
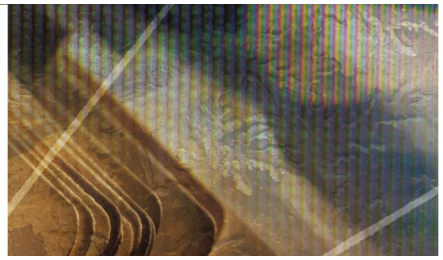


The international mobility of researchers - the potential of Norwegian register data

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The will to policy making and the lack of data

Researcher mobility has been a priority area for almost ten years …

Still Eurostat in a recent working paper concluded:

'… there is a dearth of reliable, detailed, accurate, regular and comparable data regarding the international migration of the highly skilled. This is because although migration statistics have long been collected, there is as yet no formal mechanism to differentiate for a large cross section of countries between skill levels as measured by either level of education or employment.[1]'

[1] Eurostat Working Paper: 'International Migration of the Highly Qualified in the European Union.'

The data collection strategy….

- Instead of asking:
  - What data do we need?

Replaced by

  - **What data do we have?**

- Collecting fragmentary data
- Trying to squeeze something out of the Labour Force Survey.

But:

- Fragments cannot give the answer to: "Brain drain or circulation" – you need data for the "system" as a whole.
- The Labour Force Survey = a sample survey = to few observarions for such small sub-groups as mobile researchers

The answer: full count data = register data, electronic CVs

(Brazil has 40.000 resarchers CV in a database)

The weakness of migration data

- Migration data are register data, i.e. in principle count every person being more than 12 months in another country.
- The SOPEMI system does this job fairly well.

But:

- The UN guidelines do not make the registration of data on education and occupation mandatory, and the data is not collected in many/most countries.
- If this does not change – we will still have the same lack of data in 2017…

Even if occupation had been registered…

- There is no category of RESEACHER in the International Standard Classification of Occupations (ISCO)
- It is a true paradox that there is a category:

1237 Research and development department managers

…but those that are managed by research managers are hidden in the broad categories of "professionals"

This will probably change in the ongoing ISCO-revision process

Brain drain or circulation – that's the question

- Using the
  - migration the register (year, month, destination country)
  - matched employer-emplyee register –
  - The Research Personnel Register (RPR) academic staff in:
    - universities
    - Private non-profit (public) research institutes
    - scientific high-schools
- The matched employer-employee register have data on education, income, citizenship, workplace etc. etc.
- Career can be studied both ***after*** immigration and ***before*** emigration (given that researchers can be identified)

First … the stocks

Year	Norway	Nordic	W-Eur.	E-Eur.	Asia	N-Amer.	Africa	Lat-Am.	Sum
1987	**11272**	**257**	**267**	**26**	**57**	**123**	**9**	**19**	**12030**
1989	**12739**	**290**	**295**	**29**	**86**	**139**	**19**	**17**	**13614**
1991	**14247**	**319**	**341**	**36**	**122**	**144**	**32**	**23**	**15264**
1993	**15645**	**408**	**383**	**68**	**135**	**177**	**49**	**28**	**16893**
1995	**19730**	**514**	**488**	**85**	**148**	**221**	**62**	**37**	**21285**
1997	**21400**	**607**	**627**	**114**	**130**	**272**	**34**	**40**	**23224**
1999	**21991**	**633**	**798**	**157**	**176**	**285**	**64**	**38**	**24142**
2001	**23687**	**657**	**769**	**144**	**149**	**246**	**80**	**34**	**25766**
2003	**25402**	**754**	**918**	**174**	**187**	**286**	**60**	**48**	**27829**
2005	**27099**	**909**	**1260**	**291**	**298**	**345**	**83**	**71**	**30356**

The stocks … cont.

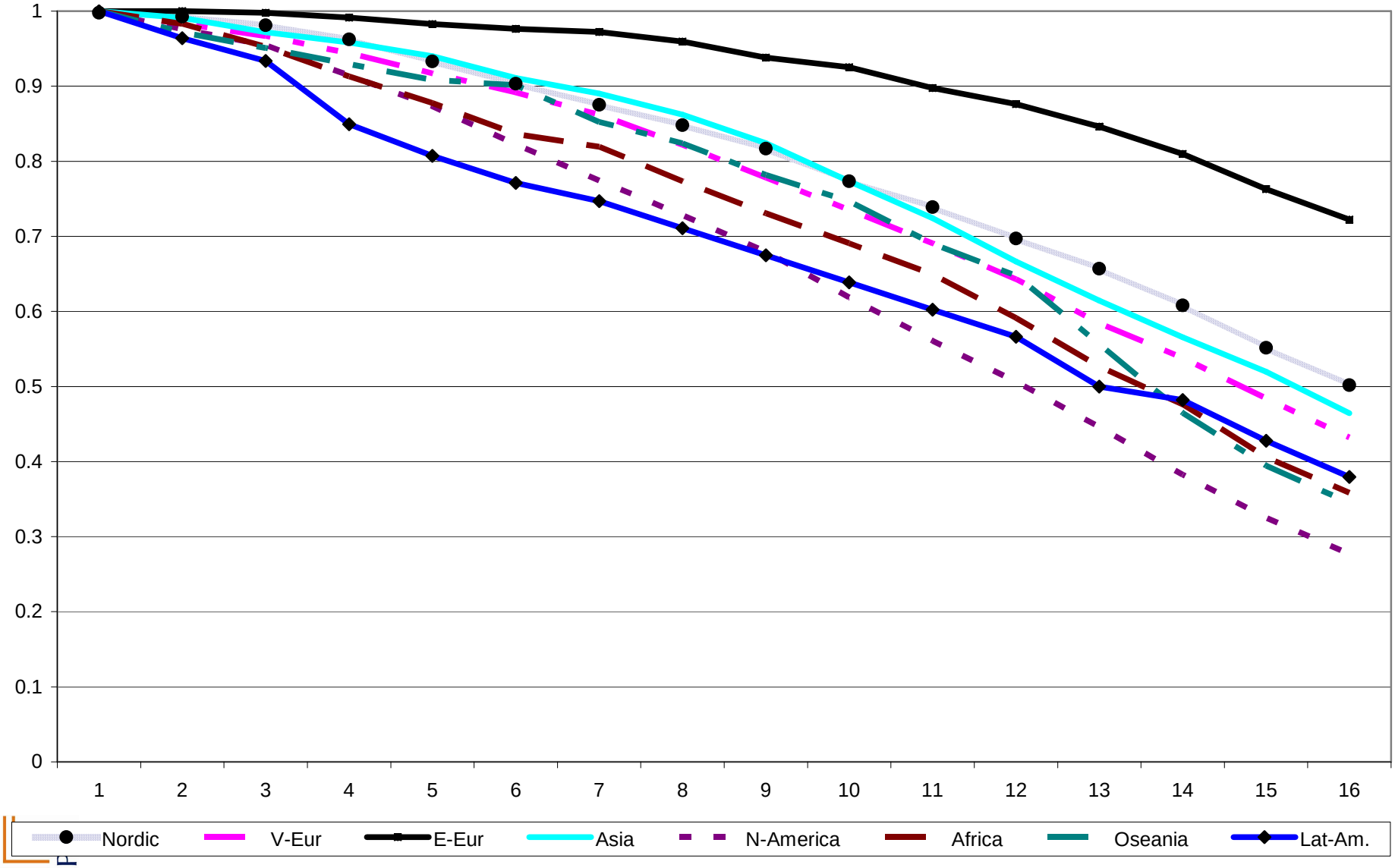
Year	Norwegian	Foreign	Norwegian	Foreign
1987	94 %	6 %	11 272	758
1989	94 %	6 %	12 739	875
1991	93 %	7 %	14 247	1 017
1993	93 %	7 %	15 645	1 248
1995	93 %	7 %	19 730	1 555
1997	92 %	8 %	21 400	1 824
1999	91 %	9 %	21 991	2 151
2001	92 %	8 %	23 687	2 079
2003	91 %	9 %	25 402	2 427
2005	89 %	11 %	27 099	3 257

Based on citizenship in the year of measurement

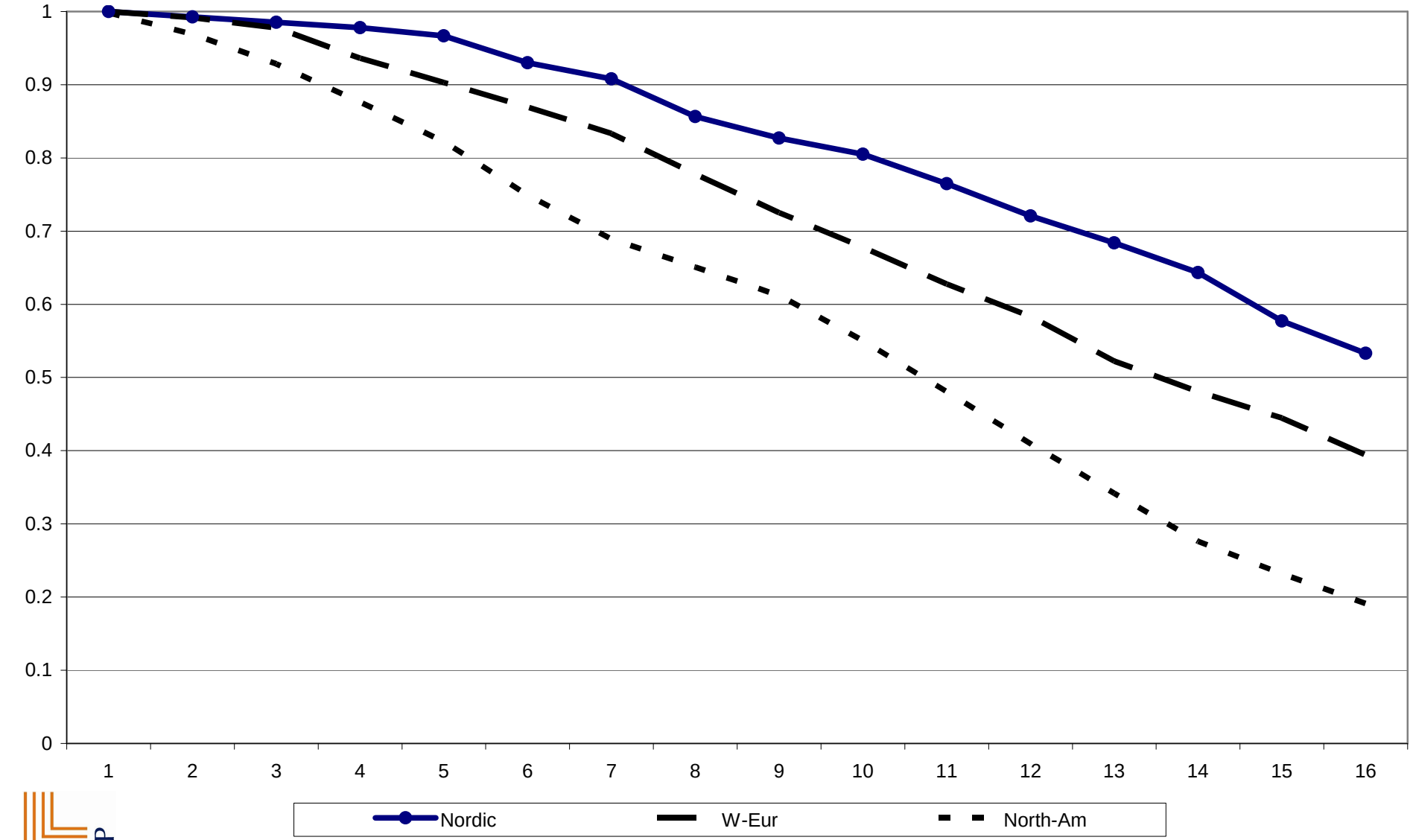
Relative shares of foreigners

Year	Nordic	W-Eur.	E-Eur.	Asia	N-Amer	Africa	Lat-Am.
1987	33.9 %	35.2 %	3.4 %	7.5 %	16.2 %	1.2 %	2.5 %
1989	33.1 %	33.7 %	3.3 %	9.8 %	15.9 %	2.2 %	1.9 %
1991	31.4 %	33.5 %	3.5 %	12.0 %	14.2 %	3.1 %	2.3 %
1993	32.7 %	30.7 %	5.4 %	10.8 %	14.2 %	3.9 %	2.2 %
1995	33.1 %	31.4 %	5.5 %	9.5 %	14.2 %	4.0 %	2.4 %
1997	33.3 %	34.4 %	6.3 %	7.1 %	14.9 %	1.9 %	2.2 %
1999	29.4 %	37.1 %	7.3 %	8.2 %	13.2 %	3.0 %	1.8 %
2001	31.6 %	37.0 %	6.9 %	7.2 %	11.8 %	3.8 %	1.6 %
2003	31.1 %	37.8 %	7.2 %	7.7 %	11.8 %	2.5 %	2.0 %
2005	27.9 %	38.7 %	8.9 %	9.1 %	10.6 %	2.5 %	2.2 %
Average	31.1 %	35.8 %	6.5 %	8.7 %	13.0 %	2.9 %	2.1 %

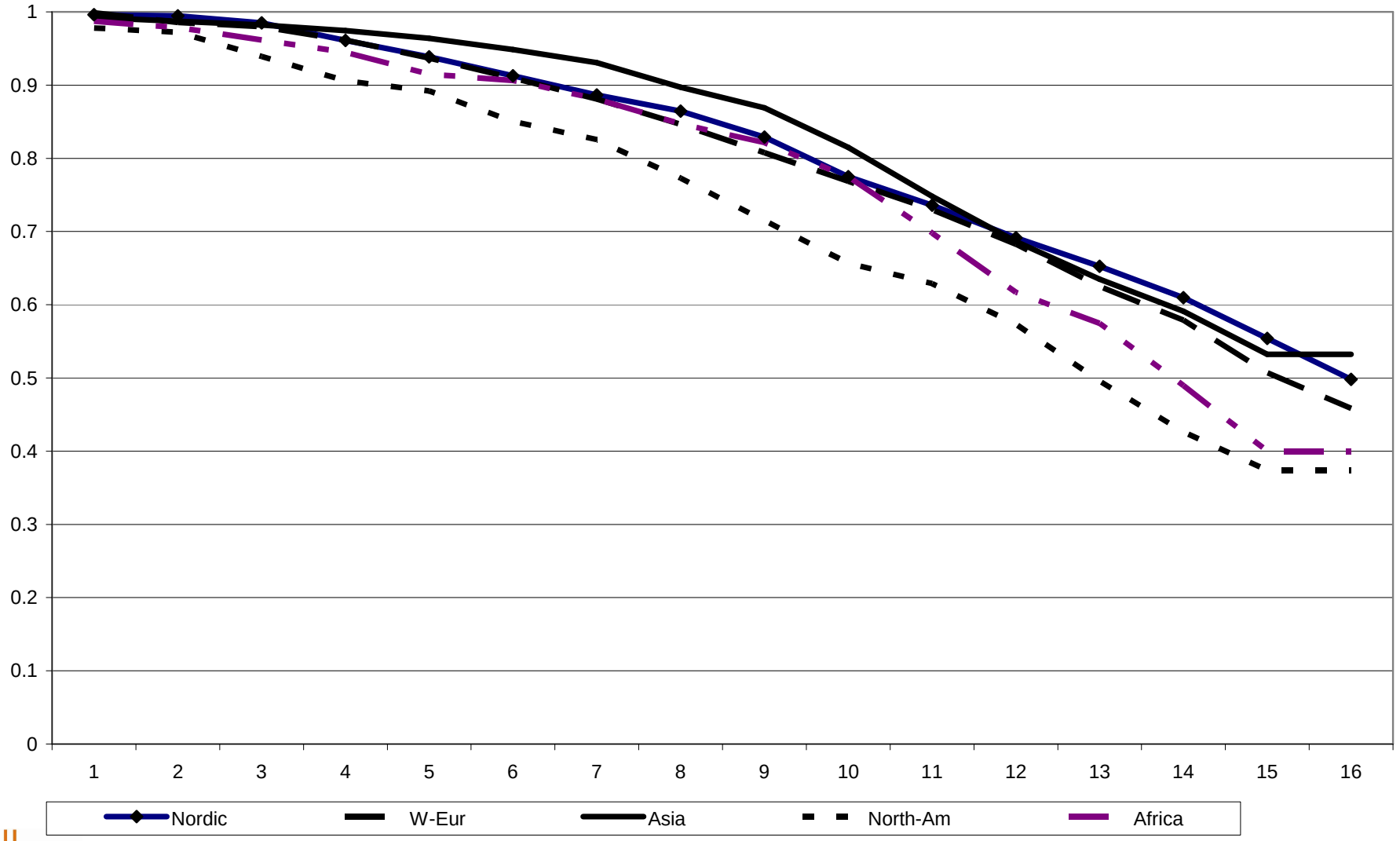
The return rate of academic personnel 1987 -2001



Return rate full professors 1987 - 2001



Return rate PhDs and Post-docs 1987 - 2001



The balance sheet with the US 1987 – 2001

Left for the US	2029
Returned from the US	1467
Net emigration loss	562
Came from US	1704
Went back	1284
Net immigration gain	420
Net drain	142

NB – only public sector research!

Push, pull – results from a survey

- The sample size = 400 persons
- Population = first-generation immigrants
- Highly skilled = degree in S&T or PhD in any field
- 4218 individuals in 2002
- Response rate = 56%

Small sample creates problems ….

NB – this is not a researcher population

(Nerdrum and Sarpebakken: "Mobility of Foreign Researchers in Norway" Science and Public. Policy, April 2006)

Reasons for moving to Norway

- Seven factors were considered “important” or “very important” by more than 50 % of the respondents
  - Five of these were related to working conditions and career prospects.
  - The two remaining being “general living standards” and “Norwegian nature and outdoor life” ranked third and fourth respectively.
- The single most important factor was “a particular employer wanted me to be here”
- One third moved to Norway on personal grounds (spouse, boy/girl-friend)

Norway comparet to other countries…

Source: Nerdrum and Sarpebakken: "Mobility of Foreign Researchers in Norway" Science and Publ. Policy, April 2006

	Among people with an opinion			Share of responding to these questions	
	Norway is…				
	less attractive than	as attractive as	more attractive than		
	...the alternatives			Answered	Un-answered
Working conditions	17	52	31	43	58
Personal issues (boy/girl-friend, family, friends, nature)	31	18	51	46	54
Subject environment and quality on your field	31	42	27	40	60
Career opportunities	36	45	20	41	59
Employer in Norway	40	34	26	39	61
Wage conditions	42	39	19	40	60
Immigration rules in Norway	65	24	11	38	62
Other administrative issues connected to the settlement in Norway	67	27	5	36	64
Tax- and social security issues	66	23	11	37	63

Summary - Conclusions

- Data collection strategy:
  - education and occupation must be mandatory in migration statistics
  - Marginal reform of ISCO – researchers must be an occupation (not only research manager)
  - Major reform of ISCO – classify tasks (like research, administration) not occupations
  - Individual micro data in the R&D survey
  - Start investigating the potential of electronic CVs !!

- Policy formulation:
  - Mobility = optimum problem, not a maximazation problem.

(It is *not* a priori given that mobility always and everywhere is too low.!)

- Avoid a "tax-benefit" race to the bottom to attract researchers

The myth of the centralised state – Canberra manual

The Canberra manual writes:

> *"Some countries, especially the Nordic ones, have a tradition of centrally co-ordinated registration of characteristics of individuals.".*

- This is not true. There was never a centrally coordinated registration of characteristics of individuals.
- The use of person identifiers was introduced in order to have ***uniqueness.*** There are always to persons living at the same address with the same name (father and son, mother and daughter – and very common names).
- The use of the unique number spread from public institutions (population census, tax-authorities, voting register) to private sector – for example banks.
- Firms started using person IDs when reporting tax data electronically.