KU LEUVEN

Funding Mechanisms in Higher Education

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This presentation

Overview of selected funding mechanisms in higher education

Didactic case: Compare the system in the Flemish region of Belgium to Estonia and other OECD systems

Cfr. "*Estonia as comparable jurisdiction for Flanders*" (p.83).

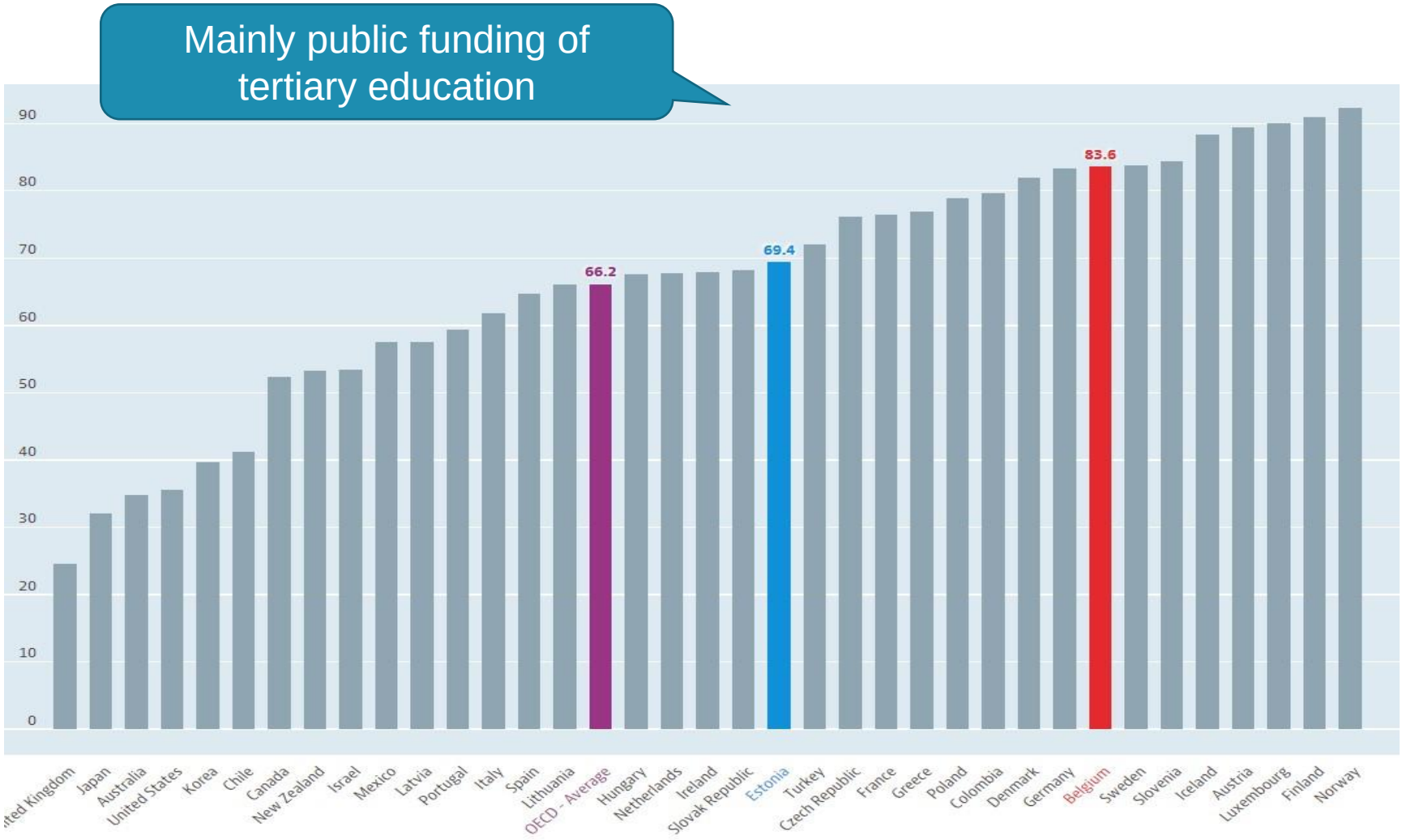
Background documentation and source of the materials:

OECD (2021). Resourcing Higher Education in the Flemish Community of Belgium. Pp. 196

Overview

- Setting the scene
- Overall funding models
- Performance-based funding
- Broad access to higher education

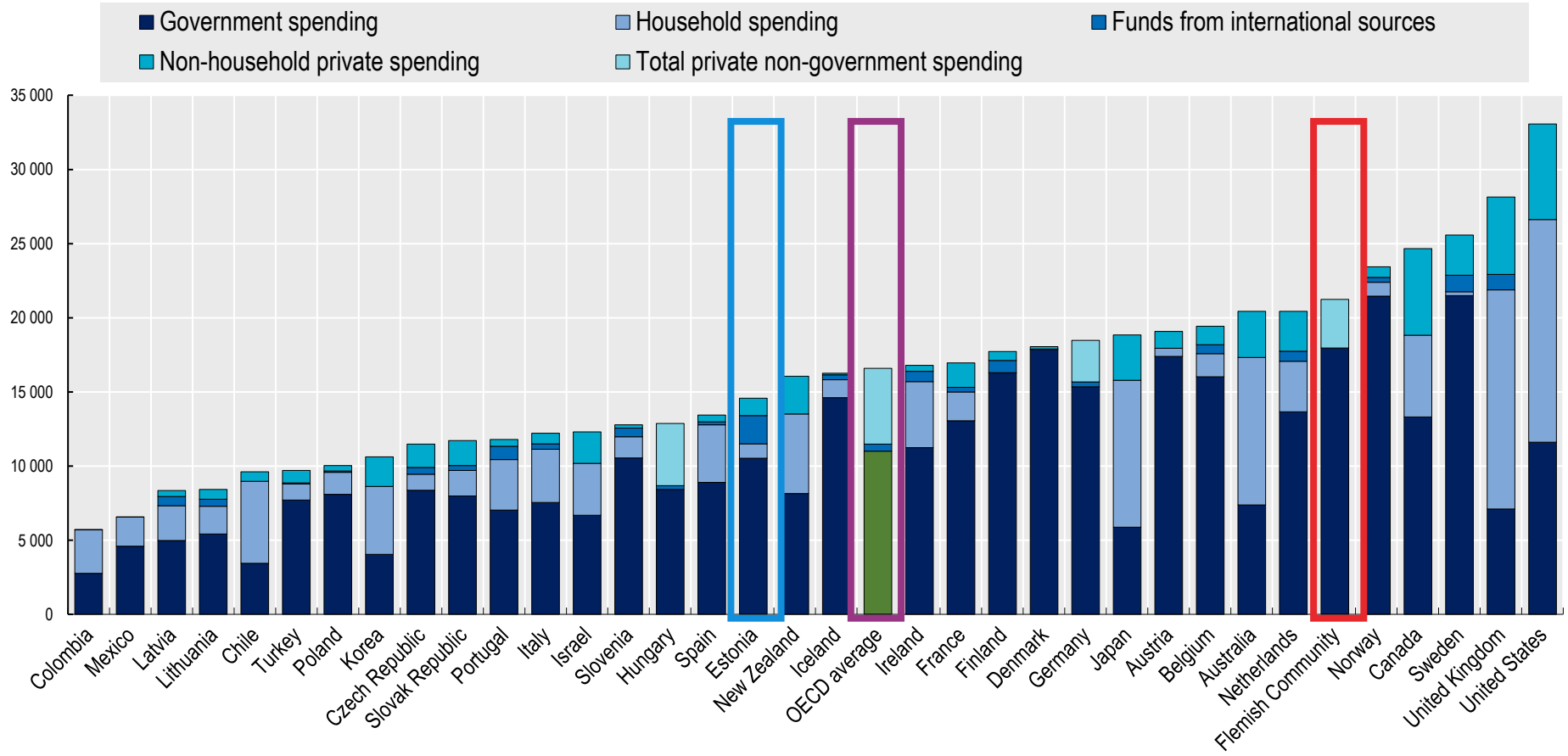
Public spending on higher education



Public spending as % of total education spending, 2018

Expenditure per student

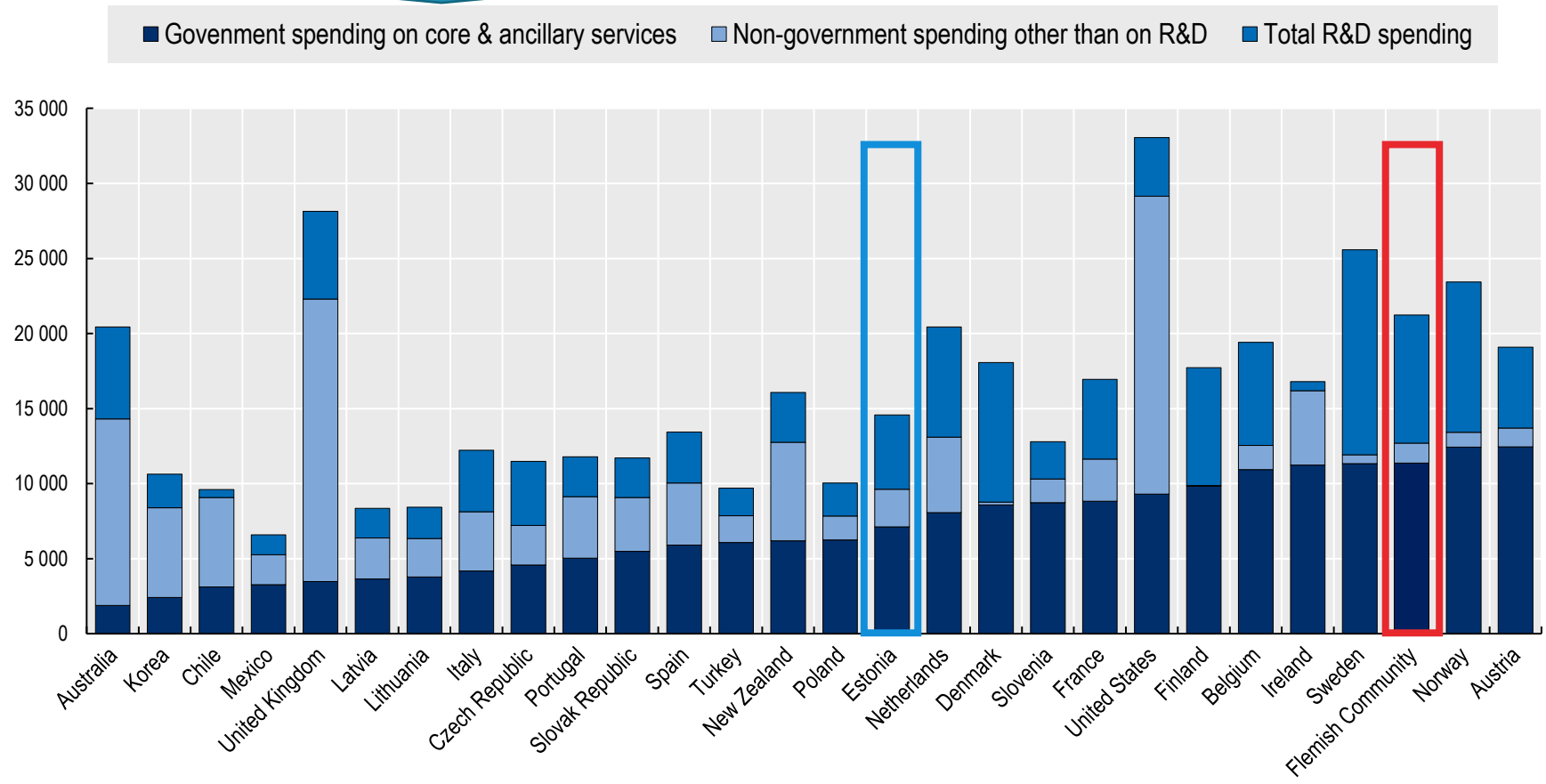
Overall, 30% lower spending per HE student in Estonia than in Flanders



Expenditure per FTE student on higher education institutions by source of funds (in USD), 2017

Expenditure per student by destination of funds

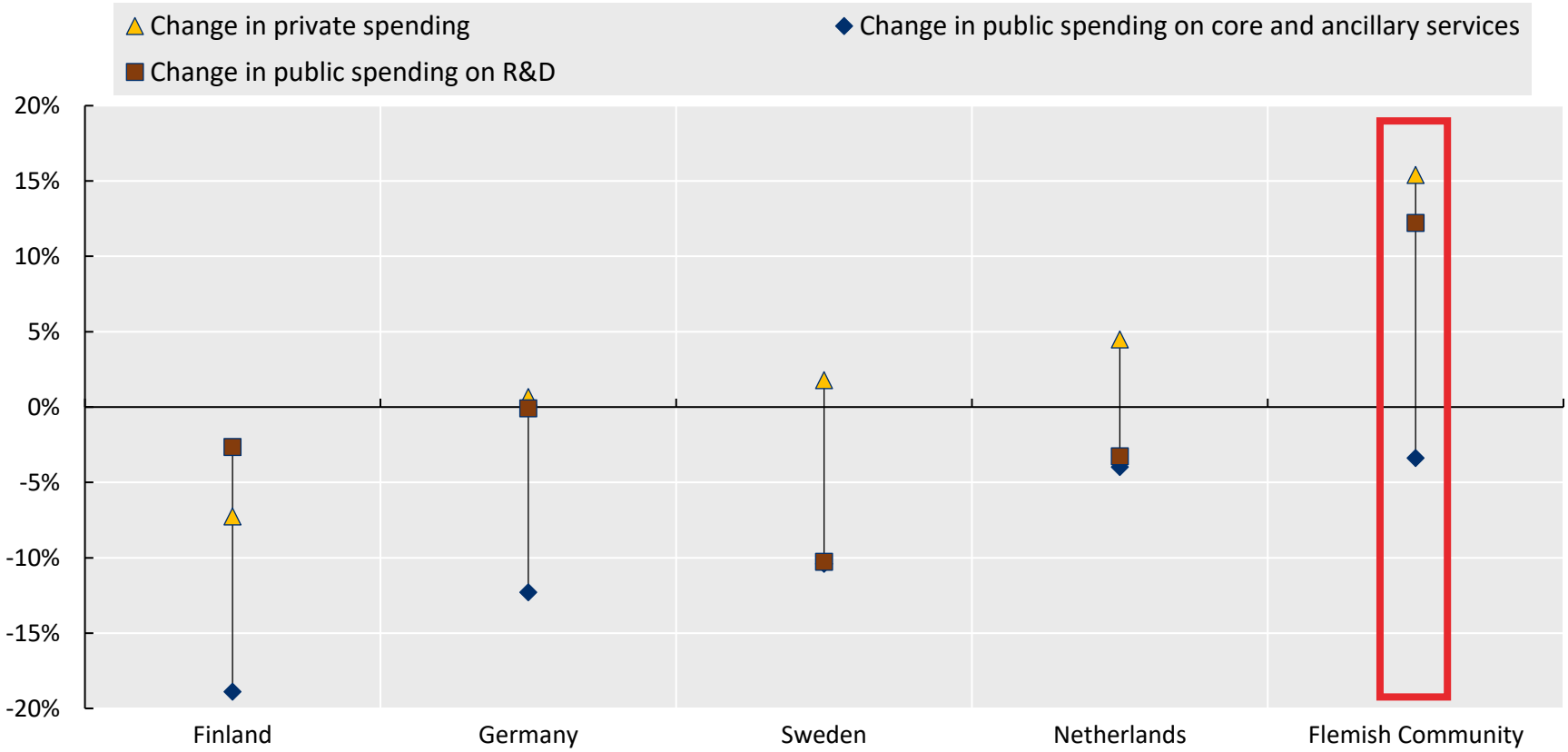
- In Estonia 34% of funding is on R&D (versus 40% in Flanders)
- In Estonia 17% is private spending on core and ancillary services (versus 6% in Flanders due to low tuition fees)



Expenditure per FTE student on higher education institutions by destination of funds (in USD), 2017

Expenditure per student by destination of funds

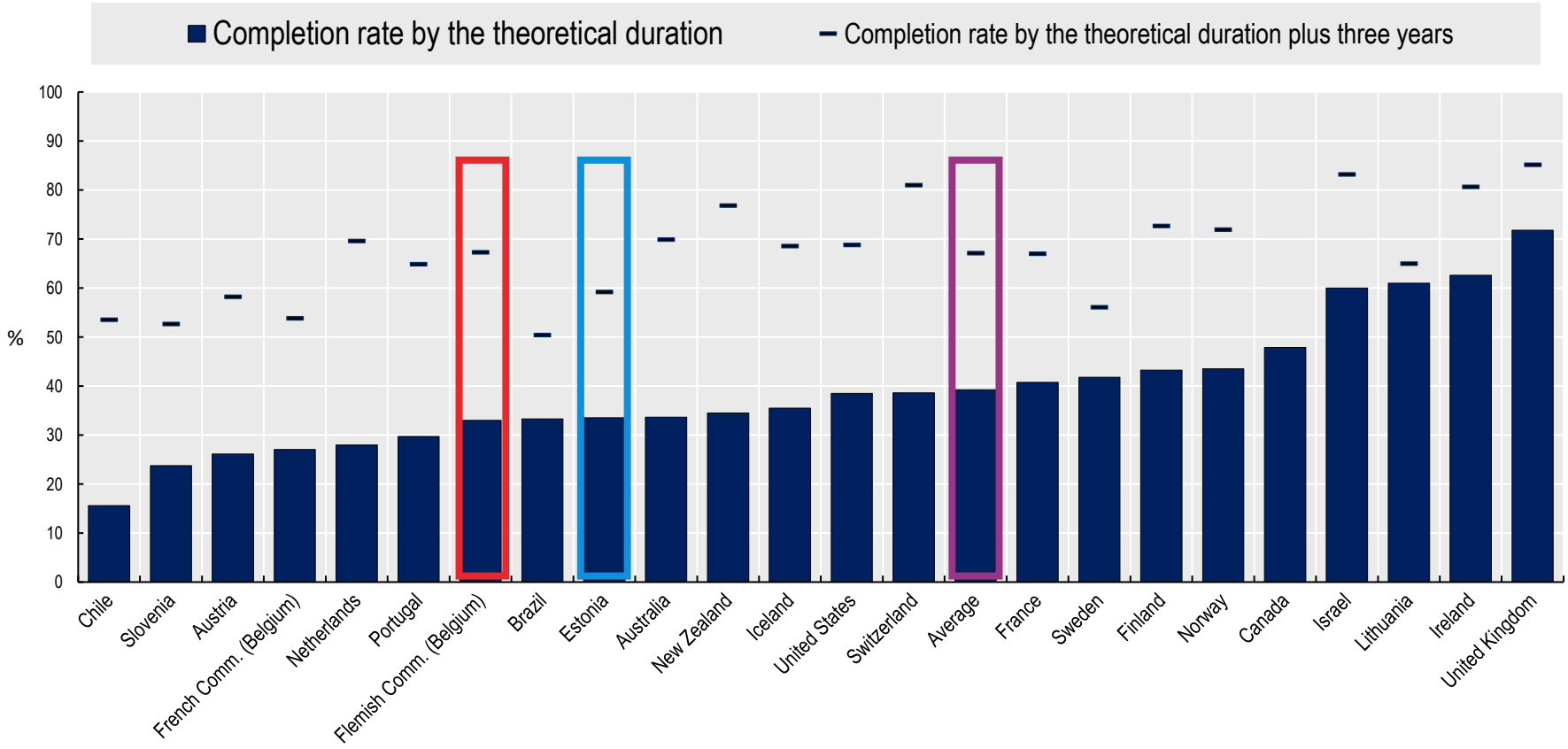
Between 2012 and 2017 increase in private spending, increase in public spending on R&D, Public spending on core & ancillary services ↓ in past years



Change in public and private expenditure per student, 2012-17

Completion rates & time to degree

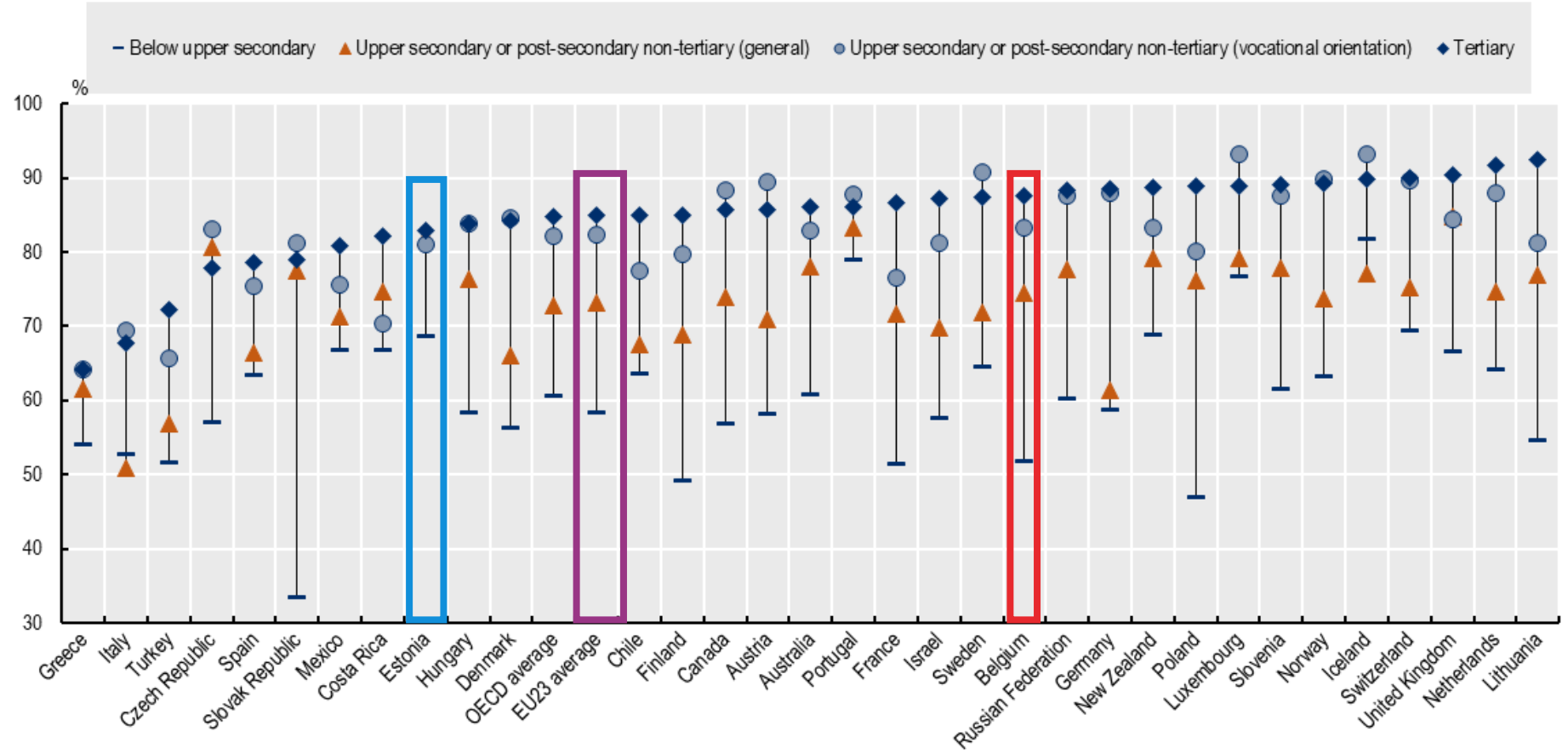
Comparable issue in Estonia and Flanders: low graduation on time (in Flanders due to open access system & flexible enrolment arrangements) → delay is costly



Share of full-time bachelor's students completing degree by theoretical duration & theoretical duration plus three years, 2017

Employment rates of young graduates

- With a knowledge-intensive economy, the employment rates of tertiary education graduates are positive
- Relatively high employment rates for lower education levels in Estonia



Employment rates of 25-34 year-olds, by educational attainment & programme orientation, 2019

Overview

- Setting the scene
- **Overall funding models**
- Performance-based funding
- Broad access to higher education

Funding mechanisms

1. Income from **demand side**: Tuition fees are regulated by Flemish government (979 euro for 60 ECTS → 5% of budget)
2. **"Supplier-oriented" mechanism**: public operating grant is provided directly to institution
3. Versus "**demand-oriented**" mechanism: where resources are directed to students who can spend the resources on a HE institution they enroll (e.g. in Lithuania)

Mechanisms

- In case of supplier-oriented mechanism

  → Use of block grant: lump sum for institutions

Basic grant for teaching and institutional operations

Specific grants for research

Specific grants for capital investments

	Flemish Community[1] (2019)		Denmark (2019)		Finland[2] (2020)		Ireland[3] (2017)		Netherlands[4] (2019)		Scotland (2017)
	Uni.	UC	Uni.	UAS	Uni.	UAS	Uni.	UAS	Uni.	UAS	Uni.
Teaching grant	43%	94%	46%	94.5%	42%	76%	39%	64%	55%	97.4%	50%
Fees paid by public authorities	-	-	-	-	-	-	51%	32%	-	-	22%
Research grant	54%	4%	54%	5.5%	34%	19%	-	-	42%	2.6%	19%
Capital grant	2%	3%	-	-	-	-	10%	4%	-	-	4%
Grant for strategic development	-	-	-	-	24%	5%	-	-	3%	-	4%
Average proportion of institutional revenue from core public funding	**52%**	**72%**	**57%**	**77%**	**63%**	**79%**	**34%**	**62%**	**58%**	**72%**	**39%**

The basic grant

- Construction of budget envelope via:
  - **Enrollment limits**
    - → Dk, Sc, Aus: fund a maximum number of students
    - → Lithuania: government agrees to fund a specific number of state-funded study places, with students selected on merit (students who do not qualify must pay fees).
  - **Demand driven**: But, high program costs (e.g. Australia, England)
  - **Distributive process**: fixed envelope distributed based on total # units in denominator (e.g. NE, Finland)

	Type of budget envelope	Open or capped recruitment of students	Formula allocation method		
			Fixed unit cost per student	Mixed (unit costs + distributive)	Purely distributive
Ireland	Closed	Open (1)		X	
Denmark	Closed	Capped in certain fields	X(2)		
Flemish Community	Semi-open	Capped in certain fields			X
Finland	Closed	Effectively capped			X
Australia	Closed	Effectively capped	X		
Scotland	Closed	Capped	X		
Netherlands	Closed	Open			X

The basic grant – Semi-open budget

“Click system”

- mechanism to adjust budget available for variable components of teaching grants in line with student numbers:

  If # students enrolled ↑ or ↓ by > 2% in professional, artistic or academic programmes (based on historical 5-year), this generates a “click”, i.e., the variable funding is adjusted ↑ or ↓ by 2% in the following budget year

- designed to create “semi-open” budget envelope

The basic grant – Example distributive process

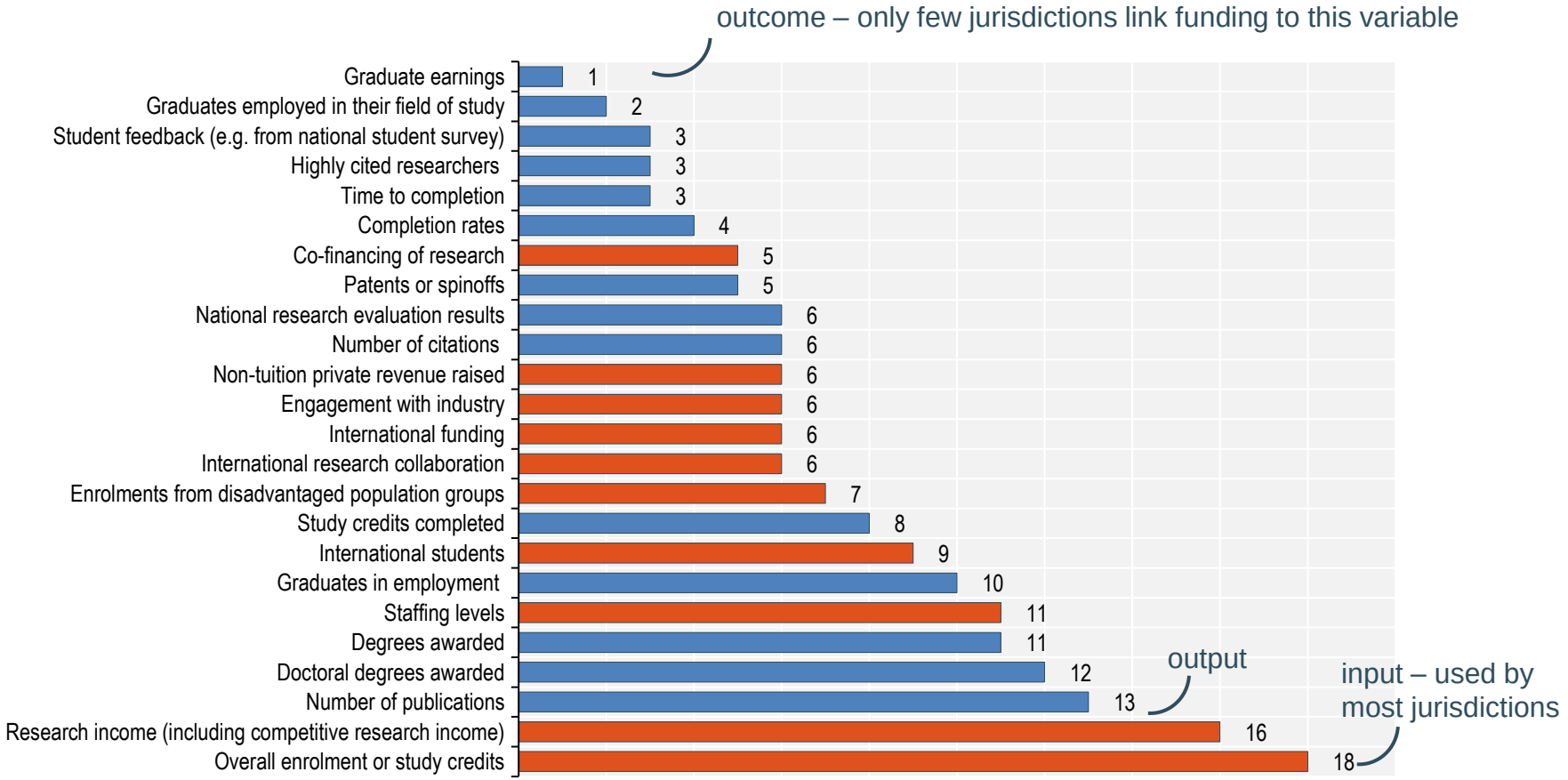
Student-driven formula-based funding model in Flanders

- Formula is based on a set of **parameters**, among which:
  - **Input measure** (10% of grant): # credits for which students enrol
  - **Output measures** (90%)
    - # credits that they successfully pass

      !! Student must fulfil 3 criteria to be “fundable”
    - # PhDs, # publications & citations, bibliometric indicators, ... (i.e. measure of output)
- parameters are adjusted using **degressive weighting** system & average values are used in the model for the 5 academic years *t-7/t-6* to *t-3/t-2*

The basic grant – Example distributive process

- Most formula-based models for core institutional funding include input, output & outcome variables



Number of responding jurisdictions (out of 27 jurisdictions) using each criterion

The basic grant - Comparison

In Flanders, higher proportion of teaching budget distributed based on output variables.
In Estonia, more distributed based on historical reasons

Table 3.6. Proportion of core teaching grant allocated by variable type (selected systems)

Country		Input / activity	Output	Outcome / other performance	Historical
Denmark		0%	67.5% (activity grant) + 3.75% (results grant –study duration)	3.75% (results grant – graduate employment rate) + 2.5% (performance component of basic grant)	22.5% (guaranteed basic grant)
Estonia		0%	~6% (output performance indicators)	11% (other performance indicators) + 3% (performance agreement)	80%
Norway		0%	~27% (performance indicators)	~5% (performance indicators)	68%
Flemish Community (1)	Universities	32% (enrolled credits)	68% (output – credits passed & diplomas)	0%	0%
	Professional programmes in university colleges (2)	47% (enrolled credits)	53% (output – credits passed & diplomas)	0%	0%
Ireland		100%	0%	10% of core grant linked to institutional compacts	0%
Finland	Universities	0%	83%	17%	0%
	Universities of applied science	0%	88%	12%	0%

The basic grant – alternative models

- Alongside formula-based model (see before), 2 additional ways to allocate funds (**performance-based**):
  - based on achievement of system-wide performance goals (e.g. employment rate of graduates in Denmark)
  - based on institutions' performance in relation to quantitative targets established in **institutional performance agreements**

Mechanisms used to allocate performance-based funding

	Output and outcome indicators in core funding formula		Separate budget envelope allocated based on output or outcome indicators		Institutional performance agreements with proportion of public funding conditional on observed performance		Institutional performance agreements as condition of funding, without financial penalties linked to observed performance
	Output	Outcome	Output	Outcome		%	
Denmark	X	X	X	X	X	1.25% (1)	
Ireland					X	10% (2)	
Finland	X	X					X
Flemish Community	X						
Scotland							X
Netherlands	X				X	3% (3)	

Note: Output indicators include the number of credits obtained or the number of degrees awarded, while outcome indicators include graduate employment rates or the results of student feedback exercises.

Overview

- Setting the scene
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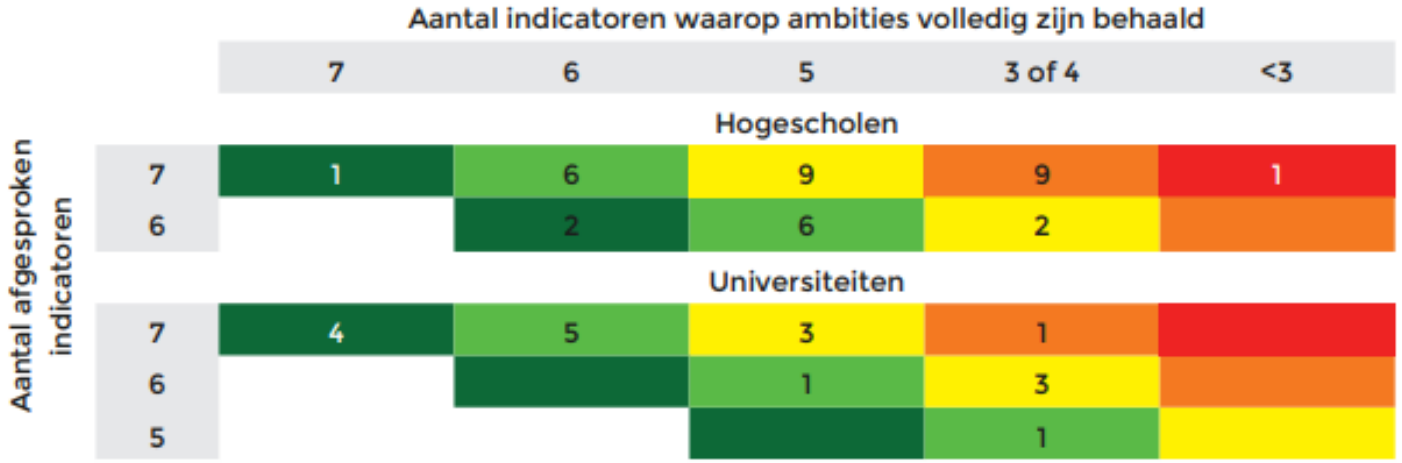
- **Performance-based funding**
- Broad access to higher education

The Dutch case

- 1st generation of performance agreements (2012-17):
  - 7 nationally determined indicators (e.g. dropout in first year, graduation, switch, national student survey), for which institutions agree their own target
  - payment of 5% of total teaching grant dependent on achievement of targets

  --> Review Committee for higher education and research (I was part of its administration)



Source: Reviewcommissie Hoger Onderwijs en Onderzoek (2017). Prestatieafspraken: het vervolgproces na 2016

The Dutch case

- Evaluation 1st generation of performance agreements (2012-17):
  - Increased transparency
  - Positive effects on organisation & strategic focus of HEIs
  - Pass rates & on-time completion rates ↑ in universities
  - On-time completion rates ↓ in universities of applied sciences

- 2nd generation of performance agreements (2019-24):
  - payment of bonus funding allocation dependent on institutions' **progress**, measured using **qualitative assessments**

The US case

- 41 of 50 states have linked state appropriations to outputs/outcomes, with proportions varying from 3% to 100%
  - e.g., credit hours earned, degrees awarded & attainment among under-represented groups
- Via a meta-analysis, Ortagus et al. (2020) investigate the effects of performance-based funding (PBF) in US:
  - no or minor positive effects on retention & graduation
  - selective institutions become more selective
  - funding disparities between institutions are exacerbated

‼ **PBF can be challenging if focus is on narrow set of outputs**

The Flemish Case

- Suggestive evidence from 2015 on output-linked funding model reveals:
  - no improvement in progression & completion rates
  - ↑ in time-to-degree
  - ↑ in drop-out rate of first-time bachelor's students
  - ↑ in proportion of degree-seeking students enrolling for < 60 credits

- Effects explained by:
  - weak incentives for institutions to adapt behaviour in response to output parameters (i.e., no limit on time students take to acquire first credits)
  - weak incentives for students to make wise decisions about study choice & to progress swiftly (i.e., students often have "spare" credits)
  - late intervention of study progress monitoring for failing students

The general case

- In general, in most countries only small proportion of funding is performance based
  - ↔ Exception Ireland: 10% of funding linked to institutional performance agreement (yet, largely notional as no institutions have ever incurred a financial penalty in practice)

- However, evidence shows that:
  - Even attaching small amount of money to institutional agreements is sufficient to incentivise institutions to take seriously,
  - while avoiding perverse effects (from higher stakes if more money is distributed in a performance-based way)

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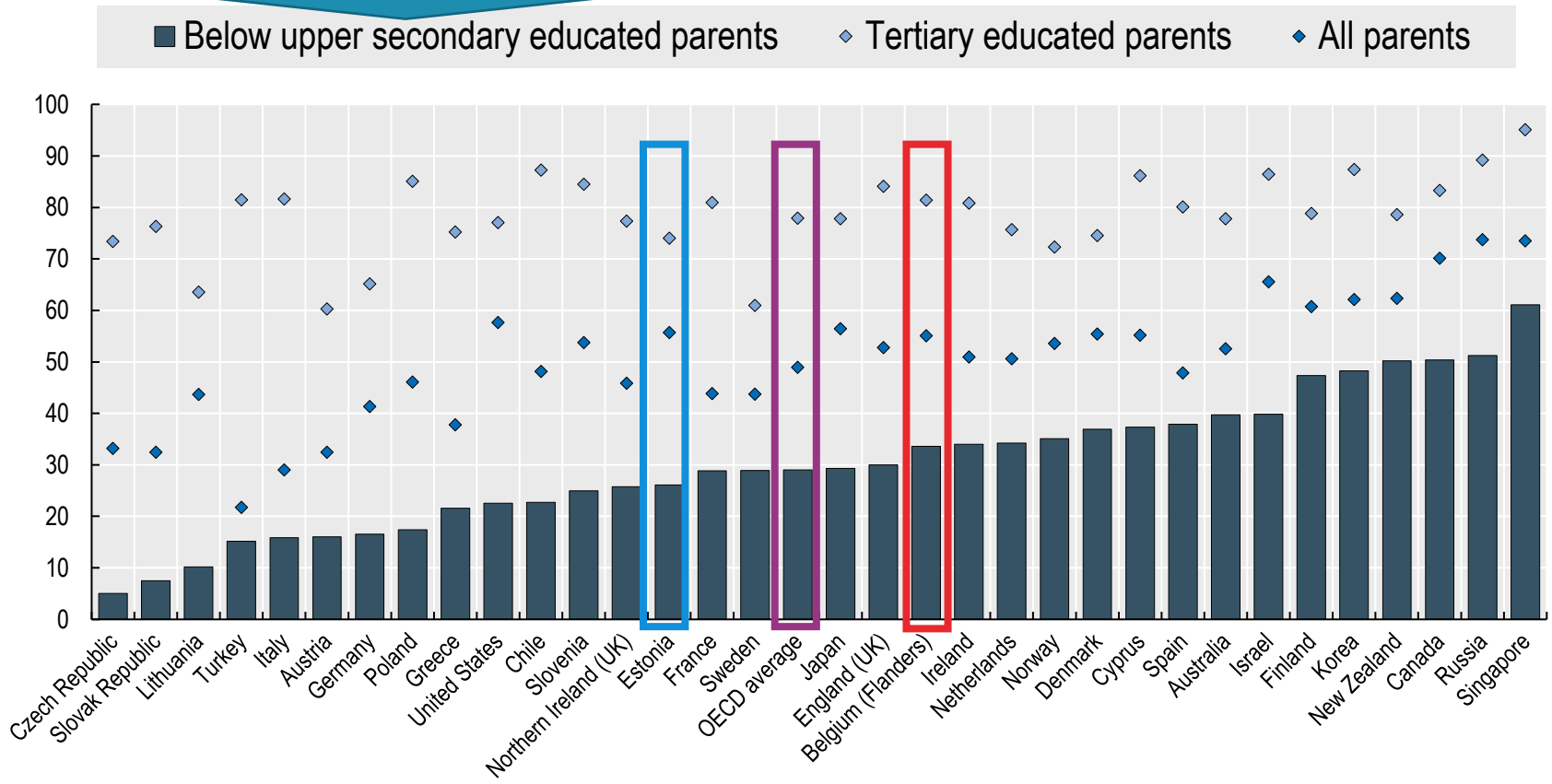
The issue – Intergenerational mobility

Widening access to higher education
- Flanders: if parents did not complete SE, 34% of their children enter HG
- Estonia: if parents did not complete SE, 26% of their children enter HG



Proportion of 25-44 year-olds who have entered HE at least once in their life by parental education attainment, reported 2012-15

Broad access to higher education

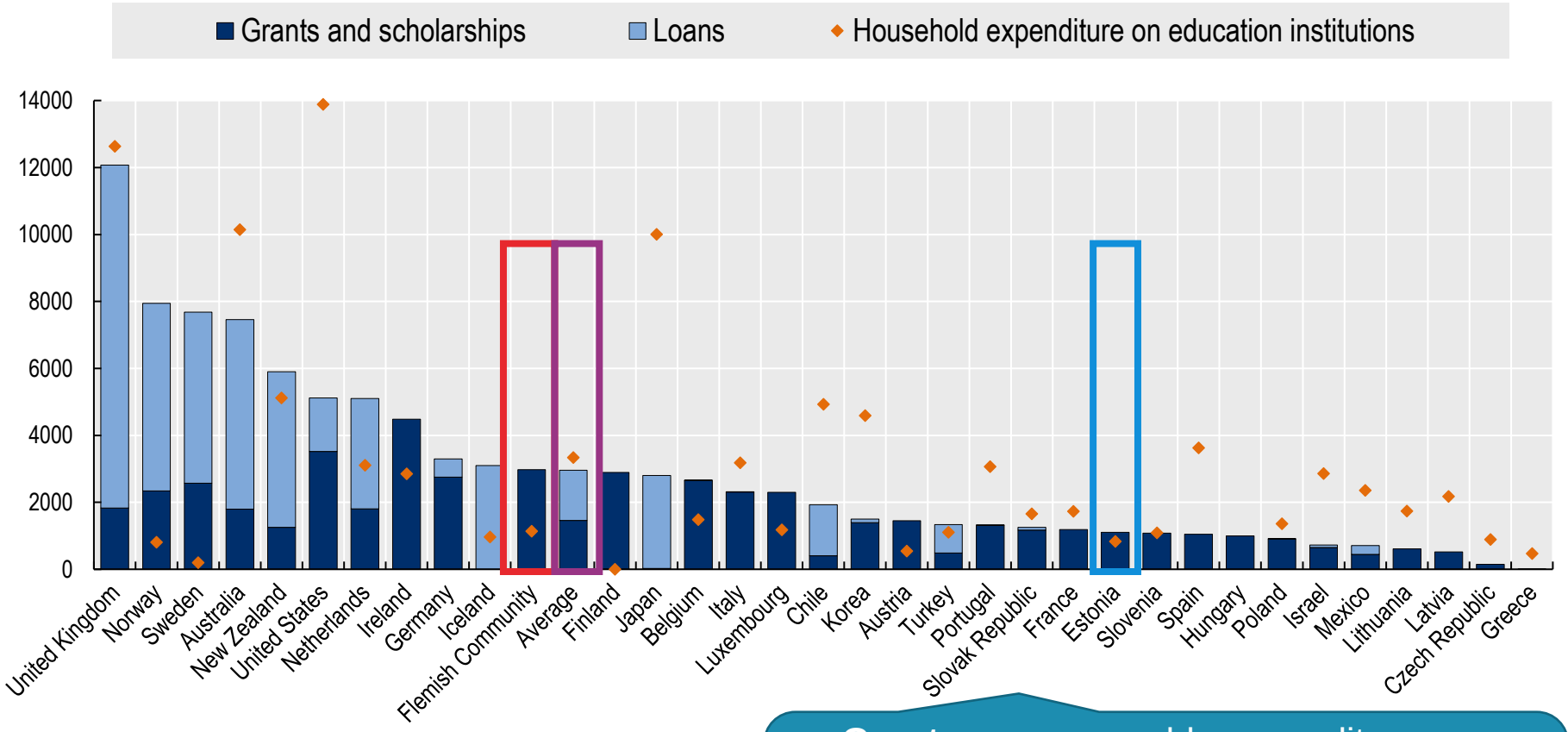
- Access to higher education depends on:
  - performance of the secondary education system
  - entry requirements and pathways
  - socio-cultural factors
  - financial support to students.

→Link with funding:

- to students: loans and grants
- to institutions

Financial aid to students

Grant or loans are the most frequently used financial mechanisms to promote social equity goals
→ Levels & coverage of grant/loan systems vary considerably



Public spending on student aid per FTE student, 2015

- **Grants**: non-repayable expenditure
- **Loans**: government-backed funds advanced to students with the expectation that at least a proportion will be repaid

Financial aid to students in Flanders

Study grants

- based on family-income criteria
- dependent on # credits student is enrolled / successfully passed (limit on length of time student can receive grant
- average of EUR 1842 in university colleges & EUR 1924 in universities

Tuition-fee reductions

- for students who qualify for grant / close to qualifying for grant
- dependent on # credits

No student loans

Financial aid to institutions in Flanders - direct

Additional institutional funding

- By an additional weighting factor for target groups (however, within a total budget envelope distributed among institutions)

Financial aid to institutions in Flanders – indirect

Indirect form of support by student services

- on top of core operating grant, based on average share of enrolled credits
- EUR 50 million annually
- designed to support equal access to HE through improving basic conditions for students and reducing financial and non-financial barriers to participation
- 6 activities include:

1. food & catering
2. housing
3. social services
4. medical & psychological services
5. transport
6. student organisations & initiatives

References

- OECD (2021). Resourcing Higher Education in the Flemish Community of Belgium. Pp. 196
- OECD (2020). Resourcing higher Education. Challenges, choices and consequences. Pp. 168.

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