

Social security coordination in Europe with focus on self-employed persons: the quantitative approach

Sandra BROŽOVÁ¹

Abstract

The article deals with international coordination of social security in the EU, aiming special focus on self-employed persons. The article outlines an overview of international social security coordination system with its legal sources and presents original research using cluster analysis method based on statistical data compiled by European Commission experts. The presented research is based on a conducted cluster analysis bringing together principal macroeconomic characteristics describing relative size and relative strength of economies, in particular total number of inhabitants, GDP per capita, in internationally comparable purchasing power parity version, and average wage, with quantitative expression of labour migration, represented by short term mobility covered by the European law posting provisions. The research question was formulated towards exploration whether there are some common features in short-term mobility inflows created by independent self-employed persons in the European internal market. The results showed prevailing lack of consistency leading to the fact that the clusters reported by the model were not comparable in size, when two of them embraced nearly all the examined European countries and the other two only few of them.

Keywords: social security coordination, migration of self-employed persons, cluster analysis, posting of workers

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1. Introduction

In this paper, the economic and legal phenomenon of social security and its international and European coordination is viewed with focus on migrating self-employed persons. Regarding social policy research and governmental practice,

¹ Ing. Sandra BROŽOVÁ, University of Economics in Prague, Faculty of International Relations, Czech Republic, e-mail: xbros00@vse.cz; brozova@europe.com

there is prevailing emphasis on employees as private persons and recently also economically inactive persons (unemployed job seekers or relatives and family members of workers). In order to bring new insights and to contribute to a more complex picture, we decided to take a closer look to self-employed individuals and their social security claims connected to labour migration within the European internal market.

The structure of this paper is designed as follows: firstly, an introduction into the discussed topic will provide comprehensive overview of important information about international legal regulation and its sources. The second part contains references to recent literature and also judicial solutions focused on interpretation and application of related legal regulation, based on EU legislation and international treaties. In the third part, the used dataset is described and sources of analysed statistical information are indicated.

The research question was formulated according to the available data in this way: to examine whether there are some shared characteristic in self-employed short term movement inflows within the EU which could eventually enable national lawmakers to get inspiration from already existing foreign legal regulation. The practical significance of this research contribution is closely connected to the fact that social security coordination and particular social benefits claims that are solved internationally are indeed an issue that really brings European integration with its theoretical principles into real every day application on existent cases.

European economic integration is connected with coordination of economic policies directed by Member States' governments from the very beginning and now it is realized by the complex European Semester mechanism. Since the entry into force of the Lisbon Treaty in 2009, several very important competences, namely the common trade policy and foreign direct investment, belong exclusively to the EU as an independent subject of international community without any possibility for Member States' individual action. In case of social policy, the situation is somewhat different. The decisive competences rest with Member States and the European Unions' task is limited only to coordinate and support the Member States' effort (to mention the legal fundamentals, this belongs to the shared competences enshrined in Article 4 and Article 151 of the Treaty on the Functioning of the European Union, commonly referred to as TFEU).

We can understand the social policy coordination in several distinct meanings: in a broader sense, as coordination of economic policies relating to

social security and employment, or, alternatively, as coordination and mutual approaching of social security regulation on the level of Member States which led to the establishment of the so called “open method of coordination” and in a narrower sense as coordination of individual claims of migrating persons who exercise their right to free movement within the internal market and therefore cannot get into any worse situation in comparison to people residing and working in one Member State only (Reimann, 2009, p. 134).

Social security coordination in a narrower sense will be further elaborated in this contribution. The system is based on following fundamental principles: the principle of non-discrimination and equal treatment, only one applicable legislation (derived from rules for the determination of applicable legislation, prevailing *lex loci laboris* (i.e. The place of employment where the work is carried out) for economically active persons and habitual residence for inactive ones), aggregation of the insurance, residence or work periods (In other words, totalization of contribution periods. It usually functions in the following manner: an employee is supposed to work for 35 years to obtain retirement pension. Throughout his career, he worked 10 years in one-member state, then he moved for 20 years to another one and finally to a third one when he officially resides when reaching retirement age. He then files an application with social security national administration in the country of residence which is the only competent country to decide about his rights, while this state administration is legally obliged to take into account the periods of retirement pension insurance completed abroad as an equivalent of respective periods insured domestically.); and the provision of benefits in other states, in other words the export of benefits (i.e. the payment of social security benefits to entitled persons residing abroad without any reduction of the claimed amount of allowances.) (Jorens and Van Overmeiren, 2009, p. 48). Moreover, two newer principles can also be mentioned, assimilation of facts and good administration and cooperation. They resulted from aggregated practice and judicial interpretation.

In the European Union, social security cooperation between Member States is based on the method of coordination, which means that Member States are still allowed to conduct independent bilateral relations with third countries outside the EU. As was already mentioned above, there are also some exclusive EU competencies enshrined in Art. 3, Treaty on the Functioning of the EU, in case of which this is not possible and all the Member States’ political effort to influence common European outcomes must be brought only on the field of coordination of shared European external position and into negotiation inside

European organs and institutions (the European Council for the highest strategic priorities shaping and the Council of the European Union for legislation adoption and amendment).

Outside the European Union, bilateral international treaties are the prevailing instrument of social security coordination. As an example, we will take a closer look on the relations between the Czech Republic and Moldova. Both countries have many active migrant citizens heading towards foreign countries to gain professional experience or to develop own private business.

Social security coordination between the Czech Republic and Moldova as two independent states is regulated by bilateral treaty concluded in 2011 that entered into force in 2012. Previously, this sphere was regulated by an older treaty concluded between Czechoslovakia and the Soviet Union in 1959, which lacked the above mentioned modern principles and was terminated in 2009. In the meantime, before the new treaty entered into force, there was no binding international instrument, which was not acceptable in the long run due to the lack of legal protection for Moldovan and Czech migrant workers and certainty about their rights and duties. The most important issue from the long-term point of view are pensions for migrant workers that have spent a considerable part of their professional career abroad.

In connection to concluded bilateral international treaties, the national Moldovan social security laws were amended so as to ensure the possibility to export benefits to foreign countries which was originally not possible. The export of benefits clause brought a significant improvement of migrant workers' social security. They are therefore entitled to get their benefits paid right at the country where they work(ed) and paid respective contributions.

The form and content of the treaty corresponds to the current international standards, to Model provisions for a bilateral social security agreement elaborated by Council of Europe experts and to other new treaties being concluded by the Czech Republic with its partners. The treaty is based on modern methods of coordination system. It covers posting of workers in the manner comparable to EU standards, with maximum duration of posting set as 24 months period and this rule also applies analogically to self-employed persons.

According to its Article 3 which sets its personal scope of application, the treaty is relevant for all persons who are or have been subject to the legislation of one or both contracting states and also for all persons that derive their rights from the above mentioned persons. Consequently, the application of the treaty is independent from citizenship or nationality of the concerned people. This means

that the personal scope is considerably wider and presents stronger international protection for migrating workers, self-employed persons and other related individuals, without insisting on their citizenship as a necessary prerequisite that was used in the past.

According to the recent Czech practice, the treaty itself contains only material coordination regulation while practical procedures and methods of cooperation of responsible national institutions (*Česká správa sociálního zabezpečení* and *Casa Națională de Asigurări Sociale*) are covered by another treaty, called Administrative arrangement, which was negotiated and signed at the same time. At the end of 2012, the Moldovan Parliament adopted important amendments of national labour market legislation that comprised complete removal of quantitative restrictions for foreign economically active migrating persons and brought new trends and intentions of openness towards EU free movement standards (Guzun, 2013).

The European Unions' coordination system applies also to self-employed persons, since 1981 (see Regulation 1390/81 of 12 May 1981), although it originated with sole focus on employed workers. The personal scope of application, this means the spread of activities considerable as a self-employing economic activity, is understood rather broadly by the Court of Justice of the EU (Case C-300/84, *Van Roosmalen*, 1986).

It is proved that small and medium enterprises do not use posted workers from other member states so often as large companies that are better able to deal with administrative costs and to generate added value, savings and economies of scale (De Wispelaere and Pacolet, 2016, p. 460). Therefore, this article is supposed to explore the statistics of self-employed persons, independent entrepreneurs who work on their own – are they ready to expand their activities to other member states? Is it attractive for them to claim benefits from European social security coordination system? According to the collected statistical data, we will estimate whether the number of internationally movable self-employed persons is low or high and whether there are some recognizable trends in shifting the numbers towards the levels usual for employees of large companies. Although it is important to consider the difference between long term movement of workers (employed as well as self-employed) to other countries within and outside Europe on the one hand and their limited time posting on the EU internal market on the other hand, we think that the forthcoming analysis based on accessible data covering posting is still valuable and can contribute to broader insight into the pan-European labour market functioning.

We can conclude this introductory part with statement that social security coordination eliminating negative impacts of labour migration is an essential prerequisite for smooth functioning of internal market inside the European Union and free movement of persons within its frame. Concurrently, the same positive effects apply in the external relations of the EU towards neighbouring countries.

2. Literature review

There is already a big orbit of literature covering international social security coordination. Nevertheless, not many authors are focused on self-employed migrating persons in particular. There is some research gap and that is why this interdisciplinary paper connecting international economic and legal analysis makes sense. In absolute terms, about only 7 per cent of all persons posted to another Member State are self-employed, while the vast majority are employees (De Wispelaere and Pacolet, 2018, p. 10). The biggest share of self-employed persons sent abroad was recorded in the Czech Republic, Slovakia, Italy, Lichtenstein and Iceland, while it was the highest in Switzerland, Sweden and Austria when it comes to receiving (De Wispelaere and Pacolet, 2018, p. 26).

In various research papers, we can find motivated support for the statement that labour migration is economically beneficial in the long term for both sending and receiving countries (Nedelescu, 2015, p. 11). The nature and true meaning of legislation covering legal standing of migrating workers and self-employed people and their rights to social security, represented by the will and intention of the lawmaker at the time of adoption, can be deducted firstly from the recent decisions of the Court of Justice of the European Union, based in Luxembourg. The judgments of this international court that is one of the principal EU bodies, are binding not only for the parties of the respective case, but to a certain extent also generally as they present an authoritative view on interpretation of European law that is to follow in the future when it comes to decide new and similar cases touching the same pieces legislation. The main task of the Court of Justice is to contribute to the uniform interpretation and application of the European norms valid in the same form in all the Member States and their internal legal systems.

In the Court of Justice of the EU's recent case law, we can clearly see a new direction towards a concerted action of the national and European authorities to tackle rising occurrence of fraud and errors in the functioning of the social security coordination systems. For example, concerning the A1 forms that will be discussed later in this contribution, they are issued by an institution of one

Member State that is sending workers to another State. The forms are considered binding and valid unless they are recalled by the issuing institution. This general view was emphasised e.g. in the case called *A-Rosa Flussschiff*, decided in April 2017.

Only a year later, in February 2018, the Court of Justice expressed a slightly modified position in the *Altun e.a.* case. According to its Grand Chamber, there actually is a possibility for the authorities of the receiving state to actively dismiss or limit the scope of application of such a form in case it had been issued by fraud or error. In the latter case, the employees were sent to work to Belgium from Bulgaria and should therefore carry the status of workers insured in Bulgaria. However, the employer as a company did not carry any significant business activity in Bulgaria and the choice of its seat in this country was clearly influenced by fraudulent motives to attain lower financial costs of social security contributions for workers sent to Belgium. The Court of Justice confirmed in this case that the institution that issued the internationally recognizable A1 form is obliged to conduct a re-examination of the situation so that its rightfulness and justiciability could be confirmed. The receiving country should have a competence to bring the issue before its national court that can pronounce the A1 form null and void when it becomes clear that it was based on some fraudulent motivation and concurrently the sending and issuing country did not take required steps of investigation in a reasonable timeframe after being asked for such an action.

There is a lot of papers discussing the interconnectedness between social security coordination norms enshrined in directly applicable regulations and the concept of posted workers that is based on the respective directive - directive 96/71/EC of the European Parliament and of the Council of 16 December 1996 concerning the posting of workers in the framework of the provision of services. This directive was recently revised in 2018. It is important to note that directive is qualitatively different source of law in comparison with regulation (e.g. Fillon, 2016). However, the above-mentioned directive is not applicable to self-employed persons; it deals with employed persons only, so we are not going to deal with the relation to this directive further in this contribution.

3. Data and Methodology

The presented contribution brings a cluster analysis based on statistical data describing macroeconomic characteristic of European countries and short-term professional migration inflows with emphasis on self-employed persons. The

migration was captured by the total numbers of issued A1 forms in 2016 by sending Member States according to numbers collected by the European Commission.

The so-called A1 portable document is issued by a competent authority in a Member State (an office responsible for social security affairs) for purposes of migrating person, in most cases on request of a migrating employed or self-employed person in his or her home country, the country of residence or the country that sends the worker abroad, i. e. the so-called sending state more generally. This document is then brought to the receiving state and its purpose is to confirm the fact that this person has been affiliated to the social security legislation of the sending state and – which is also very important – that the above mentioned person does not have any obligations to pay for social security obligations in another country.

The authors of the statistical report themselves point out that the presented quantitative data can provide only an indicative picture and may not fully reflect the multi-layered reality. Above all, it is not a mandatory legal requirement to apply for A1 form before posting. It means it is allowed to migrate even without this document. However, it is definitely recommendable to take A1 form because of streamlining of all the connected administrative processes (De Wispelaere and Pacolet, 2018, p. 9 and 12).

The procedure of A1 forms being issued in one country and subsequently deposited in another one enables the smooth functioning of posting of employees and self-employed persons enshrined in Art. 12 of the Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems. The system of posting brings an advantage for persons migrating for a short period of time – it is set up to 24 months. They can still stay affiliated to the previous social security system in their (mostly) home country, which eliminates additional administrative burden for both employers and employees and prevents people from frequent changes in legal regimes which would mean possible variations in the accessible level of social protection. Originally, the period was limited to 12 months only with one equivalent renewal possible, now it is easier – just 24 months without any renewal. This corresponds to bilateral treaties where the timeframe is similar, up to 2 years, it can be also longer in case the treaty is concluded between two geographically very distant states, e. g. the Czech Republic and Australia, then the posting can last for 5 years.

As the overall macroeconomic situation of a country is concerned, we used internationally comparable aggregates. To measure the size of an economy, it is usual to consider the gross domestic product, expressing the strength and the production capacity, together with the country's population, representing the extent of purchasing power (World Bank, p. 13 and following). The indicator is calculated as the ratio of real GDP to the average population in a specific year. GDP measures the value of total final output of goods and services produced by an economy within a certain period of time. It includes goods and services that have markets (or which could have markets) and products which are produced by general government and non-profit institutions. We therefore included real GDP per capita. In other words, it is a measure of economic activity and is also used as a proxy for the development in a country's material living standards. However, it is a limited measure of economic welfare. For example, neither does GDP include most unpaid household work nor does GDP take account of negative effects of economic activity, like environmental degradation. Finally, we concentrated on GDP values measured through purchasing power parity exchange rates due to their greater potential to take into account the living standards in respective countries and to perform internationally comparable results. (Deaton and Aten, 2015, p.5).

The other statistical numbers regarding the total population of the respective countries and average wage were taken from official EUROSTAT database. While the size of population describes the extent of the labour market in a country, the average wage is important for estimation of the ability of this country to be an attractive target country from a labour migration point of view. In general, countries with high level of remuneration, such as Belgium, Luxembourg, Switzerland, Austria or Germany, attract foreign workers to come, while countries where the wages are relatively low, e.g. Poland, Romania and Bulgaria, send a considerable share of productive workforce abroad. We suppose that this general statement is valid also for short-term posting and also for self-employed persons, migrating for purposes of their independent business.

Unfortunately, we had to leave apart some Member States due to lacking data in the study, such as Denmark, Poland or Norway (member of EEA included into European system of coordination) which leads to some extent to missing complexity of the model and its findings, but nevertheless we hope that the gap is only partial and does not deprive us of the possibility to gain an overall capture of the examined field of posting. We still work with 28 States, adding Iceland and Switzerland to the rest of EU Member States.

In some MS there are many persons active in more than one state, while in others it is not the case. Obviously, we can find many frontier workers in Benelux countries and also in France in areas neighbouring Switzerland. The Czech Republic and the United Kingdom reported relatively high share of self-employed persons in this group (De Wispelaere and Pacolet, 2018, p. 36). As these multi-state active people are concerned, according to the coordination legislation, they are subject to laws of the country of their residence if concurrently they conduct a reasonable part of their activity there, if not, the law of the country where their employer has his official seat. These rules were developed in the Court of Justice of the EU's case-law, in particular case concerning trade representative named *Hackenberg*, decided in 1973. Now, we can read the above described rules in Art. 13 of the Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems.

The highest number of A1 forms was issued in the following countries: Poland, Germany, Slovenia, Spain and France, while Poland as only 1 of 28 countries represents a share of 22 per cent of all A1s. (De Wispelaere and Pacolet, 2018, p. 9). We can see that Polish workers were very active abroad even before Polish EU accession in 2004, e.g. in Germany, under the German-Polish bilateral social security coordination treaty concluded in 1975 (Reimann, 2009, p. 135). Poland is also sending many frontier workers to Europe, together with Slovakia, Romania, Estonia, Hungary and also Germany and France, while Luxembourg, Austria and Switzerland receive the largest numbers of incoming frontier workers. Belgium is also strongly involved with sending and receiving slightly less than 100 000 people every year (De Wispelaere and Pacolet, 2016, p. 450).

A significant rise of the absolute numbers of issued A1 form can be confirmed on the base of data reported in recent years. There is increase about 64 per cent between 2010 and 2015, while the number of people economically active in multiple states more than doubled (204 per cent). The group of posted workers according to Art. 12 of the Regulation No. 883/2004 represents about 0,4 per cent of all the employed population. (De Wispelaere and Pacolet, 2016, p. 459). This growing trend can be unanimously confirmed. While 14 examined states constitute net senders (more A1 forms were issued than received), the other 18 countries are net recipients, which we can consider as a balanced distribution. (De Wispelaere and Pacolet, 2018, p. 22).

Table 1. The dataset

Member State	Number of inhabitants	GDP	Number of issued A1 forms in 2016	A1 forms in 2016 to self-employed pers.	Self-empl. pers. in 2 MS	Average wage
BE	11351727	35000	69836	3203	5126	26 953,59
BG	7101859	6300	15656	108	125	4 333,93
CZ	10578820	17200	11145	2231	10365	8 940,56
DK	5748769	47100	6508	missing	missing	34 878,05
DE	82521653	35500	231766	16320	2257	28 268,14
EE	1315635	14600	6327	14	51	10 638,42
IE	4784383	56400	3303	251	427	27 905,66
EL	10768193	17400	3941	68	577	15 233,90
ES	46527039	24500	100469	5780	2686	20 844,88
FR	66989083	32500	132012	3	6	26 775,26
HR	4154213	11500	36142	104	107	8 841,63
IT	60589445	26400	106395	15655	656	21 113,61
CY	854802	22700	169	0	40	10464,72
LV	1950116	11600	2446	85	130	6 814,57
LT	2847904	12700	25371	97	7	6 651,85
LU	590667	80300	55364	344	281	38 630,79
HU	9797561	11800	61365	570	156	6 702,39
MT	460297	20800	110	13	9	16 924,35
NL	17081507	40700	28394	1733	7134	34 825,82
AT	8772865	37200	62526	4826	1249	28 524,14
PL	37972964	11800	254926	20772	missing	8 967,20
PT	10309573	17500	62005	273	80	12 400,46
RO	19644350	8300	48710	98	113	5 119,04
SI	2065895	19400	150922	5652	348	12 062,45
SK	5435343	15000	89649	33362	1130	8 200,88
FI	5503297	35900	3707	246	59	29 980,90
SE	9995153	42800	3651	189	232	33 919,60
UK	65808573	32200	33647	5131	3823	37 995,26
IS	338349	38500	126	52	8	36 065,51
LI	37810	missing	65	12	missing	
NO	5258317	69100	missing	missing	missing	44 161,07
CH	8419550	58500	11727	943	671	69 870,20

Source: elaborated by the author mostly on the base of De Wispelaere, F. and Pacolet, J. (2018) and other sources referred to in the text.

The method of this paper is based on a cluster analysis. Cluster analysis is a modern method of applying statistical software to multivariate data processing that enables us to discover similarities among multiple explored units. In this paper, we used non-hierarchical, K-clustering which divides the complete set of objects into a certain number of clusters. (Řezanková, 2014, p. 78). To say it simply, the outcome of the cluster analysis is represented by clusters – groups of objects that share close and similar characteristic with concurrent significant differences from other clusters. In other words, the differences inside one cluster are quantitatively closer than the differences between objects being sorted to different clusters. Cluster analysis has notable potential for economic analysis of taxation, tax systems and their international comparison (Rybová, 2015, p. 66). This is the reason why we can use it also for social security matters, which are closely interrelated with income taxation.

4. The Model and Findings

We assume that higher numbers of A1 issued forms belong to prevailing sending Member States, this means lower wage and less attractive labour market. On the other hand, when the foreign worker or self-employed person leaves host country and returns home or continues to another foreign country for reasons of further career development, he or she is also equipped with an A1 form. Therefore, we must generally assume that both sending and receiving states perform high number of A1 issued forms.

We conducted cluster analysis with suitable statistical software. The task was to range all the elaborated States in clusters that encompass countries with shared characteristic showed by close values of the examined quantitative data. This helped us to answer the aforementioned research question whether European countries do have some degree of economic convergence and whether harmonization of certain legal regulation has contributed to the similarities in working and entrepreneurship conditions. An affirmative answer would be signified by clusters with comparably similar size and quantitative values for respective countries.

The outcome of our model is explained in the following text, table and figure: The numbers of Member States that were ranged to particular clusters greatly vary. While in the first and third cluster, there are 13 and 10 countries, which represent an overwhelming majority, there are only 2 and 3 countries out of 28 in the remaining two groups. Although in general, we could suppose the

strongest inflow of workers and self-employed persons from low-wage countries to high-wage ones, this in fact represents only about one third of overall posting.

Table 2. The outcomes of the cluster analysis

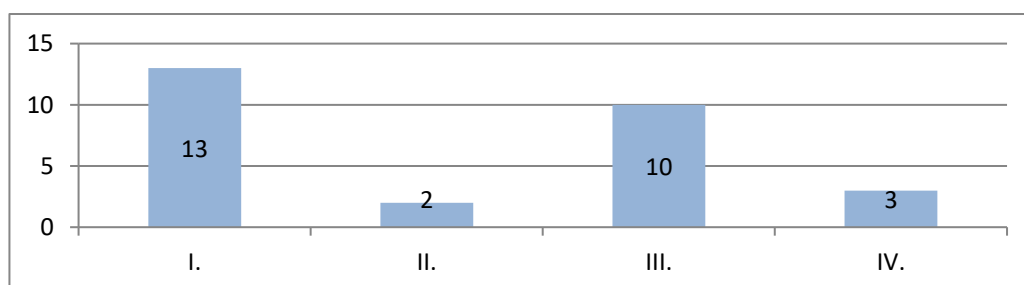
Variables	Cluster			
	I.	II.	III.	IV.
Average wage	16 731,69	20 978,50	24 248,80	31 012,67
Self-employed persons active in 2 states	209,38	1 671	2 570,30	2 028,67
A1 forms in 2016 to self-employed persons	3 102,15	10 717,50	1 413,40	7 151,33
Number of issued A1 forms in 2016	29 945,54	103 432	36 330	132 475
GDP	26 592,31	25 450	28 640	33 400
Number of inhabitants	2 877 135,38	53 558 242	11 671 929,90	71 773 103
Number of countries	13	2	10	3

Source: elaborated by the author mostly on the base of De Wispelaere, F. and Pacolet, J. (2018) and other sources referred to in the text.

The movement of workers and also self-employed professionals is also very intensive between high income rich economies only (with 38% share). Nevertheless, the vast majority of all posted persons (85%) were received by high income counties, members of the former EU-15.

In our model, we identified great regional disparities inside the EU and the European Economic Area. We can conclude that there is a significant lack of overall economic convergence, at least as is it traceable from the single labour market internal migration and self-employment posting point of view. In the Table 2, we can see the exact values of cluster centres that were identified by our model.

Figure 1. The distribution of the clusters



Source: elaborated by the author mostly on the base of De Wispelaere, F. and Pacolet, J. (2018) and other sources referred to in the text.

5. Conclusions

The analysis showed apparent disproportions in the explored characteristic among European states. While some EU Member States recorded high number of the respective variables, the others showed low values. Moreover, the disproportion is showed strongly by this simple conducted model because two of the clusters embraced the majority of reported Member States and the other two counted some two or three countries only. The results proved lack of economic convergence among EU Member States as it is shown through social security coordination of posted workers and self-employed persons.

On the basis of the aforementioned analysis, we can formulate the following conclusion: the model showed that it is really difficult to set a comprehensive and comparable set of economic characteristic touching the social security coordination that would be capable of being shared across Europe. If we try to do so such as in the above presented research the outcome is rather partial and discrepant. Further work seems to be in front of us in order to get a holistic view of European labour market and the migration of self-employed independent persons. More research is definitely needed in order to apprehend complexly the effects of migration of both employed and self-employed active professionals.

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