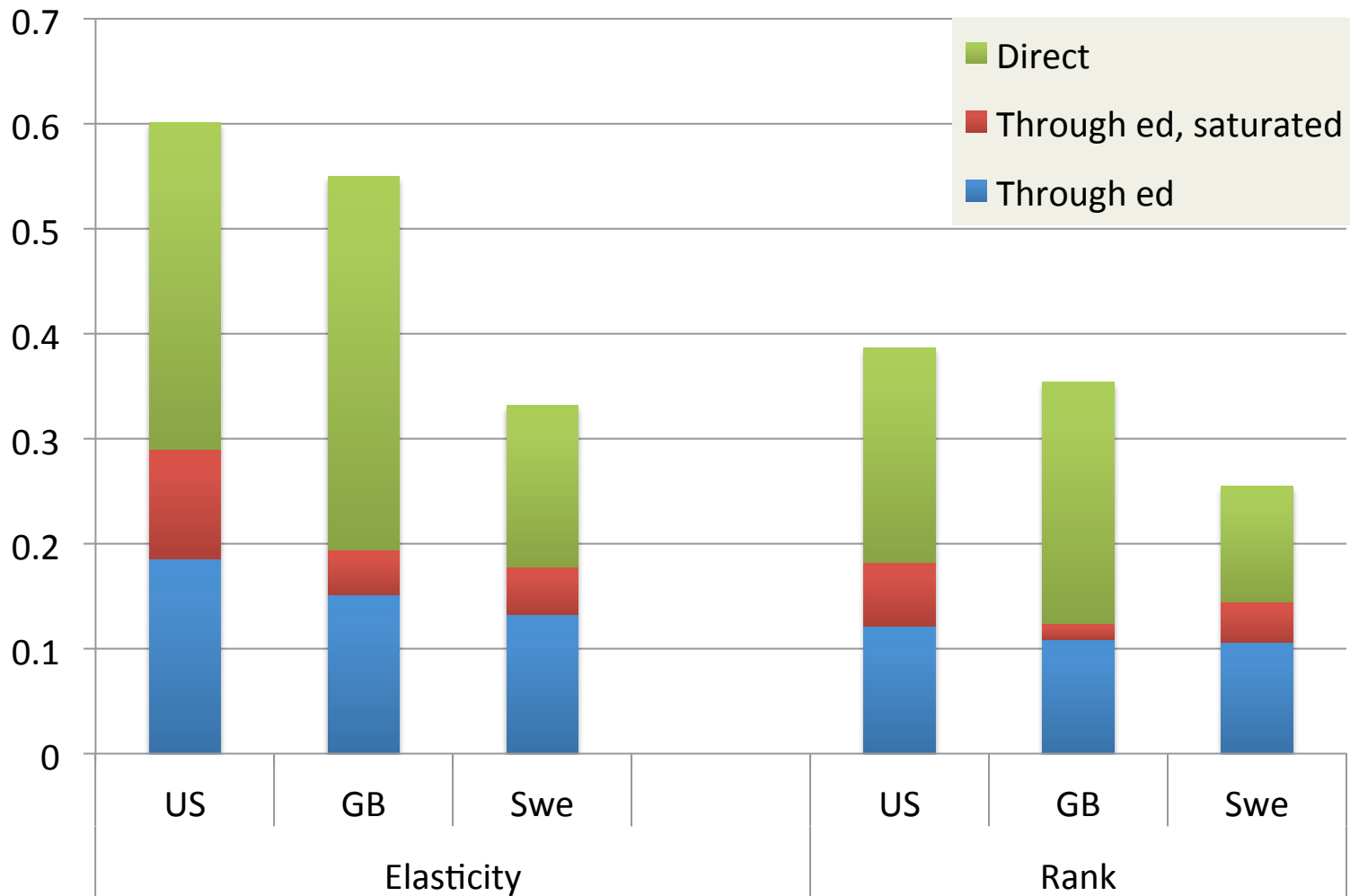
- Problem with focussing too much on a residual – sensitive to inter-country differences in ME
- How could we improve on our controls to try to isolate the 'non-meritocratic' association?
- We go for functional equivalence in our educational coding, maximizing variance picked up in each country
- Then we control for (cognitive) ability from tests

# Expanded stratification model



# Results

## Decomposing even further



# Conclusions

- Family background has a similar association with educational attainment across all three countries
- Greater pay-offs to higher education in the US and greater penalties to low education in the US and Britain
- But education is **not** the important factor behind differences in overall mobility across countries
- In the US and the Britain there are still large differences in earnings between those of richer and poorer origins **at each level of education**
- Thus, in Sweden, the stratification regime is more 'meritocratic'



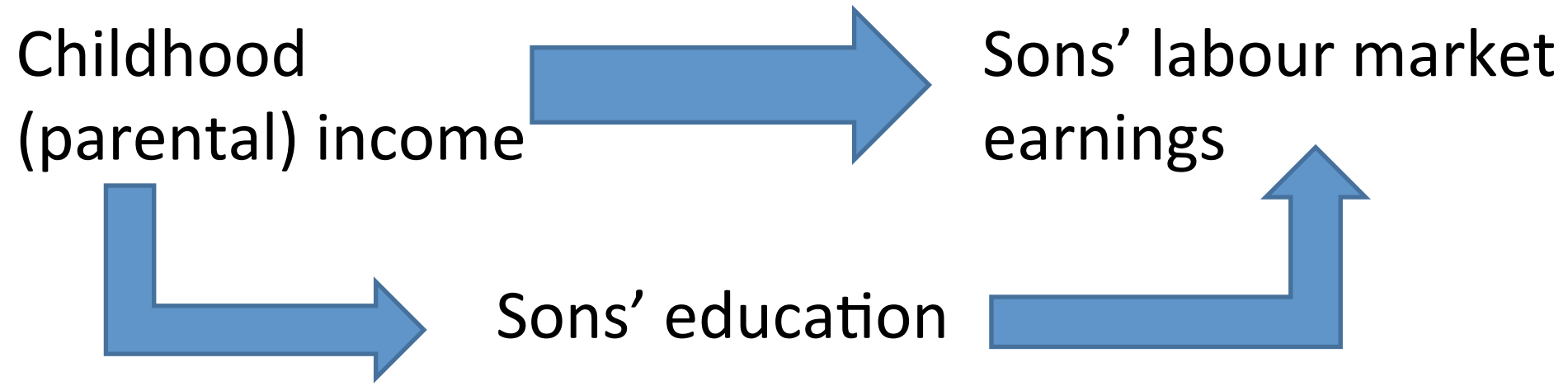
# Possible explanations?

- Social networks play bigger role in US and Britain at getting those from connected families into good jobs (public sector bigger in Sweden)
- Strong labour unions and collective bargaining set a relatively high minimum wage for those with lowest qualifications in Sweden – and resulting in a compressed wage structure
- Lower education of higher quality in Sweden
- More private schooling in US and Britain

Over and out

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# Methodology



$$1) ed_i^{son} = \sigma + \lambda y_i^{parent} + e_i$$

$$2) y_i^{son} = \eta + \gamma ed_i^{son} + \delta y_i^{parent} + \varepsilon_i$$

$$\beta = \lambda \gamma + \delta$$

Part accounted for by education

Part NOT accounted for by education