Talent – the new competitive parameter From a Danish perspective

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Agenda

- Why do we need more talented from elsewhere?
  - At universities
  - In society (economy)
- Student flows: current situation in a comparative perspective
- Attracting the best and the brightest
  - Obstacles
  - Challenges

Why care about talent?

- Two reasons
- Important for the universities. Danish universities have for many decades been of high international quality. See figure
- Shanghai list: Two (three) Danish universities among Top 100 (200). In Top 100 Sweden three, Finland one, and Norway one
- Still, can and should improve
- More importantly, due to growing international competition, risk of falling behind is bigger than before.

Actually have been doing quite well!

Source: New England Journal of Medicine, 2012

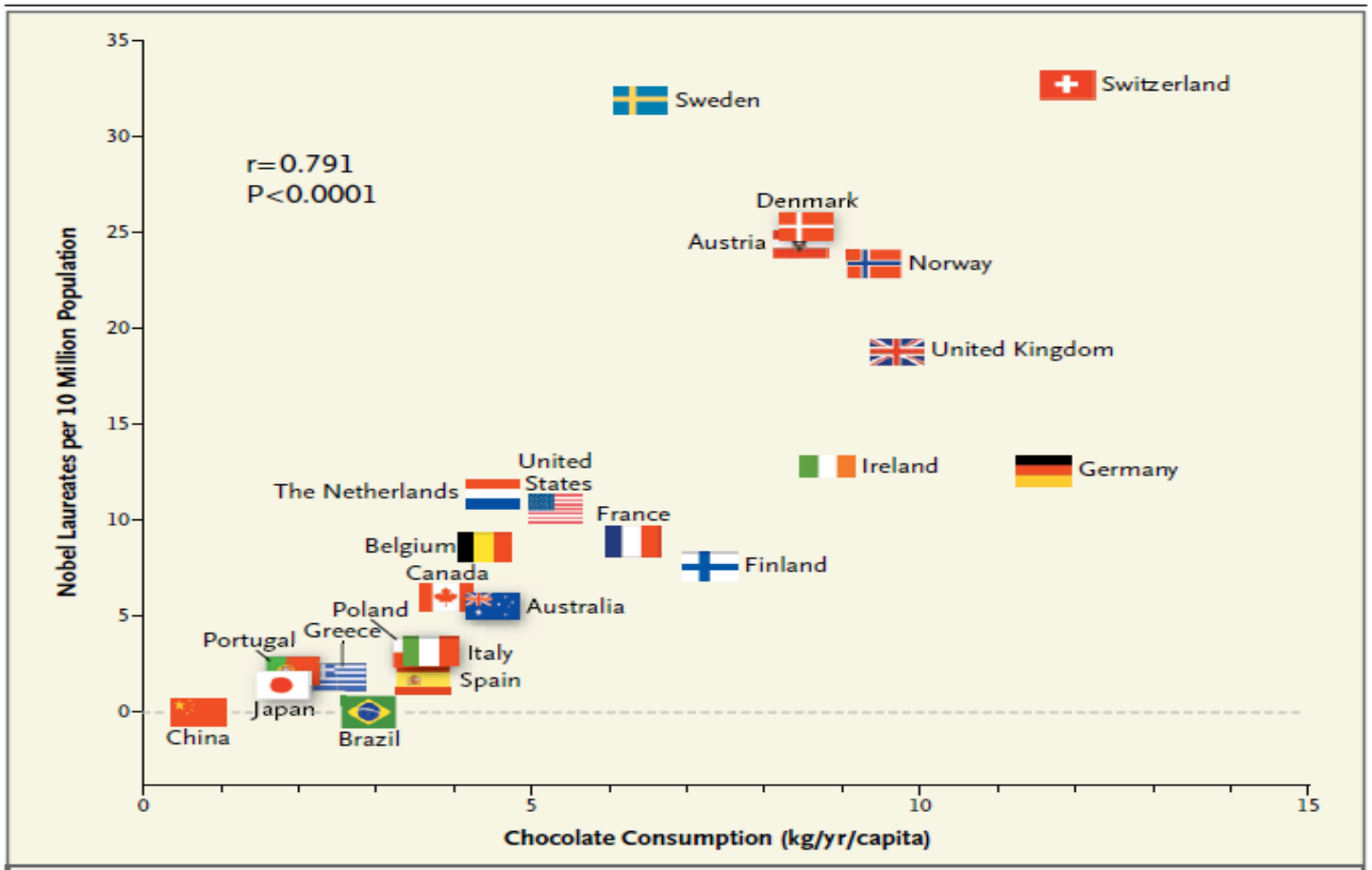


Figure 1. Correlation between Countries' Annual Per Capita Chocolate Consumption and the Number of Nobel Laureates per 10 Million Population.

For society, students and their employers

- Universities' primary goals: education (produce cultured, cultivated inidviduals who learn how to think and solve problems) and research.
- Universities the home of latest scientific knowledge. Understand new findings and their importance.
- Most important discoveries (also those with commercial applications) emanate randomly from basic, not applied, research.
- Too strong focus on applied research, typically means too strong specialization and a high risk of locking yourself into an area with little impact.

Talent is a competitive parameter, because of

- The growing integration of the world economy, globalisation of production. Especially small open economies need to be prepared for large structural changes in their economies (industries becoming obsolete).
- Increasing demand for global competencies
- Growth miracles of Japan, Korea and Taiwan involved educating their best and brightest young people by foreigners. China's doing the same; others will follow their examples.
- For success as in exporting, you need to have a deep understanding of your (potential) market.

Internationalisation is a two-way street

- Easy to understand neighbour countries. Less so for geographically and culturally more distant economies, like the BRIC countries.
- Danish exports rests on relatively few (but strong) shoulders.
- Maybe even more important: to understand your competitors. And as an employee, the foreign owners of your workplace.
- Diversity of the workforce drives innovation and helps in understanding of foreign markets
  - examples: Mærsk, NovoNordisk

To attract foreign students and to prepare our students for the future, it is important to have

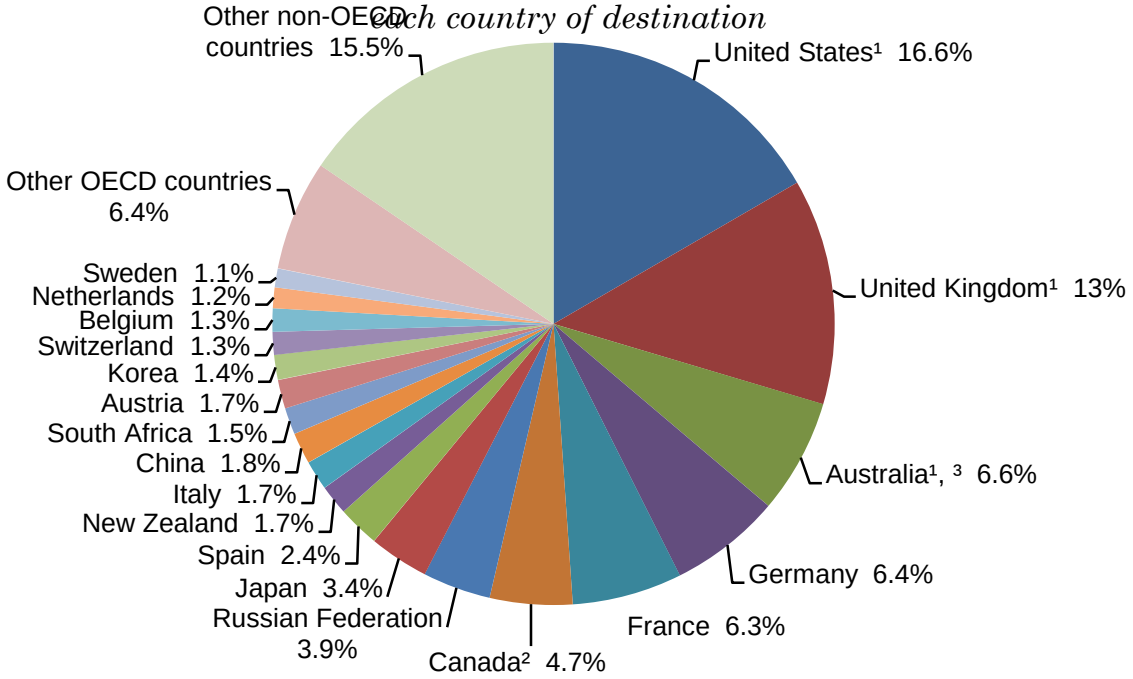
- 1. Danish students studying abroad but also to have foreign students at Danish universities. Not only to/from OECD.
- 2. More international faculty and doctoral students at Danish universities.
- 3. More mobility between universities. Already at a good level. Could follow the US example and not allow PhDs to stay at the same university after their graduation.

  Why mobility? Discoveries, new findings travel fast with internet, but the ways of thinking, how to make them is embodied in people.
- 4. More international content in the curriculum. Especially in social sciences and humanities.

Receivers of international students

Chart C4.2. Distribution of foreign students in tertiary education, by country of destination (2010)

Percentage of foreign tertiary students reported to the OECD who are enrolled in each country of destination



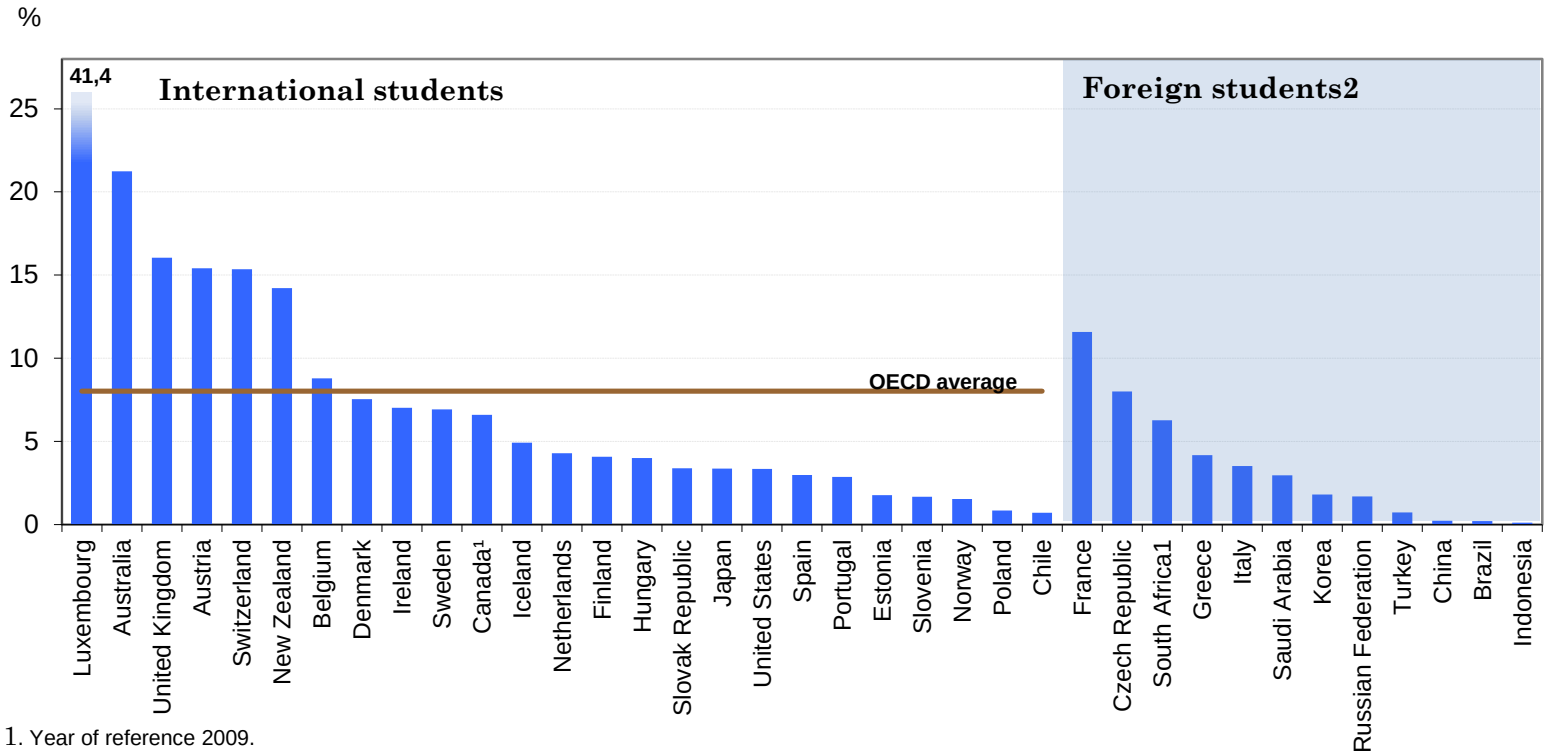
1. Data relate to international students defined on the basis of their country of residence.
2. Year of reference 2009.
3. Student stocks are derived from different sources; therefore, results should be interpreted with some caution.

Source: OECD and UNESCO Institute for Statistics for most data on non-OECD destinations. Tables C4.4 and C4.7, available on line.

Denmark: above OECD average

Chart C4.4. Student mobility in tertiary education (2010)

Percentage of international and foreign students in tertiary enrolments



1. Year of reference 2009.

2. Foreign students are defined on the basis of their country of citizenship, these data are not comparable with data on international students and are therefore presented separately in the table.

Countries are ranked in descending order of the percentage of international students in tertiary education.

Source: OECD. Table C4.1. See Annex 3 for notes (*www.oecd.org/edu/eag2012).*

Mobility patterns of foreign and international students, selected countries

Country	Percentage of national tertiary students enrolled abroad (%)	Number of foreign students per national student abroad
Denmark	**3.2**	**3.6**
Sweden	4.3	2.4
Norway	6.7	1.0
Finland	3.7	1.3
OECD	2.0	2.9
EU21	3.6	2.7
Brazil	0.5	0.4
Russia	0.8	2.3
China	2.0	n.a.

Source: Education at Glance. OECD, 2012

Where do they go (to study)?

From:	**Denmark**	Norway	Sweden
To:			
OECD	**97.2**	97.8	95.1
EU21	**63.0**	75.5	62.3
Nordics	**23.5**	26.7	23.4
Germany	**6.5**	2.7	3.6
UK	**34.3**	23.3	26.7
North America	**14.8**	10.4	17.4
Oceania	**4.9**	10.4	5.1
Asia (Japan, Korea)	**0.6**	0.6	1.0

Source: OECD, Education at glance, 2012

Where do the international students in Denmark (and some other countries) come from?

To:	**Denmark**	Sweden	Germany	Netherlands	UK	France
From:						
Africa	**2.5**	5.7	9.0	2.0	9.3	42.8
Asia	**15.4**	45.3	33.1	12.2	50.5	21.8
Europe	**72.4**	23.3	42.7	81.4	31.0	21.3
(EU21)	**(36.4)**					
(Nordics)	**(31.3)**					
North America	**1.5**	2.4	2.2	0.7	5.0	1.9
Oceania	**0.4**	0.3	0.3	0.1	0.6	0.2
Latin America	**1.3**	2.3	4.6	2.4	2.0	5.5
Unspecified	**6.5**	20.6	8.1	1.2	1.6	6.5
Total	**100.0**	100.0	100.0	100.0	100.0	100.0

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Source: Education at Glance. OECD, 2012

How do you attract talent (students and researchers) ?

- ”Best practice”: the United States
- U.S. obtains a large part of its highly qualified labour force from other countries and via their universities; see table
- H1-B Visa: ”for workers in specialty occupations,… requiring a body of specialized knowledge and a bachelor’s degree or equivalent”. Temporary, granted for three years, renewable for a total of six years.
- American high-tech firms and universities worry a lot that this flow of talent would dry up.

US Employees educated in science and engineering fields

EXHIBIT 2: Trend in Foreign-born Share of S&E Employment

	1990	2000	2004
Bachelors	11%	17%	17%
Masters	19%	29%	32%
All PhD	24%	38%	37%
PhDs < 45	27%	52%	–
Post-Doc	49%	57%	--

Source: 1990 and 2000 bachelor's, masters, PhD and PhDs less than 45 years of age, tabulated from Census of Population, IPUMS data; Post-Docs from NSF.
2004 figures tabulated from US Bureau of Census, Current Population Survey, MORG Files.
Post-Doc, NSF, http://www.nsf.gov/sbe/srs/seind04/c2/fig02-26.xls, where the figures refer to temporary residents rather than to foreign born

College-educated immigrants are very important for the U.S. economy

- Studies show that:
- Increases in college-educated immigrants increases patenting per capita.
- College-educated immigrants outperform college-educated natives in wages, (commerialized) patenting, publishing and starting up firms (with 10+ employees). Differences especially large in science and engineering fields.
- Immigrants arriving on student and temporary work visas are the best and brightest.
- Drastic, temporary cut in number of H1-B visas in 2004 resulted in lower academic quality (SAT and GPA scores) of prospective international students.

Danish higher education and research

- Is actually doing very well in many fields, given the country's size and resources spent on universities.
- Can't rest on our laurels, though.
- Several small steps in the right direction. Big changes, the University Law and the mergers, had little impact and (if any) did probably more damage than good.

Improvements

- Creativity and innovativeness flourish in small, relatively informal, groups. Money spent on ”strategic” research initiatives or ”programs” mostly pay off very little. Successful research cooperation within/across borders is *not* a top-down process.
- Important to note: many countries in the same situation, students and young well educated people much more mobile than others. Know their worth, have alternatives, do not accept being poorly treated.
- Attracting good foreign students. Offer possibility to stay and work in the country. Old rules, non-EU students having to leave almost immediately after graduation, a huge waste of money. New rules are better, but stop-go policy (now how have enough, now we don’t) sends the wrong signal.
- The US example does not apply here? In Finland about 70 per cent of the foreign students stay in the country after graduation.

Talented people can choose

- Current immigration office (SFR) and policies are a considerable obstacle to attract talent to firms and universities.
- The reputation is damaged and especially among educated people information travels fast.
- Many highly educated and talented persons do not plan upon arrival to stay for the rest of their lives. Means: de-emphasize the importance of Danish language skills (when you've decided to stay, you want to learn).
- Instead, provide services in English: for instance, you communicate with newcomers in English and you have international schools for children as in other European countries.
- Employers and universities are doing more and more to make foreign talent feel welcome. Would help a lot if governmental policies would work in the same direction.