Global Trends in Income Intergenerational Inequalities?

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Why Income Inter-generational Inequalities

- (Income) **Inter-generational inequality**: hot topic for media, policymakers
  - Surge in media coverage since 2010s
  - Official reports on IG inequalities/ "fairness" (UK, EU, Australia, ...)
  - Age-targeted policies (minimum wage exemptions, benefits, help-to-buy)
    - Upcoming italian elections: most parties propose age-targeted tax breaks, hiring incentives, wealth redistribution, pension reforms

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  2. Detailed channels and mechanisms

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Why important to investigate IGI Inequalities

IGI Inequalities: current distribution of resources, affects future wealth distribution/poverty/inequality

- **International level and dynamics**: can we learn more about *sources* and *channels* from regularities in trends among similar/different countries?
- **Detailed channels**: what is leading to higher/lower IGI inequalities? Long-run trends *vs* Business Cycle *vs* country-specific factors.
- Fundamental **first step** for future research on:
  1. Economic inefficiency
  2. Welfare
  3. Optimal policymaking
  4. Future trends across the world

Literature

- Evidence from individual countries *(Rosolia and Torrini, 2007; Bianchi and Paradisi, 2021; Guneven et al., 2021; Cribb, 2019; and more, and more...)*
- Role of various channels of old-young wage differences:
  1. Job mobility (Kambourov and Manovskii, 2009)
  2. Careers *(Bertoni and Brunello, 2020; Bianchi et al., 2021; Mohnen, 2021)*
  3. Relative price and supply of experienced labour *(Welch, 1979; Leving and Mitchell, 1988; Jeong et al., 2015)*
  4. Aging (Angelini, 2021)
  5. *(indirectly)* Technical/structural change *(Autor and Dorn, 2009, 2013; Adao et al, 2021)*
- Issue: most refer to individual countries and full-time male employees

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- **Evidence on IGI inequality in the last 20 years from 42 countries**
- **What income components drive changes in IGI inequalities?**
- **What channels explain these global trends?**

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  Result 2: Rise (rich countries) driven by employment rate divergence
  Result 3: Fall (developing countries) driven by faster young's income growth

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- **What channels explain these global trends?**
  Result 4: Relevant role of education and technical/structural change
  Result 5: Little role of business cycle for *global* dynamics

Outline

1. Data and Global IGI Inequalities
2. Income Components and IGI Inequality
3. Investigating the Channels
   - Education Expansion
   - Technical/Structural Change
4. Conclusions

Outline

Luxembourg Income Study

- Luxembourg Income Study (LIS) dataset
  - Harmonised income microdata
  - 42 countries with sufficiently long time series and individual income
  - 30 countries with optimal data for deeper analysis
- Observed income variable: income (minus capital income) and its components
- Information on employment status, benefits

Definition of IG inequalities

- **Inter-Generational Income Ratio** *(IGIR)*
- For two age groups j (old), j' (young), the ratio is:

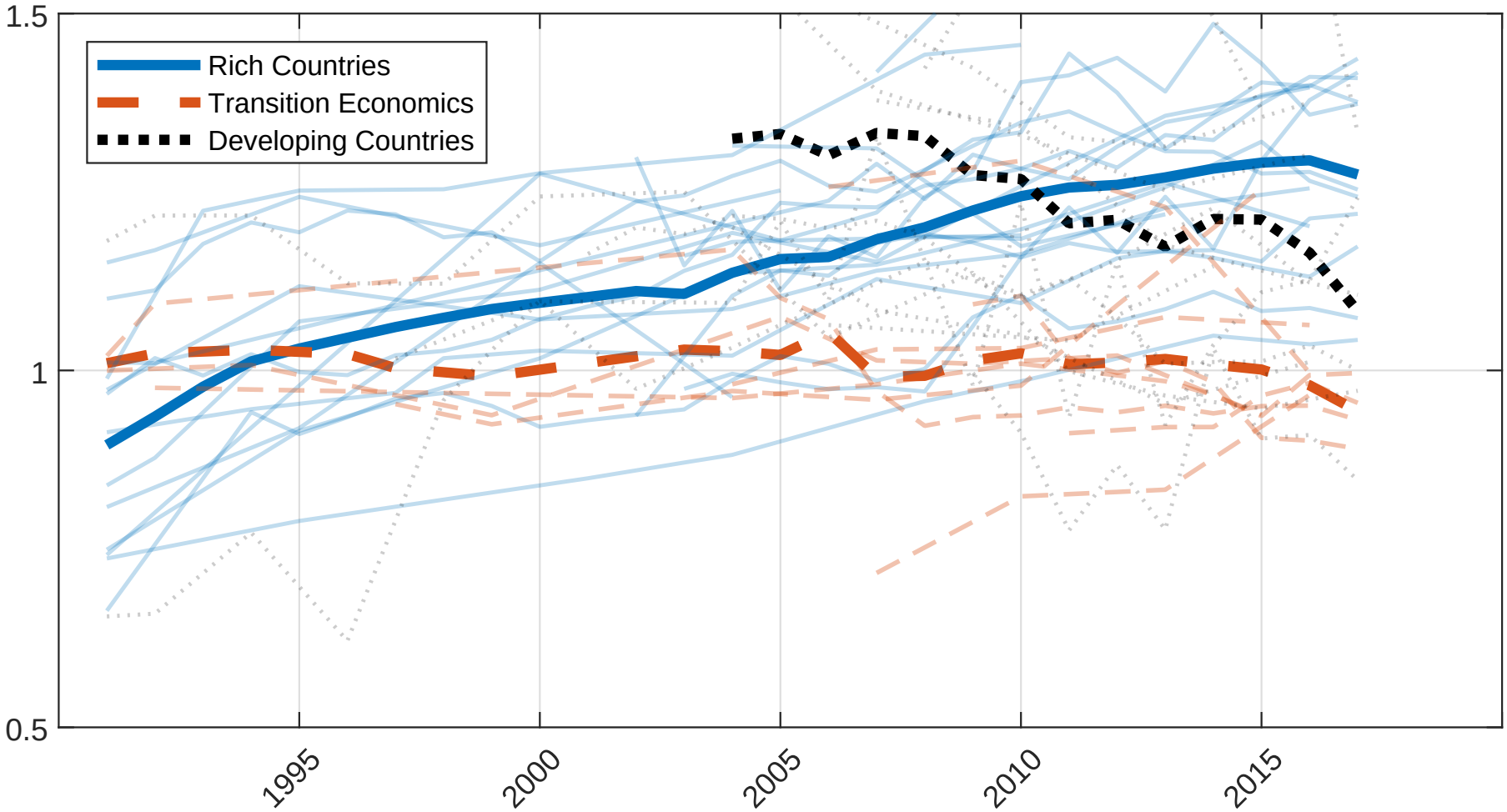
$$R^{j}_{j'} = \frac{y_j}{y_{j'}}. \tag{1}$$

- Its growth rate can be approximated by

$$\frac{\Delta R^{\text{old}}_{\text{young}}}{R^{\text{old}}_{\text{young}}} \approx \underbrace{\frac{\Delta y_{\text{old}}}{y_{\text{old}}} - \frac{\Delta y_{\text{young}}}{y_{\text{young}}}}_{\textbf{Growth Rate Differential (GRD)}} \tag{2}$$

- Five Age-groups:
  1. 16-24, young adults
  2. 25-34, early career
  3. 35-49, mid-career
  4. 50-64, late-career
  5. 65+, old adults

IGIR: late-career (50-64) vs early-career (25-34)



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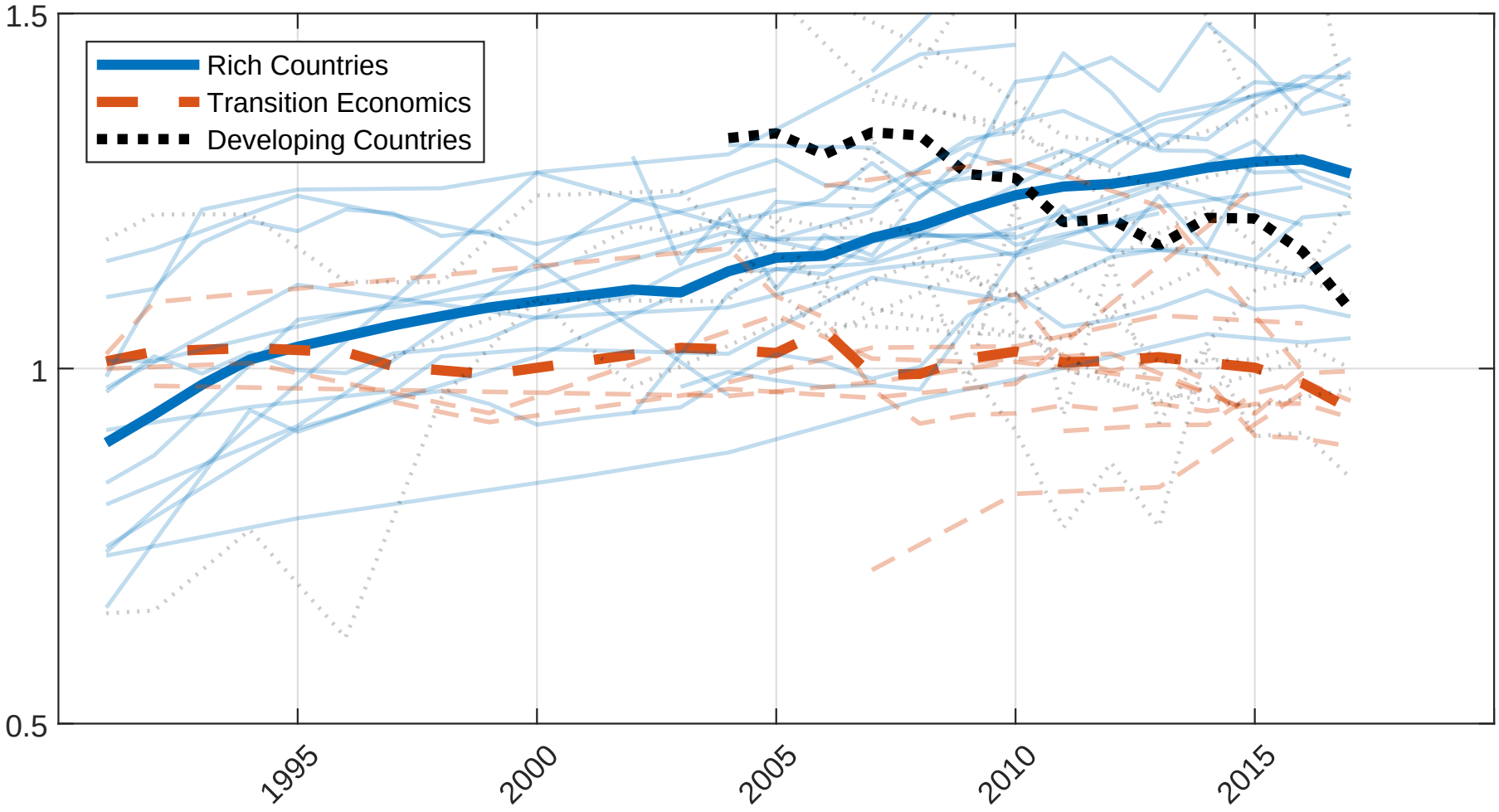
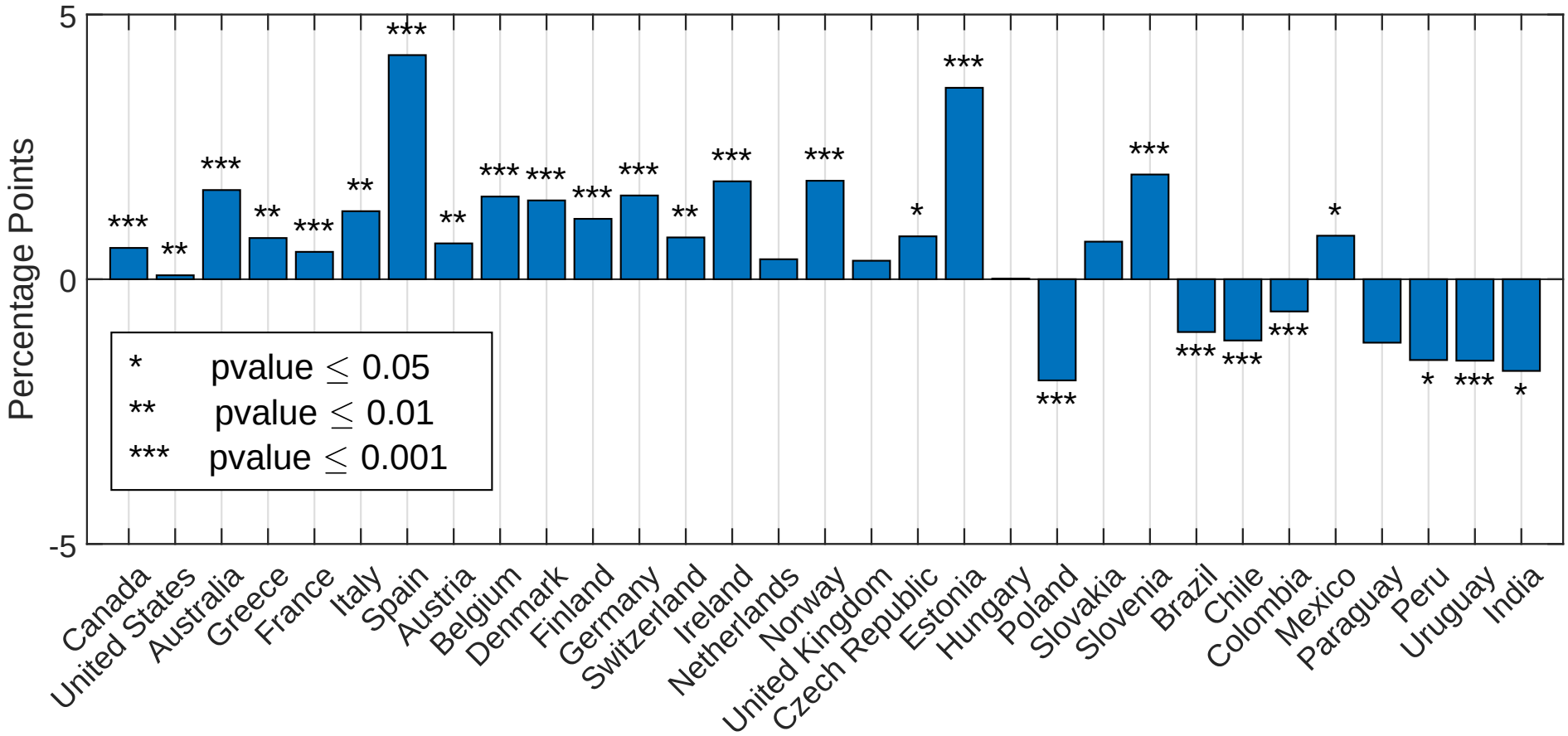


Stylized fact 1. The IGIR has grown in high-income countries, while fell or remained constant in lower-income countries.

Where did IG inequalities grow the most?

Figure: Growth Rate Differentials, 50-64 vs 24-35



Outline

Income Decomposition

- Where did these differences in GRD originate from?
- Define income as:

$$y_j \equiv e_j y_j^l + p_j \Theta_j - \tau_j \tag{3}$$

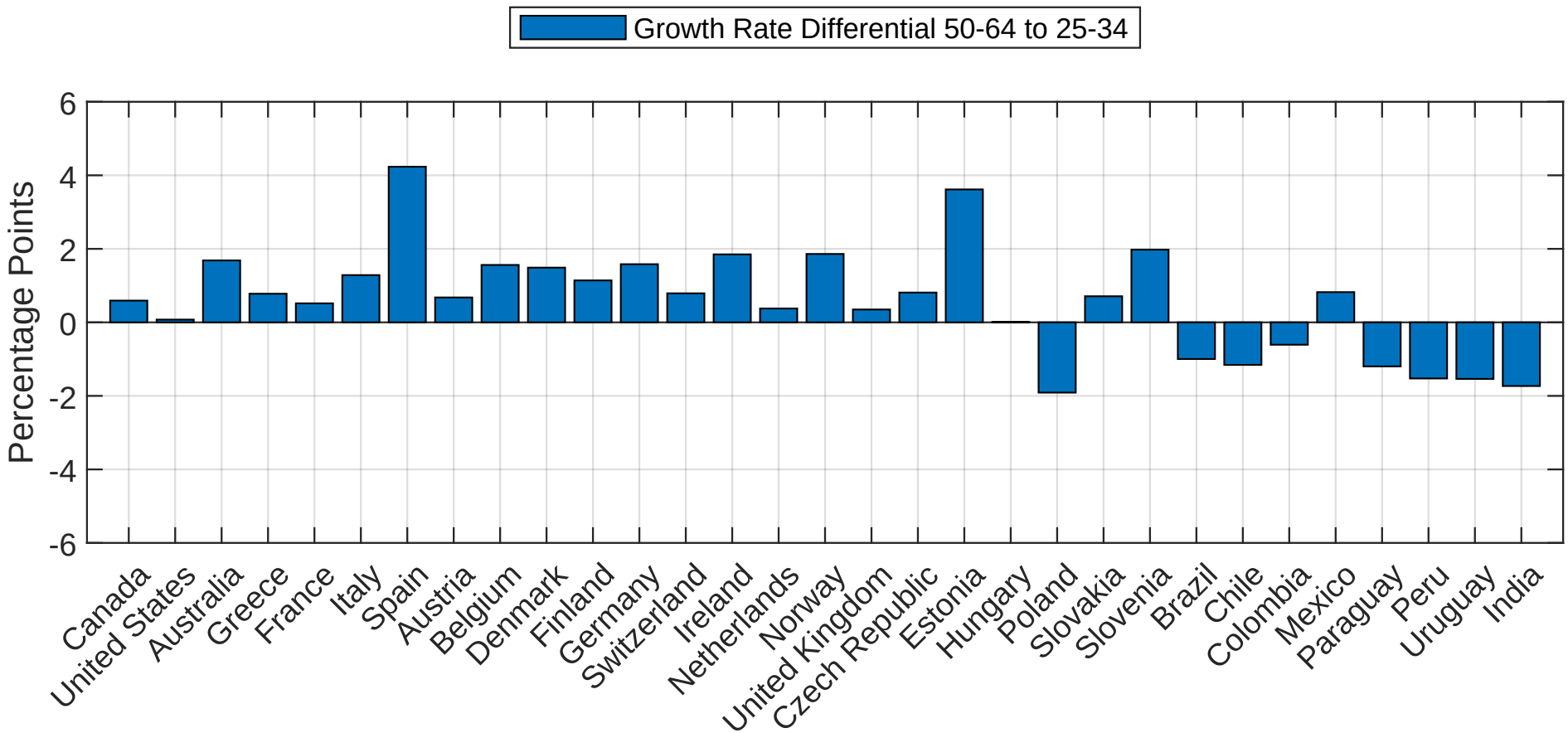
  - e_j employment share in age group j
  - y_j^l labour income conditional on being employed
  - p_j population share receiving benefits in age group j (includes pensions)
  - Θ_j amount of benefits, conditional on receiving them
  - τ_j taxes

- Decompose its variation as:

$$\Delta(y_j) = \underbrace{\frac{e_{j,T+H}\Delta y_j^l}{y_{j,T}}}_{\text{Gross Labour Income}} + \underbrace{\frac{y_{j,T}^l \Delta e_j}{y_{j,T}}}_{\text{Employment}} + \underbrace{\frac{p_{j,T+H}\Delta\Theta_j}{y_{j,T}}}_{\text{Transfer Income}} + \underbrace{\frac{\Theta_{j,T+h}\Delta p_j}{y_{j,T}}}_{\text{Transfer Share}} - \underbrace{\frac{\Delta\tau_j}{y_{j,T}}}_{\text{Taxes}}.$$

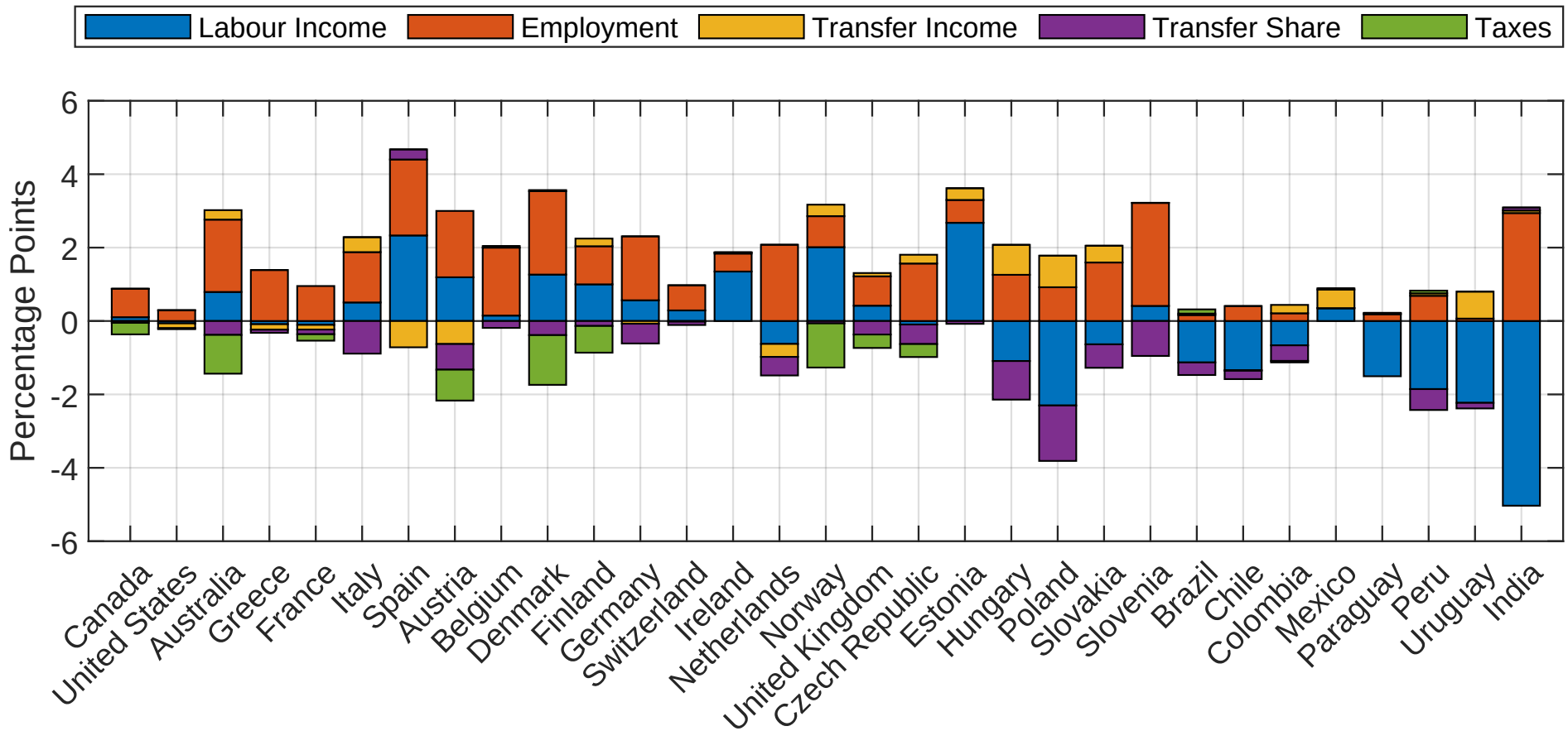
Education Expansion

Figure: Recall the Growht Rate Differential...



Income Decomposition

Figure: Contribution to GRD of net income, by income components. 50-64 against 25-34



Income Decomposition - Employment

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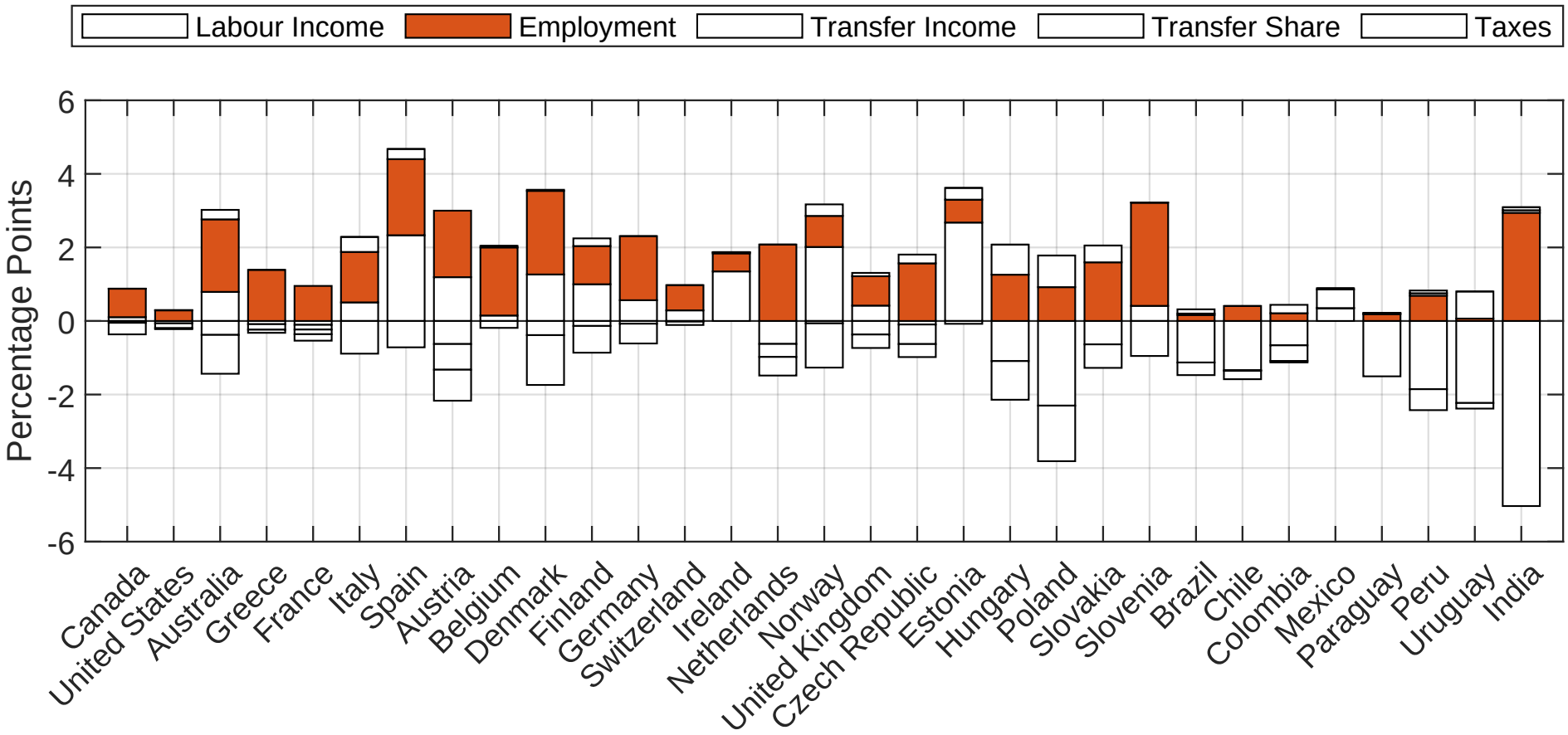

- Main contributor in rich countries and Eastern Europe: employment

Income Decomposition- Labor Income

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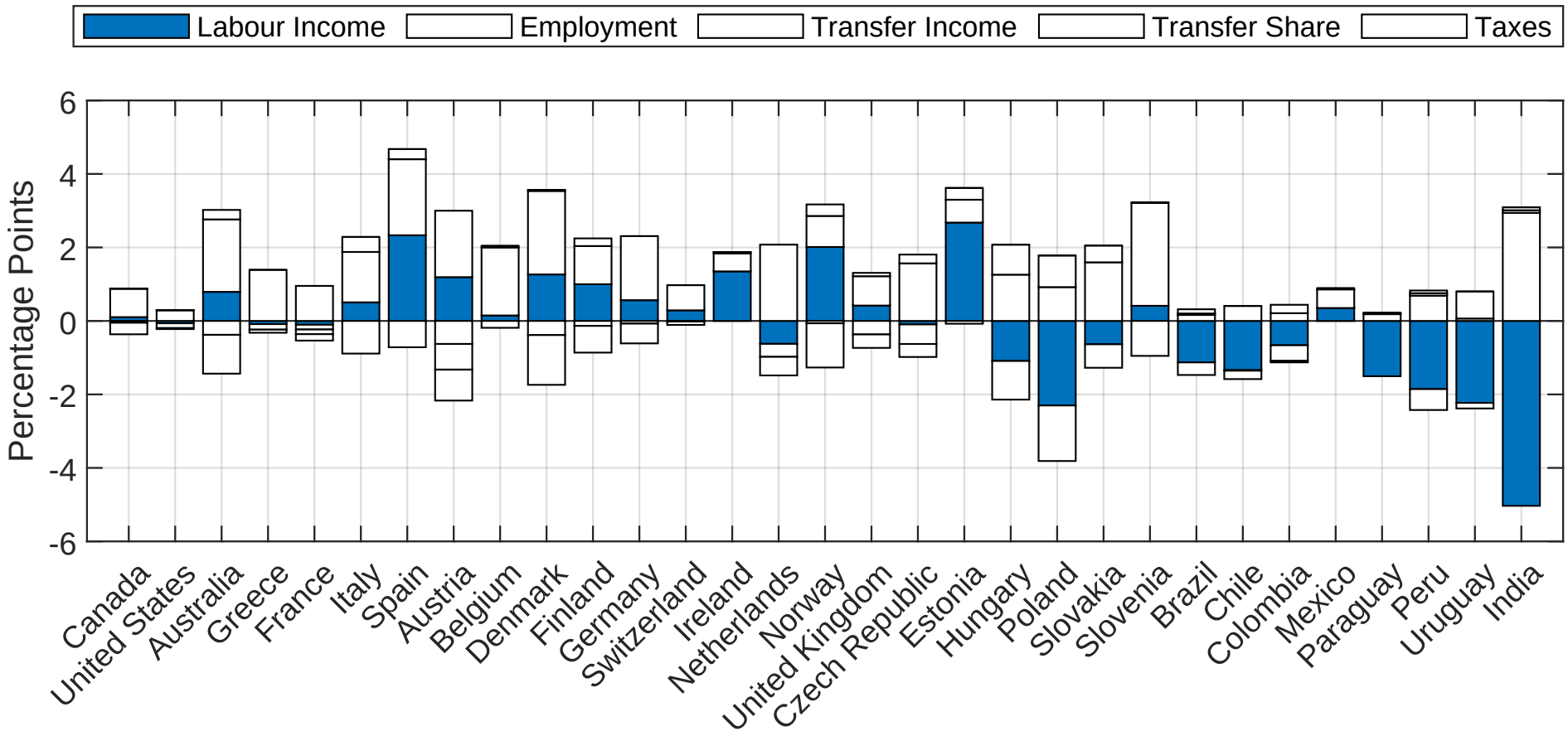

- Main contributor in lower-income countries: labour income

Take away and next step

- What we have learned about the past two decades:
  1. IGI inequality is growing in rich countries
     Main contributor: difference in employment bw old and young
  2. IGI inequality is falling in poorer countries:
     Main contributor: increased relative labour income of the young

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     Main contributor: difference in employment bw old and young
  2. IGI inequality is falling in poorer countries:
     Main contributor: increased relative labour income of the young
- **Why?** What has changed in the last two decades?
  1. Education Expansion
  2. (Tail of) boom of service economy and ICT revolution
  3. Great Recession ("scarred generation" argument)

Outline

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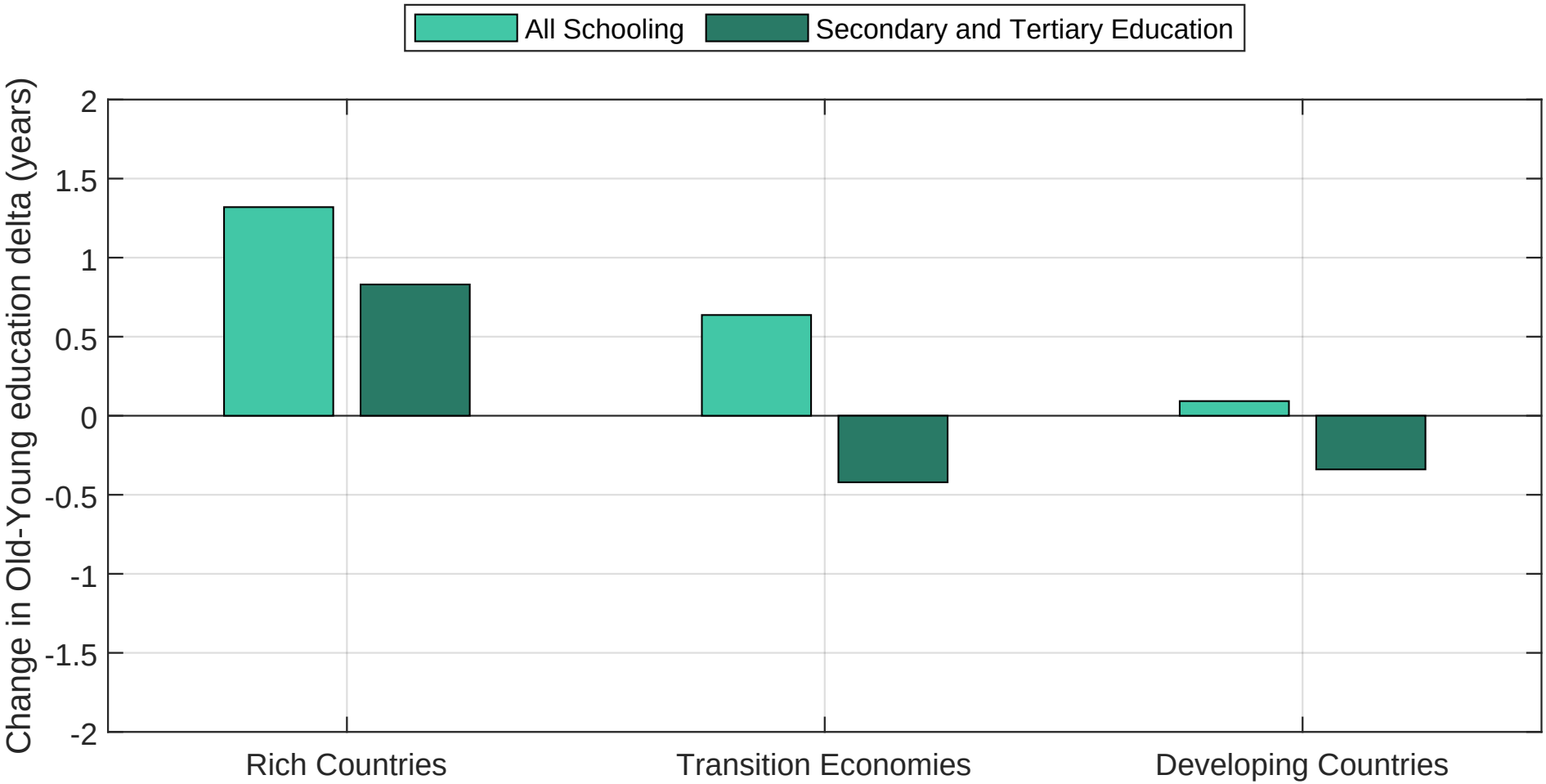
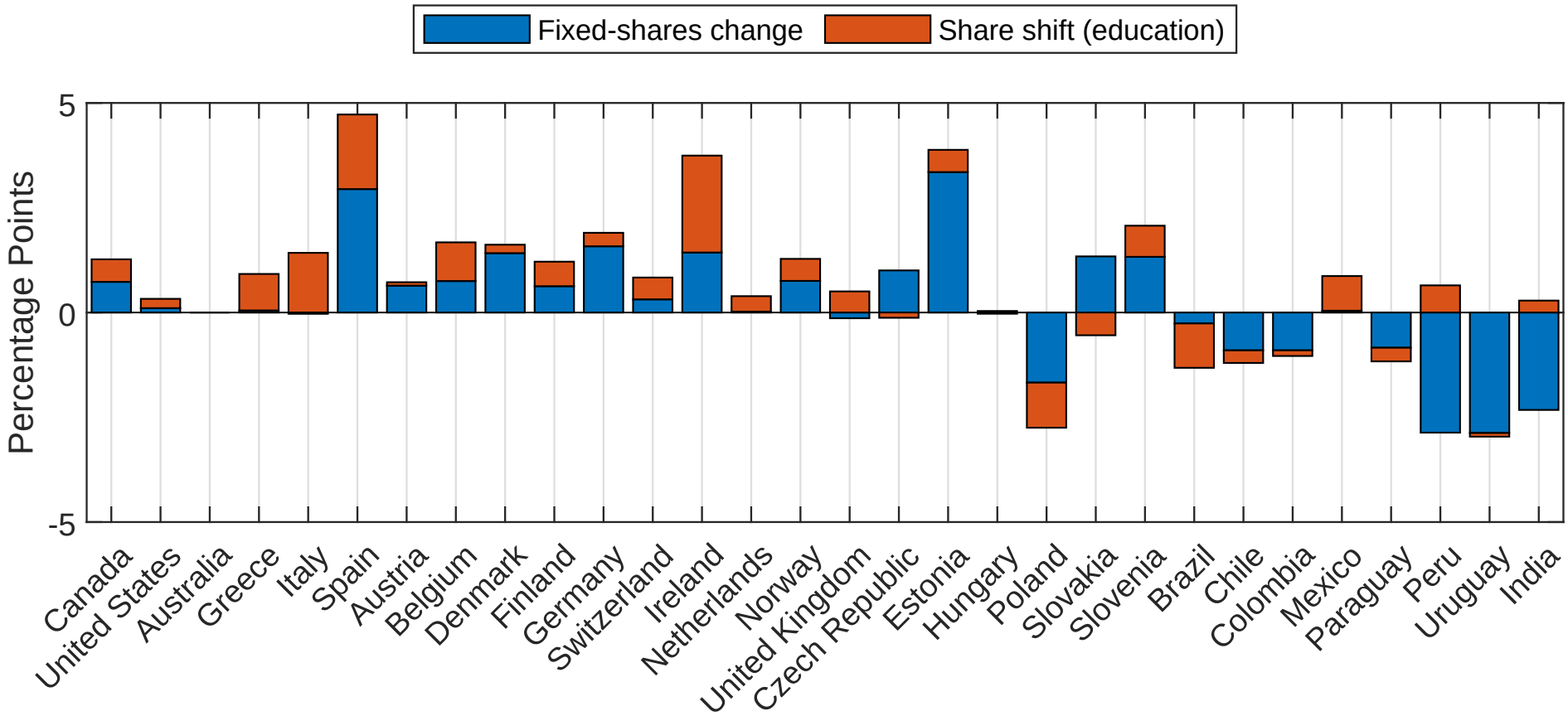
Figure: Change in education gap, old vs young



- Education gap is closing in rich countries

Education Expansion

Figure: What is the role of change in education attainment?

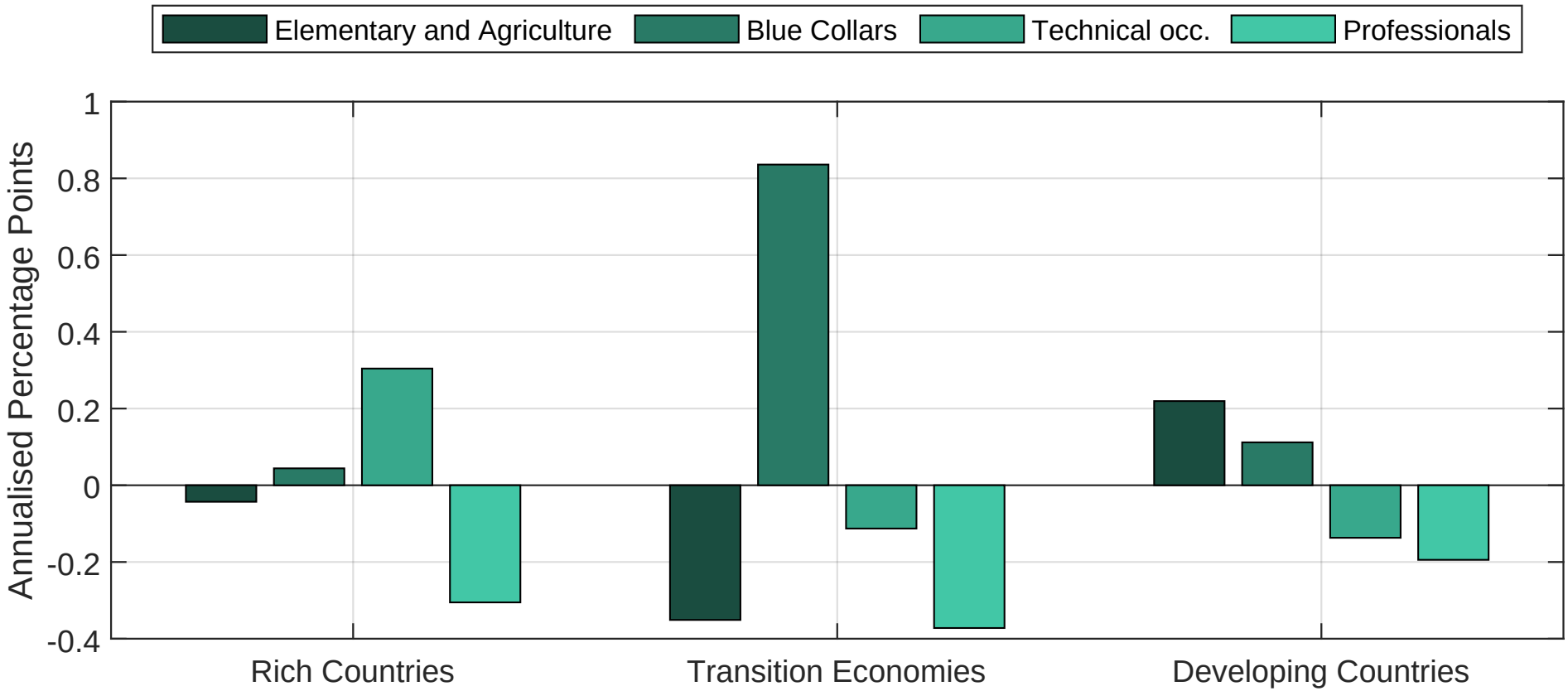


Outline

Occupational trends: "This job is getting old"...

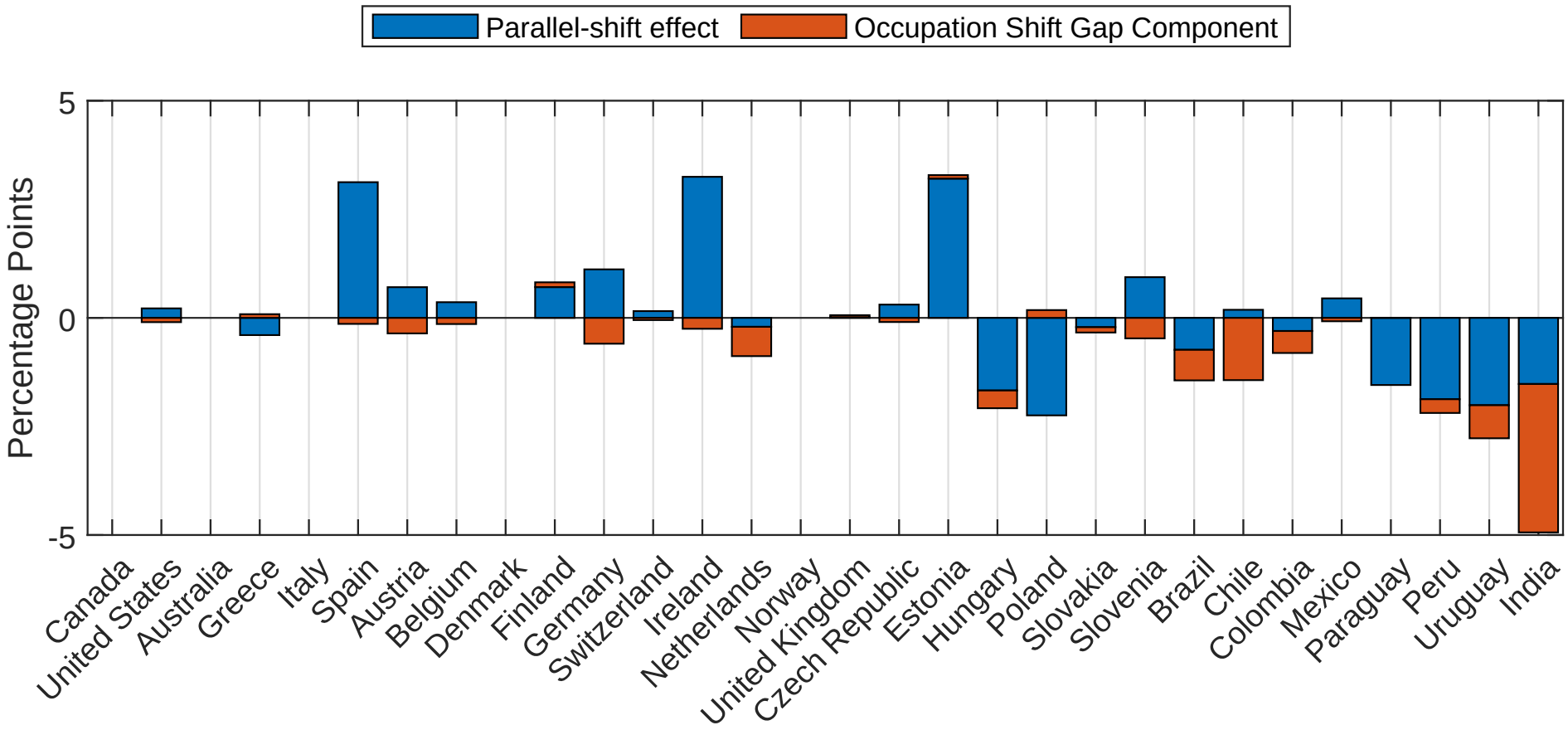
Consider $\gamma_{z,j,t}$ share workers employed in occupation z for group j at t

Figure: Occupation shift gap: $\Delta\gamma_{z,\text{old}} - \Delta\gamma_{z,\text{young}}$



... But not enough?

Figure: Labour Income Component of GRD



What about other trends/BC?

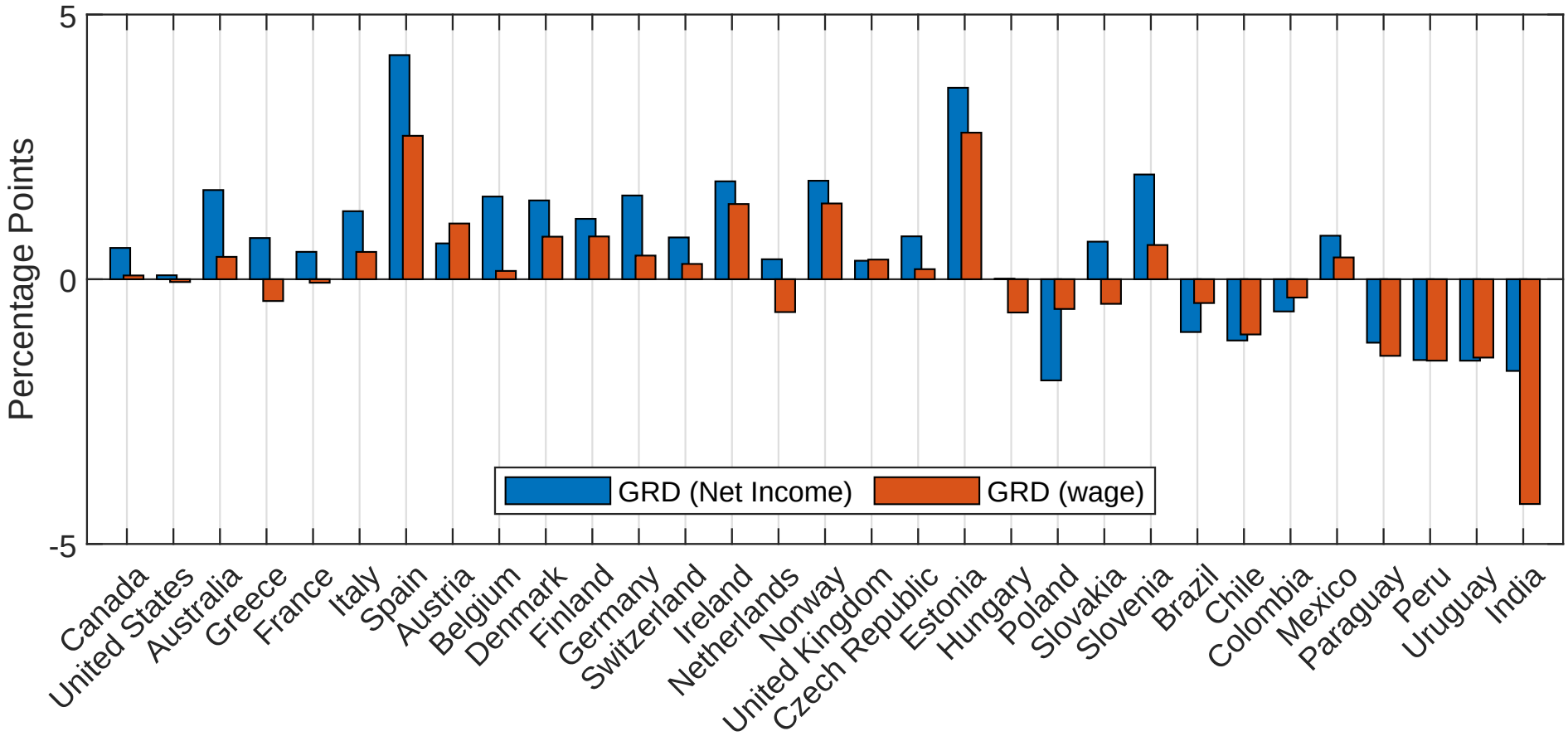
- Female labour force partecipation: not very important
- Business Cycle (recessions, recessions when young,...): cannot explain LR trend in IGIR
- Pension reforms: WIP...

Conclusions

- Intergenerational Income Inequality:
  - Increasing in *all* rich countries
  - However, not a global trend
- Mainly explained by:
  - Increasing employment rates among old
  - Change in relative wages of old and young workers
- Relevant channels: long-run trends in education and structural change
  - Not a bad thing, in first approximation?
- Two important questions to be answered:
  - Any reason beyond 'equality/fairness" to care about IGI inequality?
  - What future trends to expect in developing countries?
    Are governments shaping their pension schemes and borrowing accordingly?

Income vs wage gap

Figure: GRD of net income vs GRD of wage



Female Labour Force participation effect

Figure: Contribution of changes in FLFP to GRD