

Scientific Mobility and Inequality



ResIST Stellenbosch Meeting
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WP2 Team

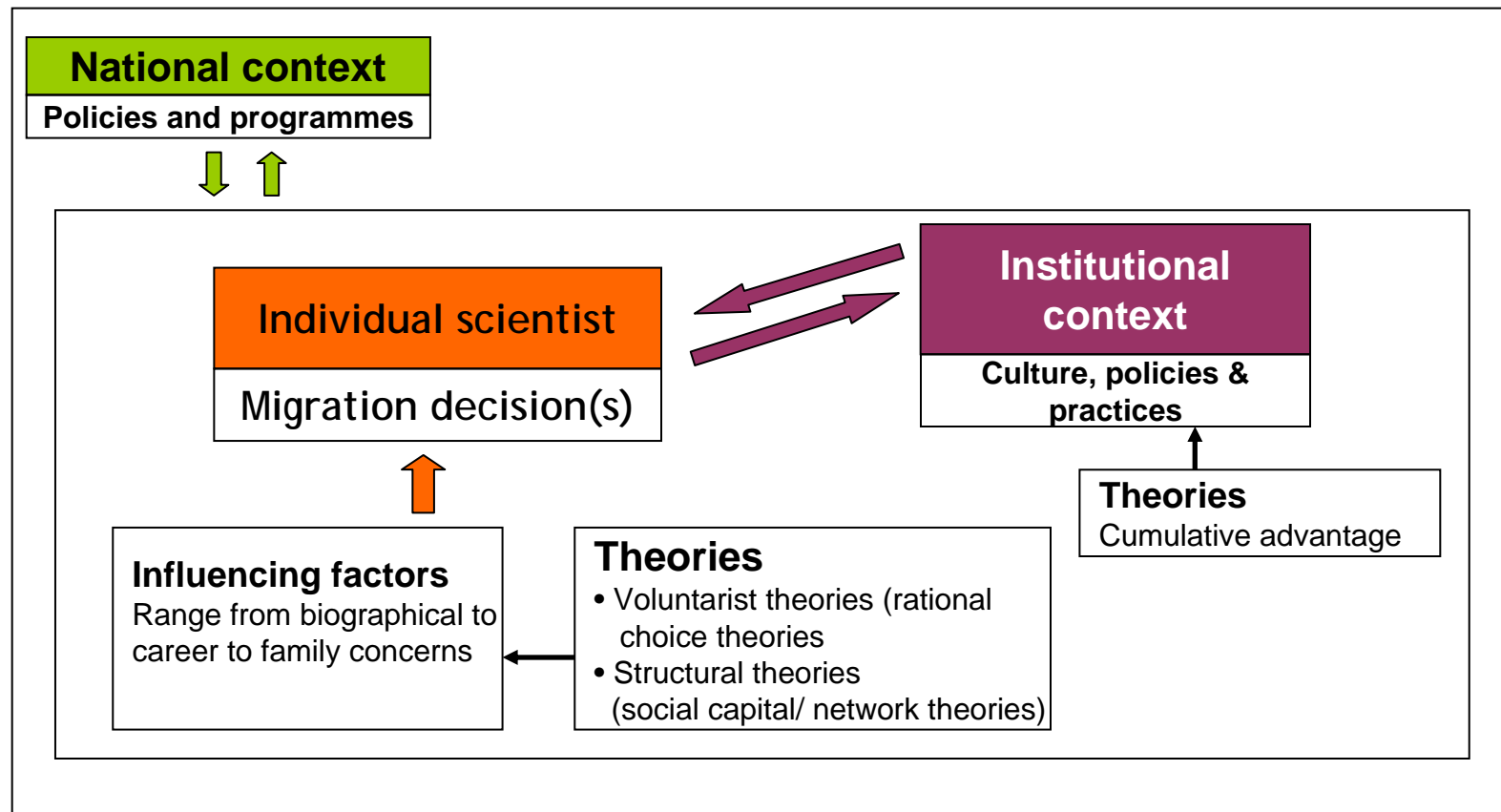


Work Package 2 Team

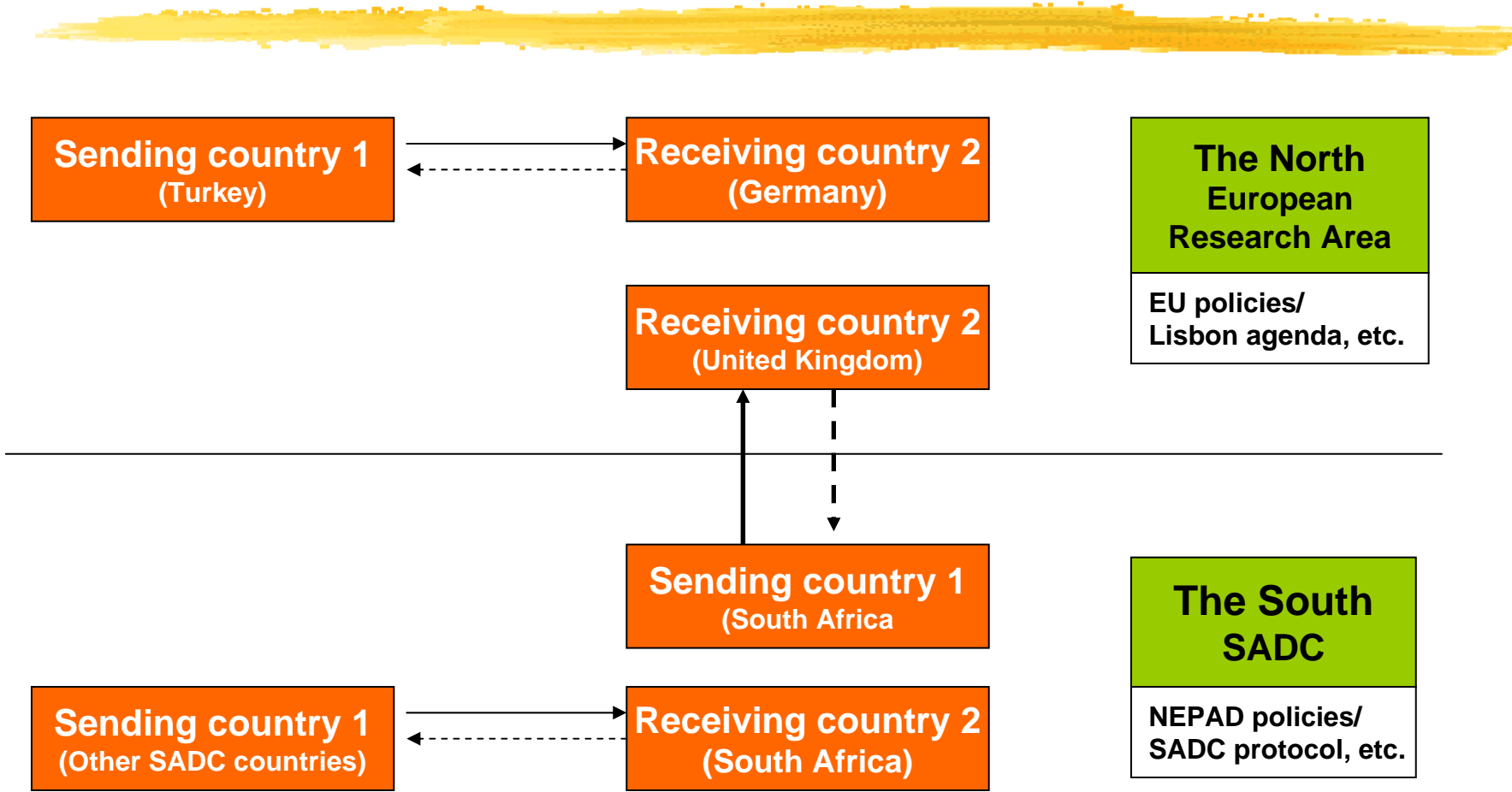


- ⌘ Louise Ackers, Liz Oliver and Bryony Gill (Leeds and Liverpool)
- ⌘ Johann Mouton, Nelius Boshoff, Liezel de Waal, Simone Esau, Tembile Kulati, Monique Ritter and Frank Teng-Zeng (Stellenbosch)
- ⌘ *Ihsan Sezal* and *Şirin Elçi*, (METUTECH, Turkey)
- ⌘ *Susanne Bühner* and *Ulrich Schmoch* (ISI Fraunhofer Gesellschaft, Germany)

The framework (intra-national level)



The framework (regional and global level)



The data



- ⌘ Patterns and trends in the scientific mobility of highly skilled personnel between Turkey and Germany and between South Africa and the United Kingdom
 - ☒ Qualitative interviews with HSP (n = 98)
 - ☒ Turkish professionals (mostly engineers) in Germany (n=25)
 - ☒ Turkish professional who have returned from Germany (n=25)
 - ☒ South African life and health scientists in the UK (n=25)
 - ☒ SA life and health scientists who have returned from the UK (n=23)

- ⌘ Study of the state of public science in the SADC region
 - ☒ Web-based survey of scientists/academics at public universities in the 14 SADC countries (N=634) + Field visits to 11 of the SADC countries which included 113 personal interviews with scientists, academics, research managers and science policy professionals
 - ☒ Study focused on understanding the nature and extent the de-institutionalization of science in the region. Topics include: the nature of knowledge production, patterns of scientific collaboration, the role of international funding agencies, trends in scientific output, modes of scientific communication, views on the scientific profession and propensity to migrate.

Finding 1A

Scientific fields, resources and the migration decisions & trajectories of scientists

⌘ *Employment Conditions*

☒ *Pay*

☒ *Respect (for research and researchers) resources and professional culture – as opposed to clinical training*

☒ *Access to funding*

☒ *Critical mass in their field and the importance of this to their research – team working – communication /collaboration*

☒ *Efficacy and time*

☒ *Access to career opportunities and progression*

⌘ *Institutional Reputation and Resources (more important than country)*

Finding 1B

Scientific fields, resources and the migration decisions & trajectories of scientists

⌘ *Field-specific issues*

- ☒ *Specialisms – disease categories***
- ☒ *Resource implications of types of research that demand high level of organisation – team working across research facilities – sample and data sharing. Remoteness of institutions – geographical aspects.***

Mobility experiences generally perceived as successful in terms of achieving these.

⌘ *Family - stickiness*

- ☒ *Outward***

⌘ *Facilitators - legal – visas – ancestral visas – ease of entry – green card - language*

⌘ *Return*

- ☒ *Crime (South Africans)***
- ☒ *Weather***
- ☒ *Belonging, identity – wanting to give something back***

Finding 2A

Promoting Effective Knowledge Transfer and Capacity-Building: Exploring Making a Contribution at a Distance

- ⌘ EU policy aggressively promotes immigration of scientists from overseas. **It seeks to lessen the impact of brain drain in developing countries by promoting return and by using S&T cooperation agreements to build capacity.** This study confirms that return is considered the key means by which scientists can ‘give something back’ to the sending country
- ⌘ However, the empirical work provides evidence of migrant scientists engaging in a host of professional activities involving the sending country whilst they are based overseas. Little evidence was found of active and effective networking at expatriate level (between South Africans abroad) – but there were many examples of active links between South African scientists based in the UK and their peers in South Africa.

“...you know it's never an easy decision to leave home, you always do stay connected in whatever way that is, whether you physically move back there or whether you use your resources to kind of help in other ways...”

Finding 2B

Promoting Effective Knowledge Transfer and Capacity-Building: Exploring Making a Contribution at a Distance

- ⌘ Examples of ongoing associations with professionals in the sending countries
 - ☒ informal knowledge exchange and sharing ideas
 - ☒ training doctoral candidates through exchange
 - ☒ delivering professional training and teaching when visiting the sending country
 - ☒ taking part in and organising conferences and seminars
 - ☒ joint collaborative projects and grant applications
 - ☒ charitable work and projects.
- ⌘ How can policy better harness these 'individual' processes?
 - ☒ Understand what's happening and why
 - ☒ Working with and supporting current practices
 - ☒ Finding ways to ensure that the process is mutually beneficial

Finding 3A

Equity, Excellence and Sustainable Development: The South African Experience

- ⌘ Previous studies have identified the impact that recruitment systems and employment policies have in terms of motivating outward moves, restricting returns with implications for capacity-building.
- ⌘ The empirical work raises concerns around the impact of Apartheid and post-Apartheid employment / equity policies in terms of:
 - ☑ Patterns of outward migration (characteristics of leavers) and:
 - ☑ Propensity to return and contribute.

These results have implications for both the knowledge economy *and* social cohesion paradigms

Finding 3B

Equity, Excellence and Sustainable Development: The South African Experience

'There is a tension between the agenda of excellence and that of equity.. these issues have not been resolved'

'Those who had international reputation during the apartheid era continue to have a comparative advantage in terms of skills and expertise'

*'Organisational culture is an important driver of **outward mobility**... in some organisations there appears to be a problem of 'fit' between young black researchers and older academic staff.'*

[Quotes from *Flight of the Flamingo's*, HSRC]

Our findings (impact of policy context on migration flows and attitudes to return) re-affirm the following:

- ⌘ The long term effects of Apartheid
- ⌘ 'Employers' Resistance to Policy Change
- ⌘ Researchers' Perceptions & Responses to Employment Equity Policies

These processes impact on migration behaviour shaping who leaves, who stays and who returns with important implications for sustainable capacity-building.

Finding 4:

Brain drain and the de-institutionalisation of science in sub-Saharan African

- ⌘ The continuing brain drain has impacted negatively on the state of scientific institutions – especially universities – in the SADC region in various ways:
 - ☒ Loss of high-level human capital
 - ☒ Loss of reproductive capacity (very high outbound mobility rates)
- ⌘ But other policies and interventions (global and domestic) have had equally devastating effects on the functioning of these institutions
 - ☒ Lack of endogenous research resources (research funding, equipment, laboratories, research management capacity)
 - ☒ Shift in modes of knowledge production and the rise of consultancy science (“scientists for hire”)
 - ☒ Increasingly individualistic career-building science
 - ☒ Huge dependency on international (donor) funding and their research agenda’s

Concluding observations

Scientific migration and forms of inequality

- ⌘ Asymmetrical flows of HSP (between institutions, countries and regions) invariably lead to unequal reservoirs of human capacities (structural inequalities)
- ⌘ These flows are caused by a whole range of international, regional, national and institutional policies and programmes and very often the “tensions” between these different levels
- ⌘ At lower levels our study reveals interesting differential effects across scientific fields and across demographic categories (gender, race and age)
- ⌘ Our study not only confirms the plausibility of social capital and cumulative advantage theories at the individual and institutional levels, but also how different science and innovation paradigms (knowledge economy and competitiveness discourses as opposed to a human capability and social cohesion discourse) impact on scientific migration dynamics.

Thank you

