

ACADEMIC MOBILITY OF BUSINESS AND ADMINISTRATIVE SCIENCES

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Abstract:

Erasmus is a mobility program with a 31 year long tradition, intended for the tertiary education. It has supported over three million students and 300000 academics in Europe. In this study, we analysed the mobility of academics from the field of business and administrative sciences between 2008 and 2013. We applied a social network approach focusing on the institutional level and the country level. Based on social network analyses, we first visualized the exchange patterns between sampled institutions and countries. The results of our network analyses reveal that the Finland higher education institution Haaga-Helia, had the most academic mobility exchanges. In the core of a network, that was built at the country level, are the Great Britain, Germany, France, Poland, Spain, Finland, Lithuania and Austria. During the period under study, the mobility of academics was increasing.

Keywords: Erasmus, academic mobility, network analysis

1. INTRODUCTION

Erasmus that stands for European Region Action Scheme for the Mobility of University Students, is the only largest programme at the European level aimed at facilitating organized student mobility, teacher mobility and cooperation between universities across Europe. The programme was inaugurated in 1987 and it is widely considered to be the most successful of the European Commission's educational programmes (Deakin, 2013).

Higher education institutions that want to participate in the Erasmus programme, must have Erasmus University Charter (EUC), this enables them to cooperate in mobile activities financed by lifelong learning. EUC provides the general framework for the European co-operation activities a higher education institution may carry out within the Erasmus programme. Obtaining this charter is a prerequisite for participating in the Erasmus programme. The charter determines the basic principles and minimum requirements based on the activities of the Erasmus programme and which must be respected by the higher education institution (EACEA, 2013).

Student mobility has been the most visible component of the Erasmus programme from the very beginning, and more than half of the Erasmus funds were allocated to student mobility scholarship (Teichler, 2001). Despite this, the mobility of staff is a strong component, which should not be neglected, as it also brings positive effects in higher education. In the literature it is stated that student mobility brings many positive features to its participants, such as academic achievement, cultural, social and linguistic capital and we believe that this also applies to the mobility of academics. Racke (2013) has demonstrated that promoting staff mobility has become an issue of increasing importance in European higher education policy. The key aspects of the Bologna process are mobility and internationalisation therefore, the mobility of staff is also an integral part of the overall objectives. This is exemplified most recently in the Mobility Strategy 2020 for the European Higher Education Area (EHEA). Despite political attention, there is surprisingly lack-off information about staff mobility at European level.

In the Mobility Strategy 2020 for the EHEA (2012) is written a mobility target that in 2020, at least 20% of those graduating in the EHEA should have had a study or training period abroad. But in the document there is no mobility target for academics, there is just invitation for the European Commission to develop and provide data on mobility of early stage researchers, teachers, and staff in higher education. Our opinion is that European policy should devote as much attention to academic mobility as student mobility.

Up to this point, the Erasmus programme has been analysed mostly for the student mobility, and for this reason we decided to investigate the mobility of academics. We analysed the mobility of academics from the business and administrative science, inside the Erasmus mobility programme, between 2008 and 2013. In this study we focused on the institutional level and on the country level. With the use of some standard statistical methods, significant higher education business and administrative institutions in the Erasmus academic mobility procedure were identified.

2. RESEARCH METHODOLOGY

To gain insight into academic mobility patterns, we investigated cross-national academic exchanges over a five year period between 2008 and 2013. Data were collected on a secondary basis from <https://data.europa.eu/euodp/en/data/dataset/>. We identified 1640 higher education institutions that participated in at least one business and administrative academic exchange.

The data were analysed using analytical procedures in social network. A social network consists of a set of actors and a relation or relations between them (Wasserman and Faust, 1994). The main aim of social network analysis is discovering and interpreting patterns of social ties among actors (De Nooy et al, 2012). In our case, the actors are higher education institutions or countries and relations are links of academics who were mobile between one to another country or higher education institution. Our network is directed, this means that there are links from home to host higher education business and administrative institution or links from one country to another. Furthermore our network is weighted, this means that a weight of the link between two higher education business and administrative institutions or countries are determined by the number of academic exchanges.

For the analysis of networks was used the Pajek program, which software is designed to handle very large networks (up to millions of vertices). Therefore, this software package concentrates on efficient routines, which are capable of dealing with large networks (De Nooy et al, 2012).

With the Pajek program, we first made an institutional analysis of the network, which means that we analysed the actors, which were represented by higher education institutions and the connections

between them. We combined multiple links, weighted them and calculated the level of connections with the command in the Pajek program. The rate in our case is the number of links to other faculties. Thus, we acquired certain information about the network and also draw it. Following this analysis, we have also made an international network analysis, in which actors represent countries, and the links between them are still academic exchanges of business and administrative sciences. To the analysis at the level of countries, we came up with the shrinking of the basic institutional network in the Pajek program and then again used a command that gave us information about the level of connections.

3. RESULTS

With institutional analysis we found out that we have 14340 lines, of which we have 6804 multiple lines. The average degree tells us the average number of academic exchanges per institution and it is 17.5, which is quite a lot. The data found are the most income of academics to the Instituto Politecnico in Portuguese (43) and the most outcome of academics in Finnish higher education institution Haaga-Helia (75).

Table 1 shows business and administrative institutions that has minimum 65 connections with the other HE institutions between 2008 and 2013. To this we came up with line cut technique with which we deleted all links with values below 64. In Table 1 is represented Erasmus code of the institutions, number of academic exchanges (income and outcome together), links with the other institutions and a calculation showing the average number of academic exchanges per institution. In this table we got some data on important institutions, because those institutions are connected with a lot of others and had the most academic exchanges in business and administrative sciences between 2008 and 2013. The Table 1 shows that the Finnish institution Haaga-Helia has the most academic exchanges and also the majority of contracts with other institutions that are linked through the Erasmus programme. Proportionately to the data given, Haaga-Helia has the highest average number of academic exchanges per institution.

Table 1: Institutions that are linked to at least 65 other institutions

Institutions (country)	Erasmus code	Number of academic exchanges	Links with other institutions	Average of academic exchanges per institution
Haaga-Helia Ammattikorkeakoulu (FI)	HELSINK40	295	109	2,7
Banku Augstskola (LV)	RIGA13	250	99	2,5
Vilniaus Gedimino Technikos Universitetas (LT)	VILNIUS02	177	99	1,8
Karel de Grote Hogeschool, Katholieke Hogeschool Antwerpen, (BE)	ANTWERP59	169	68	2,5
Laurea-Ammattikorkeakoulu (FI)	VANTAA06	162	71	2,3
Katholieke Hogeschool Zuid-West-Vlaanderen (BE)	KORTRIJ01	156	65	2,4
Instituto Politecnico do Porto (PT)	PORTO05	155	74	2,1
Univerzita Mateja Bela (SK)	BANSKA01	149	72	2,1
Tallinna Tehnikaukool (EE)	TALLINN04	139	72	1,9
Universidad de Granada (ES)	GRANADA01	135	75	1,8

With the Pajek we have drawn these ten institutions from the Table 1 and the links between them. The strongest and the most important link in Figure 1 is one way link from Finnish higher education institution Laurea-Ammattikorkeakoulu to Portuguese Instituto Politecnico do Porto. The strongest links in both ways is between Haaga-Helia and Belgian institution Karel de Grote Hogeschool. Five institutions in the Figure 1 have links with Instituto Politecnico do Porto, however that Portuguese institution have just one link to the other institutions which are presented in Figure 1. Slovak higher education institution Univerzita Mateja Bela is the only one in Figure 1, which has no connections with others in the picture.

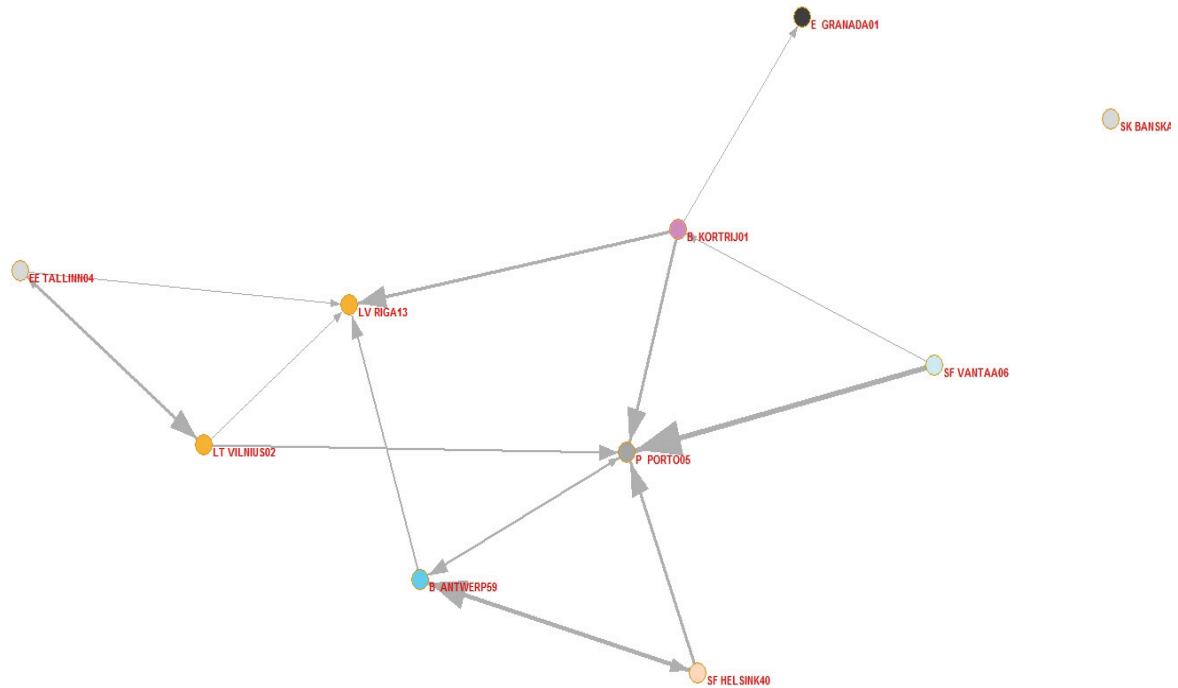


Figure 1: Institutions that are linked to at least 65 other institutions

Analysis at the county level provided us with data on 33 different countries that participated in academic exchanges of Erasmus in business and administrative sciences between 2008 and 2013. Between these countries there are 733 links, which represents income and outcome of academic exchanges. Average links between the countries are 44.4, this shows a great prevalence of academic Erasmus exchange. Luxembourg has the least links with the other countries and the most links has Finland. Most incomes of academics have Great Britain, Spain, Finland and Lithuania (29) and most outcomes have Germany, Finland and Poland (30).

Figure 2 shows these 33 countries and links between them. The strongest and the most important links are one way connections from Germany, Great Britain and Spain to France. Strong links are also both way links between Poland and Germany, Finland and Germany, Czech and Slovak. In the Figure 2 we can see that countries like Luxemburg, Liechtenstein, Malta and Switzerland are far from the core and have almost invisible links that means that they did not send or receive a lot of academics with Erasmus programme in business and administrative sciences between 2008 and 2013.

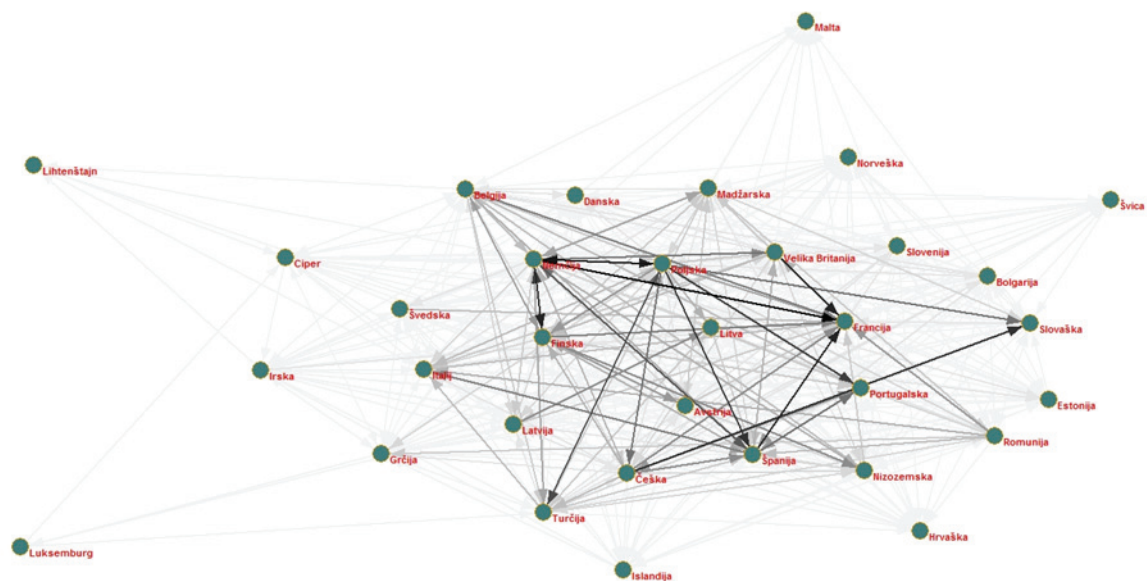


Figure 2: Academic exchange of business and administrative sciences between countries

With the Pajek program we also made a matrix, in which is all 33 countries that participated in the academic Erasmus exchanges from business and administrative sciences between 2008 and 2013. Figure 3 represents this matrix and from it is possible to determine the same result as we did in Figure 2. The links between countries in the matrix show us squares that are coloured from white to black. The darker colour suggests a stronger intensity of connections between individual countries. To read the matrix, we have to go from line to column and this path shows us an exchange from a country that is in a row to a country that is in the column. From the matrix we can see that most professors go to Erasmus exchange from Germany to France, because this square is black.

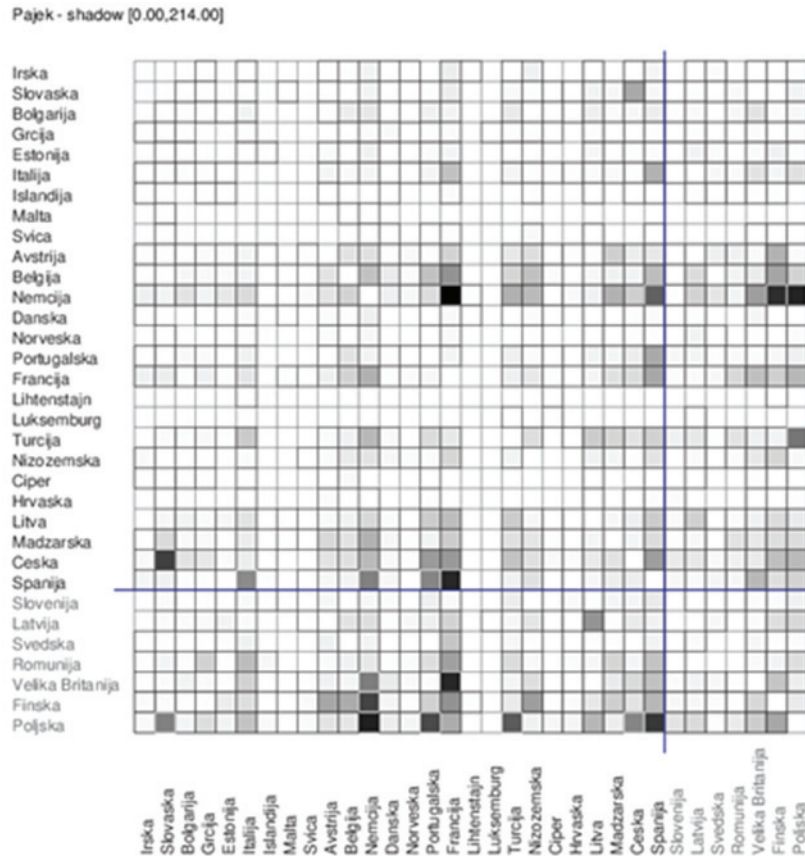


Figure 3: Matrix between countries

4. CONCLUSIONS

The Erasmus program is a real phenomenon, which extends every year. It was not stopped by the economic crisis of Europe, nor by the terrorist attacks on the oldest continent of the world. Our research was still in the time, when Erasmus existed, after year 2014 Erasmus plus was established. Erasmus plus continues and upgrades activities previously carried out by lifelong learning programs. The activities offered by the program are enabled in the fields of education, training, youth and sport, which is a novelty in the mentioned mobility programs (European Commission, 2015).

The sociogram has proved to be an important analytical tool that helped to reveal several features in our network (de Nooy, 2012). Finland was recognised as the country with the highest mobility of academics from business and administrative sciences. Right after it were Great Britain, Germany, Poland, Spain and Lithuania, with just one academic exchange less. Finland also has a high percentage, which indicates that the country has 77.59% of the institutions included in the Erasmus program and also participated in academic exchanges. The most income of academics from business and administrative sciences had Finland, Germany and Poland, none of these countries are among the most popular if we look at the entire population of mobile academics, where the most popular countries are Great Britain, Italy and Spain. It should be interesting to explore the reason for such a contrast. One of the reasons could be different contract partners of higher education institutions.

At the institutional level, Portugal's Instituto de Porto is one of those who inspired us with a long-standing tradition, but nevertheless follows the trends of internationalization. The Spanish University of Granada is the next one that has a long tradition and is very active in mobility programs. It is especially popular with students, with that reason it received the Erasmus Student Mobility Award and is also

active in academic mobility. Haga-Helia was the one who had the most exchanges, and its average number of exchanges per institution was the highest. This Finnish higher education institution is the most important in our network, it is a young and modern institution, aware of the importance of cooperation with foreign organizations, as this contributes to development and added value.

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