Informal networks of innovation policy makers in the EU28: a study of structures and proximities

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This paper studies the structures and characteristics of informal networks between national innovation policy makers. Recent years have seen increasing interest in innovation networks, but until now there has been limited knowledge on how different proximities shape the informal networks between policy makers and its potential consequences. This study looks at the 28 EU innovation policy directors and the resulting 756 possible connections between them. I first use social network analysis to map the structures of the informal networks between policy makers. Then I use logistic regressions to test three types of proximities: geographical, policy-related and cultural. Distinguishing between asymmetric and symmetric ties, I find a centre-periphery pattern for the former and a three-fold cluster structure for the latter. Regarding proximities, I find that geographical and cultural proximity matter for both kinds if tie, but a similar level of innovation performance only predicts a symmetric tie. These findings provide a useful insight on possible cross-border learning, as we see policy-makers reaching beyond their ‘natural’ peers in search of new knowledge. As such, the proximities in informal networks have potential implications for learning and require continued attention from national and international organisations alike in order to facilitate knowledge flows between countries.
A cross-country configurational approach to academic international mobility: exploring mobility effects on academics’ career progression in EU countries.

Previous research on international academics’ mobility has emphasised the potential gains and losses for national productive systems, derived from academics’ international mobility (Edler et al., 2011; Baruffaldi and Landoni, 2012; Cañibano and Woolley, 2015). During the last decade, the positive stance towards mobility has taken thrust because of the systemic and individual benefits derived from human capital circulation (Fernández-Zubieta et al., 2016). Overall, international mobility is considered beneficial for both home and host countries: it favours knowledge production and diffusion and fosters the collaboration between countries (Baruffaldi and Landoni, 2012).

European mobility policies have promoted mobility on quantitative bases, linking higher mobility to a more integrative European research system (Cañibaño et al., 2008). The expected benefits derived from international mobility play a determinant role in the final academics’ decision to move abroad. For this reason, a recent stream of literature on international mobility has focused on analysing the influence of academic mobility on diverse career outputs or dimensions (see Netz et al., 2020 for a review). The aim of this study is to better understand the relationship between international mobility and academics’ perception of its impact on their academic career progression. Our research questions are the following: RQ1: How international mobility and academic career progression are connected in EU countries? RQ2: What configuration of mobility options (short-term mobility, long-term mobility and migration) and context conditions (academics’ perception about science system rewards linked to mobility) leads to academic’s career progression? These are relevant issues for the literature on international academics’ mobility as well as for public policy design for national science systems in the EU.

This paper is based on the scientific and technical human capital (STHC) approach (Bozeman and Corley, 2004; Jonkers and Tijssen, 2008; Netz et al., 2020). Bozeman et al. (2001, p. 636) defines STHC as the “sum of an individual researcher's professional network ties, technical knowledge and skills, and resources broadly defined.” According to this approach, scientific collaborations are an important input for academic learning and training. International mobility represents an effective individual strategy to promote these collaborations (Edler et al., 2011).

We use the indicator tool of the Mobility Survey of the Higher Education Sector (MORE), 2016 wave (https://www.more3.eu/indicator-tool) to do a cross-country comparison of the effects of international mobility on researchers’ global career outcomes. MORE is considered as the most comprehensive empirical study on researchers’ mobility. The indicator tool contains around 150 indicators which represent country aggregated data from the European Union Higher Education (EU HE) Survey about researchers, their careers and mobility. This survey was administered in 2016 to representative samples of researchers in each of the 28 European Union (EU) member
states. However, due to missing data, we were able to include in the analysis only 24 of the currently EU member countries.

Using EU’s MORE3 database, we implement a fuzzy-set approach to qualitative comparative analysis (FsQCA) to explore mobility patterns, science system level characteristics and perceived impact of international mobility on academic career progression. According to our results, countries where academics perceive that international mobility has a positive impact on their career progression correspond to three configurations:

1. Configuration 1: Germany, Belgium, Austria, Finland. Most of academics go both for short-term stays and migration. Academics benefit from international collaboration and networking and they perceive that their national science systems use international mobility as a criterion for career progression.

2. Configuration 2: France, Netherlands, Cyprus and Luxembourg. Most of academics do long-term stays or migrate for a period. Doing short-term stays is a scarce practice. Advantage for career progression does not come directly from mobility recognition schemes in the national science system, but from the benefits of the international mobility in terms of academic collaboration and networking.

3. Configuration 3: Poland. Very few academics do any of the three forms of international mobility, but they perceive institutional system does recognise international mobility for career progression. This is sufficient for a large part of academics to perceive that international mobility has a global positive effect on their career.

For the remaining countries (Italy, Spain, Portugal, Greece, Hungary, Czech Republic, Slovakia, Bulgaria, Croatia, Slovenia), international mobility does not generate positive effects on academics’ career progression. International mobility might be perceived as an activity that softens the academics’ ties with their home university / research institute (Jonkers and Cruz-Castro, 2013). Finally, for Estonia and Lithuania any form of international mobility seems to be an infrequent practice among academics and the effect on career progression is null or negative.

This paper makes four contributions in extending our understanding of the links between international mobility and academics’ career progression. First, it addresses recent calls for comparative studies across countries (Netz et al., 2020). Most of previous research on the effect of international mobility on academics’ output has restricted the context of study to a single country such as Norway (Asknes et al., 2013) or Spain (Cañibano et al., 2008), while some other studies have focused on a few countries (e.g., Baruffaldi and Landoni, 2012). Through a cross-country configurational analysis on 24 EU countries, this study sheds new light on the STHC approach.

Second, rather than considering a single type of outcome, in this paper we focus on the effect that international mobility has on the overall academics’ career progression. Career progression is a key indicator for evaluating whether academics have actual incentives to move abroad as European institutions are trying to promote. Moreover, it provides a more comprehensive assessment of the consequences that international mobility has on academics’ career; thus, adding substantially to previous fragmented
and partial impact measures addressed in most studies (see Netz et al., 2020 for a review). Indeed, international mobility could have positive effects in all the facets of the academic activity, not only research (i.e., also teaching, knowledge transfer activities and knowledge about how to organize and manage research groups and networks) and happen in all knowledge fields / disciplines (Cañibano et al., 2011), which is hardly captured through specific research outcomes such as article publications, patents or collaborations with international colleagues.

Third, rather than analysing highly productive scientists or elite researchers (Cañibano et al., 2008; Jonkers and Tijseen, 2008; Halevi et al., 2016), who are far from being representative of the average researcher, we provide a more insightful understanding on the academic community by focusing on what Gibson and McKinsey (2014) called the “ordinary scientist”, considering a representative sample of scientists working at higher education institutions at country level and their aggregated perceptions.

Finally, we respond to recent calls asking to analyse not only whether but also how international mobility may influence academics’ career (Netz et al., 2020). Conducting a country-level comparative qualitative analysis is a complementary and novel approach to explore the relationship between international mobility and academic career progression which allows us to evaluate the extent to which the national science systems and the actual academics’ mobility patterns create a favourable setting for mobility. Thanks to this analysis, we have established different countries’ configurations which represent an important input for science policy design in EU.

REFERENCES


