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POSTING OF WORKERS: THE IMPACT OF SOCIAL SECURITY COORDINATION AND INCOME TAXATION LAW ON WELFARE STATES

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Abstract

Posted workers provide on a temporary basis services for their employer outside the Member State where the employer is established. Their wages are taxed for a certain period of time at the taxation level of the sending Member State, which is also the recipient of these tax revenues. The differences in labour tax rates between the sending and the receiving Member State might lead to a tax and competitive advantage for 'foreign' service providers and their employees posted to another Member State. Labour taxes levied to the income of the posted workers are estimated to be equal to approximately 0.7% of the total monthly labour tax revenues of the sending Member States. Sending 'new' Member States are clearly more dependent on the labour tax revenues of posted workers as share of the total labour tax revenues compared to the sending 'old' Member States. Also, labour tax revenues from these workers living in the sending 'new' Member States would decrease by 77% if these workers would not be posted but employed in their sending Member State. This outcome is the result of an important flow of posted workers towards higher-wage Member States. It proves that sending Member States benefit from respecting minimum wages in the Member State of employment and the collection of the proper amount of social contributions and income taxes. Otherwise, these labour tax revenues will be much lower. An alternative scenario, a tax harmonisation based on the 'source' principle (i.e. paying taxes at the taxation level of the receiving Member State in the sending Member State) could be introduced in order to remove tax competition and to create (already ongoing) upward 'social' convergence. This alternative scenario on average increases labour tax revenues from posted workers 'only' by 3% compared to the current situation, in particular since labour tax rates of the 'new' and 'old' Member States are quite similar to each other. Where labour tax revenues from posted workers will decrease by 2% in the 'old' sending Member States, a higher increase of revenues will be realised in the 'new' sending Member States (+8%).

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Introduction [1,2]

The current debate on 'social dumping'[3] by the intra-EU mobility of posted workers[4] and the fight against it is currently strongly focused on the application of the 'Posting of Workers Directive'[5] and on the more recent 'Enforcement Directive'[6,7]. In 2013, on average 1.3 million formal statements on the applicable social security legislation (Portable Document (PD) A1)[8] were issued to workers who provided services on a temporary basis in a Member State[9] (= receiving Member State) other than the Member State where their employer was established (= sending Member State and also competent Member State) (Pacolet and De Wispelaere, 2014a).[10,11] The possible impact of social security coordination and taxation law and in particular the bilateral differences in tax rates which might lead to a tax advantage under current rules are, however, rarely described and discussed.[12]

Some alternative scenarios could be introduced in order to remove these tax advantages. Moreover, these scenarios should also try to create upward 'economic' and 'social' convergence between Member States. On the other hand, this could already be the case under current rules if tax rates would be applied to a higher (minimum) income level than would be the case in the sending Member State. The labour tax revenues of the posted worker's income under current rules are estimated, as well as those in case these current rules would be changed by a tax harmonisation based on the source principle (i.e. paying labour taxes at the taxation level of the receiving Member State in the sending Member State).

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1 This paper benefited from previous research prepared in the framework of the Conference on '*Mobility of Workers and Pensioners and Coordination of Social Protection in Europe*' organised by HIVA for and in collaboration with the European Centre for Workers' Questions EZA held on 13 October 2014 in Leuven and in the framework of Contract No VC/2013/0301 'Network of Experts on intra-EU mobility – social security coordination and free movement of workers / Lot 2: Statistics and compilation of national data'.

2 The authors would like to thank Prof Dr Yves Jorens, Dr Filip Van Overmeiren and Sarah Van den Broucke for their very useful comments.

3 Within the context of this article 'social dumping' should rather be associated with competition by taking advantage of differences in national legislation and the EU legislation on posting of workers to tackle these differences (in terms of conditions of employment, social security contributions and income taxation) (i.e. term is not equal to social or fiscal fraud).

4 Art. 2 of Directive 96/71/EC defines a posted worker as "*a worker who, for a limited period, carries out his work in the territory of a Member State other than the State in which he normally works*". Art. 12 (1) of Regulation (EC) No 883/2004 defines a posted worker as "*a person who pursues an activity as an employed person in a Member State on behalf of an employer which normally carries out its activities there and who is posted by that employer to another Member State to perform work on that employer's behalf …, provided that the anticipated duration of such work does not exceed twenty-four months and that he is not sent to replace another person.*" Article 12 (2) of Regulation (EC) No 883/2004 defines a posted self-employed person as "*a person who normally pursues an activity as a self-employed person in a Member State who goes to pursue a similar activity in another Member State …, provided that the anticipated duration of such activity does not exceed twenty-four months.*" The term 'posted worker' applied in the paper includes both posted workers and posted self-employed persons.

5 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.

6 Directive 2014/67/EU of the European Parliament and of the Council of 15 May 2014 on the enforcement of Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and amending Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System ('the IMI Regulation').

7 In 2012, the Commission published an impact assessment on 'the revision of the legislative framework on the posting of worker in the context of provision of services'. This impact assessment conducted by the Commission, which was based on a series of external studies, resulted in the proposal to apply the Enforcement Directive.

8 Previously known as the E101 form. The form proves that the posted worker pays social security contributions in another Member State.

9 Member State: 28 EU Member States and EFTA countries.

10 However, in 2013, a total of 1.7 million PDs A1 were issued by the reporting Member States. Approximately 1.3 million PDs A1 were related to postings to one specific Member State. The remainder PDs A1 were applicable to persons active in 2 or more Member States and to common agreements.

11 However, there is still uncertainty to what extent the number of PDs A1 issued by Member States is a precise measure of the actual number of postings taking place. For instance, Belgium has introduced in 2007 a mandatory declaration tool by LIMOSA for posted workers. Figures on the yearly number of declarations registered by LIMOSA differ to a high extent from the number of PDs A1 received by Belgium. For example, in 2012 Belgium received a total of about 373,000 LIMOSA registrations, whereas only 125,000 PDs A1 were delivered for persons sent to Belgium (source: National Social Security Office - NSSO).

12 None of the external studies in preparation of the impact assessment conducted of the Commission describe in detail the differences in national employee and employer social security contributions and the possible impact of these differences.

Legal framework

National social security and taxation law should be coordinated in order to avoid double labour taxation. Here, a distinction should be made between the provisions applicable to posted workers in social security coordination and income taxation law.[13, 14]

The social security systems of the countries of the European Union, Liechtenstein, Norway, Iceland and Switzerland are coordinated by Basic Regulation (EC) No. 883/2004[15] and Implementing Regulation (EC) No. 987/2009[16]. Article 12 of Regulation (EC) 883/2004 exempts the posted worker (and his/her employer) to pay social security contributions in the receiving Member State during a posting period of a maximum of 24 months.[17,18] They still pay employer and employee social security contributions in the sending competent Member State despite the temporary provided services in the receiving Member State. This is an exception to the general rule in order to promote free movement of services, since not the legislation of the place where the activity is performed is applicable *(lex loci laboris)*.[19] Thus, the coordination regulation on social security schemes creates (unintentionally) competition. Moreover, this implies that the posted worker can still claim social security benefits in case of unemployment, sickness, invalidity, etc. and continues building up his old-age pension in the sending Member State.

At EU level there are no coordinating tax rules determining which Member State will tax income during the posting period. However, this may be set out in national laws or bilateral tax agreements. The 'double taxation conventions' agreed between EU Member States are mainly inspired on the OECD Model Convention on Income and on Capital. Article 15 (2) of the OECD Model Tax Convention on Income and on Capital defines the '183-days-rule'.[20] It implies that the posted worker who provides services on a temporary basis during a period of less than 183 days within a period of 12 months that starts or ends in the fiscal year in another Member State will be taxed by the sending Member State.[21] Thus, also the application of taxation law could result in a tax and competitive advantage in case of posting of workers.

The application of a different period of time under social security coordination (= max. 24 months – extendable to 5 years) and taxation law (max. 183 days) is remarkable. It implies that the national competences to levy labour taxes[22] will depend on the posting period[23] *(Figure 1)*. This is probably not sustainable in order to promote intra-EU labour mobility and to avoid an additional administrative burden. Therefore, some changes were already proposed in the past (see Pennings and

13 For a more detailed legal analysis see Spiegel et al. (2014).

14 However, the impact of posting is broader than only on personal income (for instance, VAT, corporate tax).

15 Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems.

16 Regulation (EC) No 987/2009 of the European Parliament and of the Council of 16 September 2009 laying down the procedure for implementing Regulation (EC) No 883/2004 on the coordination of social security systems.

17 Under old Regulation 1408/71 the E101 form could be issued for a posting period of maximum 12 months and prolonged for another 12 months by the E102 form. See also Art. 16 Regulation (EC) No 883/2004 (extendable to 5 years).

18 Other conditions to be fulfilled are that a posted worker cannot be sent to replace another posted worker and that there should be a direct relationship between the posted worker and an employer that normally carries out its activities in the sending Member State (EC, 2012).

19 For a more detailed analysis see Jorens, 2009; 2010.

20 ... *A resident of a Contracting State in respect of an employment exercised in the other Contracting State shall be taxable only in the first mentioned State if:*

> *a) the recipient is present in the other State for a period or periods not exceeding in the aggregate 183 days in any twelve month period commencing or ending in the fiscal year concerned, and*
> *b) the remuneration is paid by, or on behalf of, an employer who is not a resident of the other State, and*
> *c) the remuneration is not borne by a permanent establishment which the employer has in the other State.*

21 Other conditions to be fulfilled are that the wage is paid by, or on behalf of, an employer who is not a resident of the other Member State, and that the wage is not borne by a permanent establishment which the employer has in the other Member State.

22 Equal to social security contributions and personal income taxes.

23 See Spiegel et al. (2014) for the discussion of some cases.

Weerapas, 2006;[24] Spiegel et al., 2014).[25] In the debate on 'social dumping' some proposals were made as well to reduce the maximum posting period (Goyens et al., 2003; Donders et al., 1997).

Figure 1 Posting in social security coordination and taxation law, competence to levy taxes

Posting period	Tax	Social security
Less than 183 days	MS of origin	MS of origin
Between 183 days and 24 months	MS of employment	MS of origin
Longer than 24 months	MS of employment	MS of employment

Source Own figure

Possible consequences

Posting of workers and the possible negative impact of this phenomenon, by undermining jobs for local employees and the competitive position of local employers, have become a hot issue in public and political debate.[26] Through the 'Posting of Workers Directive' and the more recent 'Enforcement Directive' steps were taken at European level to avoid as much abuse as possible and to avoid 'social dumping', by introducing a nucleus of terms and conditions of employment of the 'host' Member State.[27, 28, 29] This principle of 'host-country control' has according to Pelkmans (2006, p. 182) *"not given precisely the workers from relatively poor EU countries a possibility to use their competitive advantage to the full (for short periods)."* Nevertheless, the level of the wages could still have an impact on the financial incentive for both the employer and the employee to provide services/to carry out work abroad. As stated by Borjas (2010, p. 317) *"workers are continually searching for higher-paying jobs and firms are searching for cheaper workers"* which as a result also increases the probability of geographic mobility. Despite the fact that a nucleus of terms and conditions of employment of the Member State of temporary employment has to be respected, many posted workers will earn a (much) higher (minimum) wage given that a high number of the posted workers will move from a low-wage to a high-wage Member State. In 2013, for instance, 38% of the PDs A1 were issued to posted workers living in the EU-13 and 86% of the PDs A1 were issued to posted workers who were temporarily employed in the EU-15 (Pacolet and De Wispelaere, 2014).[30] Average wages and minimum wages vary markedly across the 'high-wage' EU-15 and 'low-wage' EU-13 Member States *(Figure 2)*. The possible positive consequences of these higher wages on the labour taxes of the sending Member States and on the convergence between the 'new' and 'old' Member States will also be discussed in this paper.

Other issues to be tackled are the challenge of respecting minimum wages in the Member state of employment and the collection of the proper amount of social contributions and income taxes by the Member State of origin in case workers are posted. Both will have a negative impact on the labour

24 *"…Social security rules are necessary to promote freedom of movement. It is consensus, though hard to prove, that a period of six months of posting is too short to allow free movement, as many projects take longer. … From this approach it follows that, if convergence is desirable, the social security rules have to be followed"* (Pennings and Weerapas, 2006, p. 221).

25 *"Changes could be made to synchronise the different principles, e.g. harmonising the posting provisions towards the 183-days rule"* (Spiegel et al., 2014, p. 58).

26 On the other hand, too little attention has been paid to the positive aspects of posting, in particular as a useful stabilisation tool if a Member State is confronted with an asymmetric shock (De Wispelaere and Pacolet, 2015).

27 For a more detailed discussion of the 'Posting of Workers Directive' see Cremers, 2011 and Cremers et al., 2007.

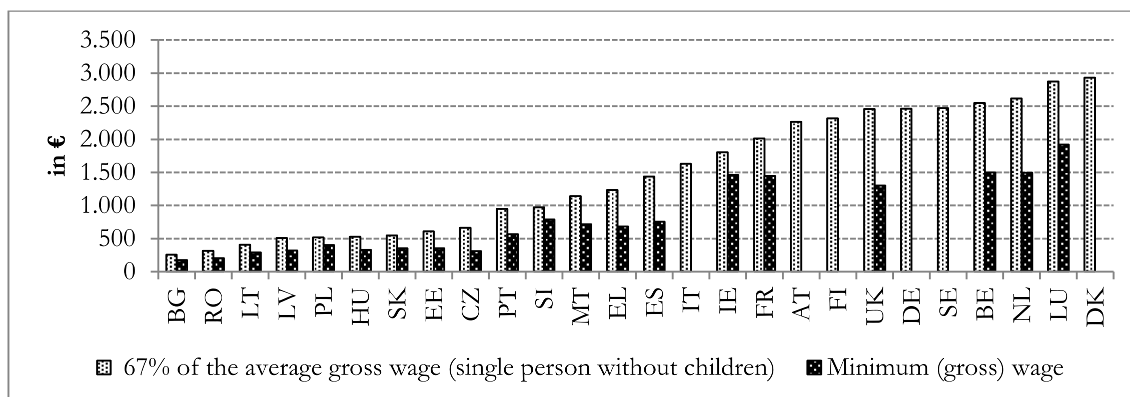
28 Member States are not obliged to set or introduce minimum wages if they do not exist in the Member State in question. Therefore, also a debate on the introduction of a 'EU minimum wage' is ongoing. Italy, Austria, Denmark, Finland, Sweden and Cyprus are EU Member States where a minimum does not exist at this moment. For an overview of the monthly minimum wages see Eurostat [earn_mw_cur]

29 The labour conditions of the Member State of origin remain even applicable if these are more favourable to posted workers.

30 We use the term 'EU-15' to refer to the 'old' EU Member States (Belgium, Greece, Luxembourg, Denmark, Spain, Netherlands, Germany, France, Portugal, Ireland, Italy, United Kingdom, Austria, Finland and Sweden);'EU-13' to refer to the 'new' Member States (Croatia, Romania, Bulgaria, Poland, Czech Republic, Latvia, Lithuania, Slovenia, Estonia, Slovakia, Hungary, Cyprus and Malta); 'EU-12': EU13 excluding Croatia and 'EU-2' to refer to Romania and Bulgaria.

tax revenues of the sending Member States. However, the discussion on tax competition should not be confused with social and fiscal fraud.

Figure 2 **Differences in gross monthly earnings across Member States, 2013**



* No data for HR and CY.
Source EUROSTAT [earn_mw_cur]

Differences in social security and personal income tax rates between the sending and receiving Member State might lead to a tax and competitive advantage *(see Figure 3)* (see also Pennings, 2005;[31] Donders et al., 1997).[32] These differences could be considered as an incentive or disincentive for employers and their workers in the sending Member State to provide services/ to carry out work on a temporary basis in another Member State.[33] It will be an additional financial incentive for the posted worker in case (s)he is taxed less on the (already higher) (minimum) wage (s)he earns in the receiving Member State. There could also be a financial incentive for their employers in case social security contributions are lower in the sending Member State compared to the Member State of temporary employment since it will lead to cheaper employees and an additional competitive advantage for the 'foreign' service providers compared to 'national' service providers. Also from a contractor's point of view it could be interesting to ask for the services of posted workers in case the bid and the final invoice is taking into account the tax advantage of the 'foreign' service provider and probably also the lower wages of the posted workers. The fact that posted workers still pay labour taxes in the sending Member State has probably also a positive budgetary impact on these Member States. The labour tax revenues in the sending Member State will be (much) higher since labour tax rates are applied to a (much) higher income level earned in the receiving Member State *(see also Figure 2).*

This exception to the general tax principle, which is taxation in the Member State of employment, through posting of workers, is mainly motivated to encourage intra-EU mobility and economic interpenetration and to avoid an additional administrative burden.[34] This was even recognised by the European Commission in a recent report (EC, 2014a, p. 148): "*Posting workers allows companies to exploit their competitive advantage across borders".*

31 *"An obvious conclusion is that employers often use posting certificates to obtain cost advantages by posting workers from a country with low contributions to a country with higher contributions"* (Pennings, 2005, p. 73).

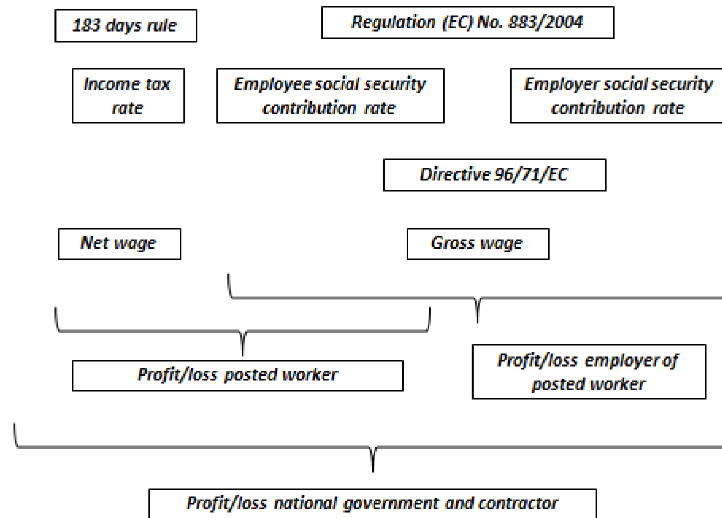
32 One of the reasons defined by Pennings (2005, p. 69) for the 'lex loci laboris' principle is that *" if an employee falls within the scope of the system of the country of residence (that not being the work State) or the system of the country of origin, he would be more expensive or cheaper for the employer than the employees who live in the country of employment (the "national workers")."* This situation has risen precisely under the current posting rules.

33 Previous research defined the unemployment rate – from a sending perspective – and labour costs and labour shortages – from a receiving perspective – as the main explanatory variables of the extent of posting (Ismeri, 2012).

34 *"In order to give as much encouragement as possible to the freedom of movement of workers and services, to avoid unnecessary and costly administrative and other complications which would not be in the interests of workers, companies and administrations, the Community provisions in force allow for certain exceptions"* (European Commission, 2012, p. 6). See also Case 35/70 Manpower paragraph 10; Case C-202/97 *Fitzwilliam* paragraphs 28 to 30 and Case C-49/98 *Finalarte* paragraph 30.

Thus, current rules could be maintained in order to enhance the competitiveness of 'foreign' service providers. As mentioned before, this exception has important financial consequences, in particular on the public national budget. The financial impact on the labour tax revenues of the sending Member State under current rules will therefore be calculated.

Figure 3 Schematic overview of the impact of current rules on the financial profits or losses of employers, employees, contractors and national governments



Source Pacolet and De Wispelaere, 2014b

However, not only the financial impact under current rules will be calculated. Also an alternative scenario will be calculated which tries to remove the competitive (dis)advantage and to create (already ongoing) 'economic' and 'social' convergence. Both aspects will be discussed more in detail.

To what extent a 'race to the bottom' is thinkable on the basis of tax competition (by direct and indirect taxes, here in particular by labour taxes) in the EU has been discussed frequently by scholars (see, for instance, Molle, 2011;[35] Pennings, 2005;[36] Razin and Sadka, 2011; Keuschnigg et al., 2014; Sørensen, 2001; Genschel, 2002; Verschueren, 2015). Sinn (1990, p. 501) even predicted *"the death of Europe's welfare states if the unmitigated competition of tax systems is allowed."* By contrast, Tanzi (1996) does not consider social security taxes sensitive to tax competition.[37] And also Genschel and Schwarz (2011, p. 348) tend to conclude that *"most workers cross borders in search of better jobs and higher wages, not lower taxes."* Moreover, also other components than wages and taxes will influence the competiveness of Member States (e.g. infrastructure, skills, education, innovation, etc.) (Baldwin and Krugman, 2002; De Grauwe and Polan, 2003).

To what extent tax competition manifests itself in case of posting of workers is much less discussed. Bilateral differences in social security contributions and income tax rates result in a tax (dis)advantage of 'foreign' service providers and a competitive (dis)advantage. The possible lower labour cost as a result of the advantage of lower social security contributions and income tax rates by the 'foreign'

35 Molle (2011, p. 281) concludes that *"Net contributors of the welfare state will join low-tax countries; whereas net recipients are attracted to countries with a well-established welfare state. If this phenomenon becomes of a significant size, individual countries have an incentive to undercut the tax rate of other countries and to reduce the level of their welfare state provisions in order to attract the rich and to deter the benefit dependants."*

36 Pennings (2005, p. 69) concludes that *"it results in unemployment for the national employees and the country concerned would be likely to react by reducing the cost of its own social security system. The effect will be that the level of social security will be lower."*

37 It is more likely that the rate will have an impact on the labour demand and the engagement in undeclared work (Tanzi, 1996).

service providers might lead to 'social dumping' effects[38] and job displacement effects[39]. Within the context of this article 'social dumping' should rather be associated with competition by taking advantage of disparities in national legislation and the EU legislation on posting of workers to tackle these differences in terms of conditions of employment, social security contributions and income taxation (i.e. not equal to social or fiscal fraud). Contrary to the original use of the social dumping hypothesis, where a relocation of firms to low-wage Member States or the displacement by low-cost producers from these Member States could be answered by a higher productivity[40] (expressed by the 'unit labour cost'[41] (see Abraham, 2006; Adnett, 1995; Erickson and Kuruvilla, 1994; Maslauskaité, 2013)) in high-wage Member States (with probably also higher social protection provisions), it is not possible in case of posting of workers since national workers and posted workers are subject to the same nucleus of terms and conditions of employment of the 'host' Member State. As a result, the lower tax rates and probably also the lower wages of the posted workers could not be matched by a higher productivity level of the 'national' workers.

Based on administrative figures it is questionable if 'social dumping' through posting of workers is currently a real threat for the receiving Member States. In 2013, on average an equivalent of 0.6% of the total employed population between 15 and 64 years was posted to another Member State (Pacolet and De Wispelaere, 2014a). When using the number of 'unique'[42] posted workers as the number of PDs A1 issued is not necessarily equal to the number of posted workers involved, this ratio would even reduce to only 0.4% of the employed population. Taking also the posting period into account (some 3 months – *cf. infra*), roughly 0.2% of the employment in full-time equivalents could be related to posted workers. We tend to conclude that no significant impact on the labour market of the receiving Member State, in terms of job displacement or social dumping effects, could be realised by this marginal percentage of posted workers compared to the total number of employed persons.

Especially unskilled labour-intensive sectors are considered to be sensitive to the social dumping hypothesis (Adnett, 1995; Abraham, 2006). In 2013, on average 43.9% of the PDs A1 were issued to posted workers employed in the construction sector (Pacolet and De Wispelaere, 2014a). Moreover, 31.8% of the forms were issued for activities in the service sector and 22.7% for other industrial activities (excluding the construction sector). The distribution of the economic activity strongly differs between the sending EU-15 (especially employed in the service sector) and EU-13 Member States (especially employed in the construction sector). These two types of posting, low-medium skilled workers posted from low labour cost to high labour cost Member States, mainly in labour-intensive sectors, on the one hand, and medium-high skilled workers posted in qualified occupations, on the other hand was also described in previous research (Ismeri, 2012). Thus, a high percentage of incoming posted workers in a receiving Member State concentrated within a (labour-intensive) sector might increase the risk of a social disruption of the sector within this Member State (for instance, this

38 Two types of dumping are defined by Alber and Standing (2000): the first type of dumping occurs *without state intervention* this e.g. by displacement of high-cost producers by low-cost producers; by the relocation of firms towards low labour cost countries or even by the movement of people towards high-wage countries resulting in a pressure on wages and labour supply (see also Adnett, 1995; Erikson and Kuruvilla, 1994; Abraham, 2006); while the second type of dumping is a result of *state intervention* by reducing labour costs or by reducing social security provisions (see also Guillén and Matsaganis, 2000; Bernaciak, 2015 and 2012; Kvist, 2004). Alber and Standing (2000, p. 99) define this type of social dumping as *"situations in which standards in one country are lowered relative to what they would have been because of external pressure from all or part of the global economic system."*

39 The judgement in case C-113/89 *Rush Portuguesa Lda* states that *"posted workers return to their country of origin after the completion of their work without at any time gaining access to the labour market of the host Member State"* (paragraph 15). Also, a posted worker cannot be sent to replace another posted worker and there should be a direct relationship between the posted worker and an employer that normally carries out its activities in the sending Member State. This should limit the risk of job displacement.

40 This supposes a process of specialisation and technological development.

41 The Unit labour costs (ULC), defined by the OECD, is a measure of the average cost of labour per unit of output and are calculated as the ratio of total labour costs to real output. See also http://stats.oecd.org/Index.aspx?DataSetCode=ULC_ANN

42 'Unique' implies that posted workers who received more than one PD A1 certificate during the reference period are only counted once.

might be the case for the Belgian construction sector). The fact that labour-intensive sectors are also price sensitive puts even an additional pressure on the tax burden (Baldwin and Wyplosz, 2012).

An intervention by tax coordination, and even more explicit by tax harmonisation, in order to remove tax distortions has been the topic of public and political debate and discussed by many scholars (Jha, 2010). However, in the case of posting of workers, these tax distortions are the result of an exception from the general rule *(lex loci laboris)*. National workers are taxed by the *'source/origin'* principle (labour income is taxed by the Member State of employment, i.e. location of the source of revenue) while posted workers are taxed by the *'residence/destination'* principle (labour income is taxable in the Member State in which the employee resides, i.e. sending Member State) (cf. infra) (Keen, 1993; Genschel and Schwarz, 2011). A possible solution to resolve this situation is to apply the *'lex loci laboris'* principle to posted workers (i.e. labour income is taxable in the receiving Member State). However, specific reasons oppose this solution. Among other effects, a shift towards this principle will have a negative impact on the convergence between 'new' and 'old' Member States *(cf. infra)*. The authors will discuss, therefore, another alternative solution by a tax harmonisation based on the 'source' principle (i.e. paying taxes at the taxation level of the receiving Member State in the sending Member State).

Another issue to be tackled is to what extent posting, the current rules and alternative scenarios might lead to 'social' convergence. First, the scope of this term should be determined. The EC (2014) has, for instance, selected five employment and social dimensions (GDP per head, employment and unemployment developments, household income per capita, rate of being at-risk-of-poverty-and-exclusion (AROPE) and inequality) to measure 'social' convergence or divergence. Other dimensions could also be taken into consideration, such as replacement rates or the social spending of Member States (as a percentage of their GDP) (see, for instance, Paetzold, 2013; Caminade et al., 2010). Figures dating from before the financial and economic crisis show social convergence among new and old Member States (Pacolet and Delsen, 2011). However, this picture has been changed since 2007 towards even social divergence (EC, 2013; 2014a; Caminada et al., 2010, van Vliet, 2011).

Social spending could be considered as one of the main functions of the 'welfare state'[43]. Probably the most determining factor for the development of welfare states and their social protection schemes is their economic development (Wilensky, 1975; [44] Kerr et al., 1960; Gos and Pacolet, 1996[45]). Thus, social spending strongly correlates with GDP per head (as an indicator for economic development) since the latter will determine the 'spending capacity' of the welfare state (Goudswaard and van Riel, 2004). Therefore, 'social' convergence is expected to arise spontaneously through 'economic' convergence (Sinn and Ochel, 2003). As a result, 'social' convergence of welfare states is not necessarily equal to a harmonisation (i.e. a top-down 'one size fits all' approach) of it (see for instance, Vandenbroucke, 2014; Sinn and Ochel, 2003; Goudswaard and van Riel, 2004).[46] This paper will

43 Sandmo (1995) defines the 'welfare state' as *"a subsection of the public sector, concerned with redistribution (via social security and social assistance) and the provision of those social goods which have a strong redistributive element, like health care and education." Pestieau (2006, p. 4) states "The welfare state consists of a number of programs through which the government pursues the goal of social protection on behalf of citizens against certain categories of risk, of social assistance for the needy, and of encouraging the consumption of certain services such as education, housing and child care."* See also Pacolet (2002) for a more detailed discussion on the state of the welfare states.

44 Wilensky (1975) considers ideological and institutional factors as little significant in explaining the development of the modern welfare state.

45 Gos and Pacolet (1996) consider a) the spending capacity and b) the needs as the two main factors of social expenditure in a region. Both factors are demand driven but are also influenced by political choices (who is eligible?, expenditure level of benefits or services?, production function and their cost?).

46 Pieters (1996, p. 27) concludes that none of the harmonisation measures are satisfactory. *"They concentrate too much on minima and therefore indirectly threaten to reduce social security in the Community to a kind of minimal social protection; or they suppose a solidarity between the Member States and a readiness of States to change radically their own social security concepts, organisation, funding methods, etc., which make them completely unacceptable to the majority of EC Member States."*

focus on the evolution of the labour tax revenues, a criteria to measure convergence, assuming that labour taxes are a reflection of the evolution of the GDP per capita and social spending.

Posting could be considered as a possible tool to create 'social' convergence given that it could have a (minor) impact on the evolution of employment, unemployment, household incomes and labour taxes in the sending Member States (De Wispelaere and Pacolet, 2015). Therefore, 'economic' and 'social' convergence could already be expected if there is a high flow of posted workers from 'low-wage' towards 'high-wage' Member States. Labour tax rates of the sending Member State are then applied to much higher (minimum) wages of the receiving Member State than this would be the case in the sending Member State *(see also Figure 2)*. As a result, the sending Member State will earn higher labour tax revenues. And as already concluded by Goudswaard and van Riel (2004) *"higher levels of income offer the possibility to develop a system of social security with adequate protection levels. At least the funding will become easier."* However, the (presumed) negative impact of posting workers on the national labour market of the receiving Member State, in terms of job displacement effects[47] and lower tax revenues, might reduce this upward convergence hypothesis. Not respecting the terms and conditions of employment of the Member State of employment will even reinforce the negative impact. The final outcome is as a result uncertain and requires further research.

Through the application of the tax rates of the receiving Member State perhaps even more labour tax revenues will be earned. Therefore, a more detailed view on the differences in social security contributions and personal income tax rates across Member States is necessary. Also the question to what extent labour tax rates could create convergence should be answered.

Differences in social security contributions and income tax rates between Member States

A more detailed view on the bilateral differences in tax rates will be obtained by using the tax wedge published in the 'Tax and benefits indicators database' of the European Commission and the OECD.[48] The tax wedge is defined as *"the proportional difference between the costs of a worker to their employer (wage and social security contributions, i.e. the total labour cost) and the amount of net earnings that the worker receives (wages minus personal income tax and social security contributions, plus any available family benefits)"*.[49]

Figure 4 shows the labour taxation of the different EU Member States (for a single person receiving 67% of the average national wage) by type of tax (personal income tax, employee social security contribution and employer social security contribution).[50] The tax wedges across Member States vary markedly from a high level in Belgium (tax wedge of 50.4%), Hungary (tax wedge of 47.4%) and France (tax wedge of 47.1%) to a low level in Malta (tax wedge of 18.9%) and Ireland (tax wedge of 20%). The average tax wedge of the EU-15 Member States is quite similar to the average one of the EU-13 Member States (see also Goudswaard and van Riel, 2004). However, the average tax wedge of the EU-13 Member States is slightly lower than this of the EU-15 Member States if only social security contributions are taken into account. *Figure 5* plots the standard deviation of the tax wedge between 2005 and 2014. The standard deviation remained broadly stable between and within zones, with some slightly convergent trends in the EU-28 and the EU-15. These figures refute largely the

47 However, we read in a recent report of the European Commission (EC, 2014a, p. 148) that *"Posting workers allows to meet temporary shortfalls in labour supply"*.

48 See http://ec.europa.eu/economy_finance/db_indicators/tax_benefits_indicators/index_en.htm
"The tax and benefits indicators database presents results of an ongoing joint European Commission/OECD project, aimed at monitoring the direct influence of tax and benefit instruments on household incomes and incentives to work".

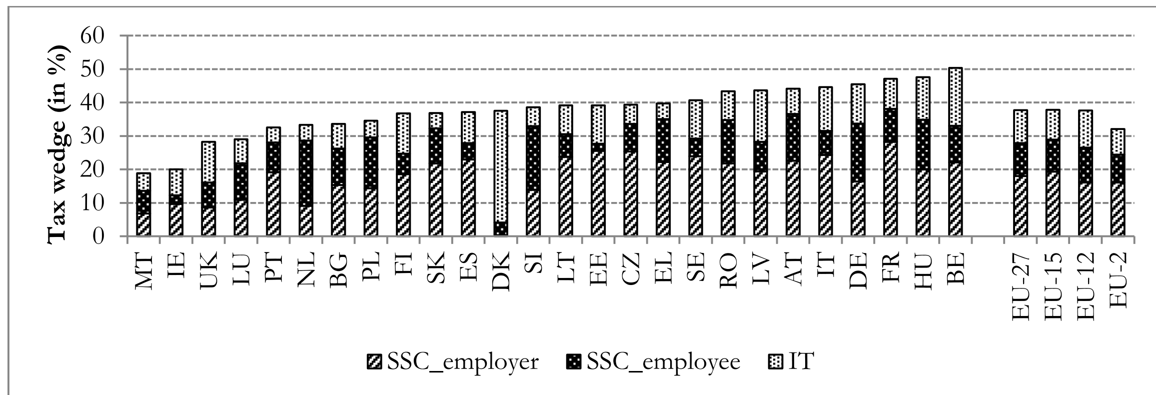
49 The marginal employee and employer social security contribution rates are published by the OECD: http://www.oecd.org/tax/tax-policy/tax-database.htm. The tax wedge is only one method to measure the bilateral differences in labour taxation. Also the implicit tax rate could be used.

50 This was also discussed in Maslauskaité (2014).

'social dumping' hypothesis. Furthermore, bilateral differences between 'high tax wedge' and 'low tax wedge' Member States could partly be solved through a tax shift. This should enforce the competitivity of 'high tax wedge' Member States.

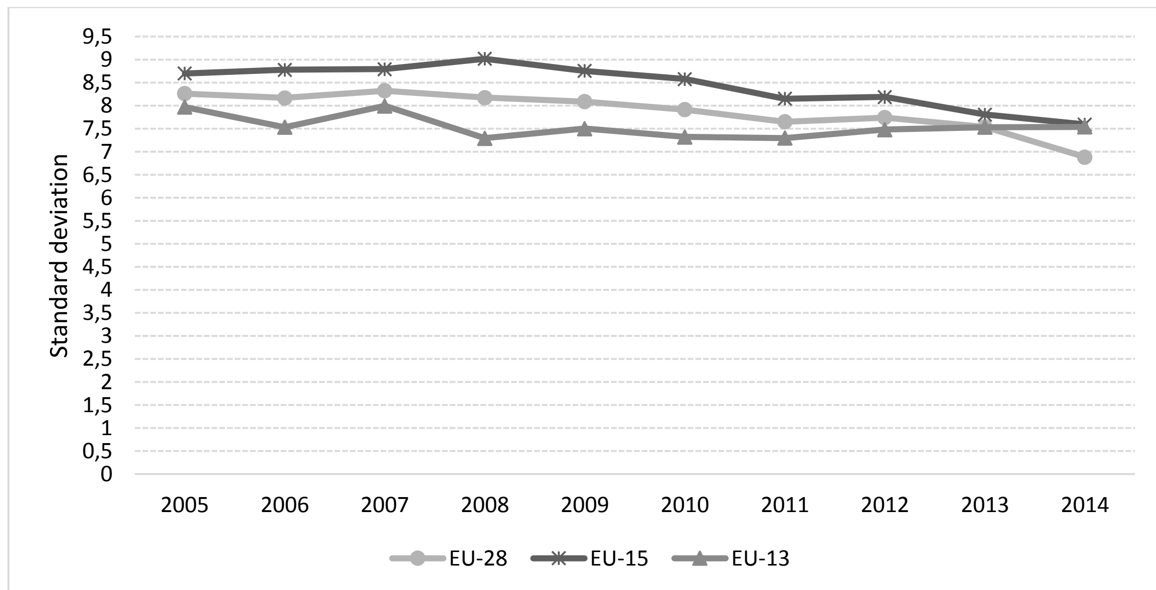
There is also a strong difference in the labour tax policy applied by the Member States since some Member States have opted to keep employer or employee social security contributions very low. For instance, the tax wedge created by social security contributions in Denmark is very limited while there is still a relatively high tax wedge because of the level of personal income taxes. As a result, there will be a distorted view on the risk of 'social dumping' when only social security contributions are taken into consideration.

Figure 4 **Tax wedge (of a single person receiving 67% of the average national wage) in 2013 by type of labour taxation**



* IT: Income Tax; SSC_employee: employee social security contribution; SSC_employer: employer social security contribution
** CY and HR: no data available
Source Own calculations based on EC - DG ECFIN - Tax and benefits indicators database

Figure 5 **Standard deviation of the tax wedge (of a single person receiving 67% of the average national wage), 2005-2014**

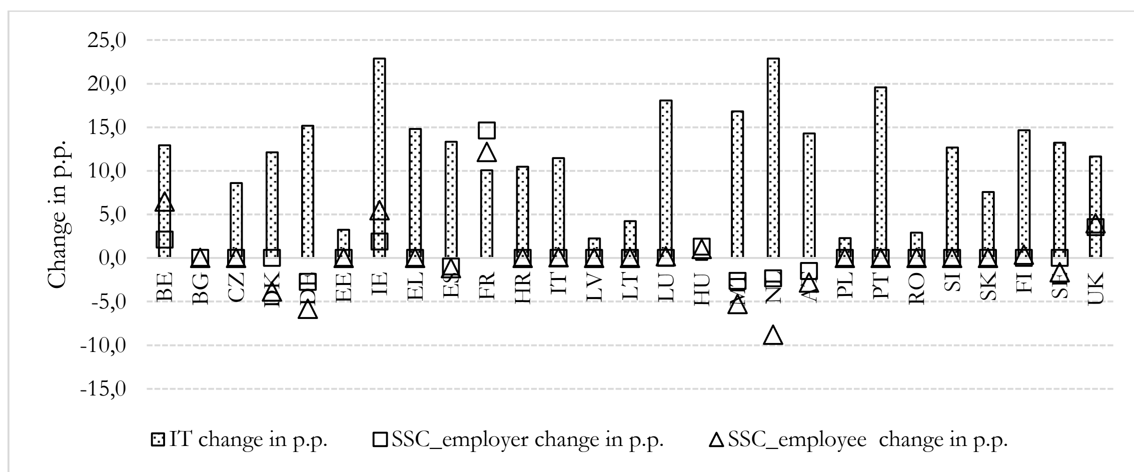


* CY and HR: no data available
Source Own calculations based on EC - DG ECFIN - Tax and benefits indicators database

Differences will become more transparent when tax wedges (by type) are compared between the sending Member State and the receiving Member State. However, some caution is required when applying tax wedges in order to determine the labour tax revenues from cross-border incomes since most Member States levy progressive tax rates on earnings through the application of income-based

tax brackets. Since average wages are not similar across Member States *(see Figure 2)* average cross-border wages might be taxed differently compared to the average national wages *(i.e. Figure 4 - 67% of the average wage in the Member State of origin is not necessarily similar to this of the Member State of employment)*. In case of posting, there is a high flow of posted workers from 'low-wage' EU-13 Member States to 'high-wage' EU-15 Member States. This implies that wages earned in the EU-15 receiving Member States will be considered as a high wage in the sending Member States and as a result also higher labour taxes will be levied (i.e. the tax wedge for high incomes will be applied). Comparing the differences of the tax wedge in percentage points between low (i.e. 50% of the average wage) and high (i.e. 167% of the average wage) wages also shows that many Member States apply flat social security rates while in most Member States the personal income taxes have a progressive character *(Figure 6)*. Thus, the higher wages will mainly be taxed by higher personal income tax rates and not necessarily by higher social security contributions.

Figure 6 Differences of the tax wedge in percentage points between low (50% of the average wage) and high (167% of the average wage) wages, of a single person, by type of labour taxation, 2013



* IT: Income Tax; SSC_employee: employee social security contribution; SSC_employer: employer social security contribution
** CY and HR: no data available
Source Own calculations based on EC - DG ECFIN - Tax and benefits indicators database

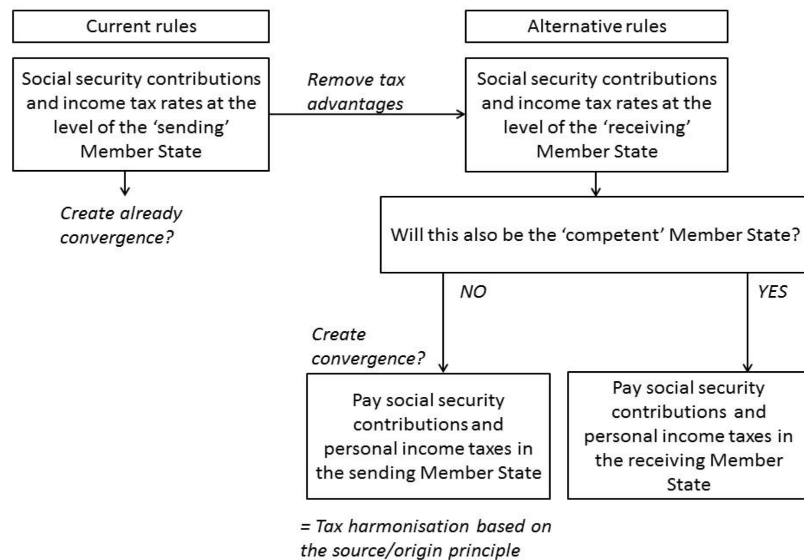
Measuring the impact on sending Member States

The labour taxes on the wages of the posting workers could be calculated for the current rules (=baseline scenario) but also for alternative scenarios. However, these other scenarios will have their pros and cons compared to the baseline scenario (no longer a tax and competitive advantage, a higher/lower administrative burden, higher/lower/no labour tax revenues, other Member State competent for paying social benefits, increase/decrease of intra-EU mobility etc.). As regards to which alternative to the baseline scenario should be studied, a change towards the *'lex loci laboris'* principle is probably the most obvious scenario. Nonetheless, we propose to implement an alternative ruling which removes the bilateral differences in tax rates but potentially also creates 'convergence', in the case that labour tax rates in the receiving Member State are higher compared to these in sending Member State *(Figure 7)*.[51] This could be obtained by paying labour taxes at the taxation level of the receiving Member State in the sending Member States. This implies a tax harmonisation based on the 'source' principle. The labour tax revenues under current rules and those when the alternative scenario is applied, will be estimated. These revenues, if significant enough, could be invested in a

51 No exhaustive impact assessment of this option will be made. For instance, there might be a higher administrative burden compared to the current rules. The dynamic effects (i.e. decrease or increase of posted workers) have not been empirically examined. However, a negative impact on the number of posted workers could be expected if there is no longer a competitive advantage. Nonetheless, there are also other (more) important push and pull factors.

more developed welfare state. Also, the impact on the labour tax revenues of the sending Member States in case workers who are now posted to another Member State would not be posted but employed in their own Member State will be estimated. This will give an indication whether posting in itself under the current rules already creates to some extent 'social' convergence through higher labour tax revenues for the 'new' Member States.

Figure 7 Alternative option in order to remove tax advantages and create 'social' convergence

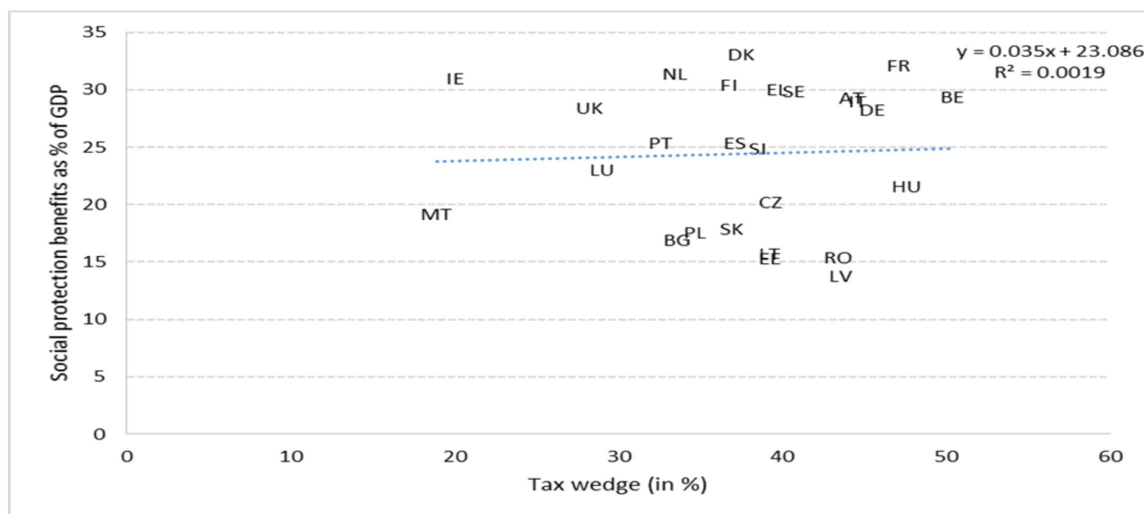


Source Own figure

There are broadly two methods to tax cross-border flows: the *source/origin principle* (income is taxed by and at the tax rate of the Member State of employment) and the *residence/destination principle* (income is taxed by and at the tax rate of the Member State of residence) (Keen, 1993; Genschel and Schwarz, 2011). In case of posting, the residence/destination principle will be applied as an exception on the *'lex loci laboris'* principle. Both principles, however, do not remediate tax competition (see, for instance, Lockwood, 2001). Tax harmonisation (based on an average level, the source/origin principle or the residence/destination principle) is therefore an alternative principle and can be considered as a tighter form of coordination (Genschel and Schwarz, 2011; Keuschnigg et al., 2014). Jha (2010, p. 652) defines horizontal harmonisation as *"governments at the same level that share a particular tax base apply a similar tax rate on a uniform tax base/or use a similar definition and formula in calculating the amounts owning."* One of the main goals of tax harmonisation in case of posting is to remove tax distortions between the sending and the receiving Member State. Thus, in order to avoid a possible spontaneous (downwards) harmonisation, there could an intervention at EU-level by the implementation of an intentional harmonisation policy. However, this will have also important consequences. Berghman (1996, p. 44) points out that: *"One could argue that the EC, by not elaborating an explicit policy of harmonisation, in fact elaborates an invisible regional policy. By not interfering in social security [but also in taxation law], the EC allows its less developed Member States to improve their economic position, as they can profit from the competitive advantage which their less developed system of social protection generates. At the same time, however, this also constitutes an incentive for social dumping."* Another goal of the tax harmonisation is to create convergence in terms of tax rates but in particular in terms of more developed welfare states and social security schemes as a result of higher labour tax revenues. More developed welfare states, in terms of their social spending as percentage of the GDP, tend to apply higher labour tax rates (see, for instance Baldwin and Krugman, 2002). However, based on *Figure 8* this conclusion is perhaps somewhat inconsistent. As already observed social spending could rather be linked to GDP per capita while the tax wedge is

mainly the result of a broad or narrow base for the financing of the welfare state (Goudswaard and van Riel, 2004).

Figure 8 **Tax wedge (of a single person receiving 67% of the average national wage) (2013) and social protection benefits as percentage of GDP (2012)**



Source EC - DG ECFIN - Tax and benefits indicators database and Eurostat [spr_exp_sum]

There is apparently also no general understanding of the added value of tax harmonisation among scholars. Baldwin and Krugman (2002) even conclude that tax harmonisation always harms one or even both of the Member States involved. Also, difficulties can be expected in the determination of the tax rate in case of harmonisation, because an average EU tax rate might cause a negative impact on the labour tax revenues and the financing of the welfare state of Member States currently above average social spending, while at the same time also causing negative impact on the competitive position of Member States below this average. Therefore, rather than an average EU tax rate, we propose a tax harmonisation based on the tax rates applied by the Member State of temporary employment (see, also Vander Lucas, 2000). In general, most of the posted workers are sent to more developed Member States. Some of these Member States apply also higher tax rates. However, the average tax wedge of the EU-15 is quite similar to that of the EU-13 *(Figure 4)*. This might limit the impact of a tax harmonisation in order to create convergence. These flows should enable an upward convergence since less-developed welfare states could invest labour tax revenues from posting in an upward development of their social protection schemes. Subsequently, posting of workers - which mostly results in higher wages and the implementation of harmonised taxes on the level of the Member State of temporary employment - could strengthen further development of the EU-13 welfare states. However, this supposes a sufficiently high impact of the labour taxes levied to the wages of the outgoing posted workers on the total amount of labour tax revenues received by the sending Member States.

The definition we apply to calculate the annual labour tax revenues from the posted worker's income by sending Member States = ***average gross monthly income * social security contributions and personal income tax rates * number of PDs A1 issued * posting period***

The average gross monthly income of the posted worker is not known in the available administrative data or survey data.[52] We have used, therefore, the earnings statistics of Eurostat in order to estimate

52 A nucleus of terms and conditions of employment of the Member State of temporary employment has to be respected, defined by 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. However, the labour conditions of the Member State of origin remain applicable if these are more favourable to workers.

the average monthly gross income (single person without children, 67% of the average wage).[53] On these amounts the tax wedge (by type) (for a single person without children, 67% of the average wage) of the sending Member States is applied under current rules. In order to correct cross-border wages for the progressivity of the taxes, also the tax wedge levied on a lower (i.e. 50%) or higher (i.e. 100%, 125% of 167%) percentage of the average wage by the sending Member should be taken into consideration. The average monthly tax revenues (by tax type) have been multiplied by the numbers of PDs A1 issued by the sending Member States (here limited to the EU-28). This will give us an idea of the monthly labour tax revenues received by the different sending Member States. This could also be multiplied by the average posting period. This methodology is also applied for the calculation of an alternative scenario whereby the tax wedge of the Member State of employment is taken into account and where the revenues are still received by the sending Member State.

Based on our calculations, competent Member States receive under current rules monthly approximately € 1.5 billion taxes from the outgoing posted workers which is equal to 0.7% of the total monthly labour tax revenues *(Table 1)*. This share is somewhat higher for social security contributions (0.8% (employer) and 1.1% (employee)) than for personal income taxes (0.5%). However, a remarkable difference can be observed in the importance of the labour tax revenues from the posting of workers as share of the total labour tax revenues between the sending 'old' and 'new' Member States. Only 0.3% of the total monthly labour tax revenues received by the EU-15 could be related to posting of workers while this is equal to 5.7% for the EU-13 and 4.9% for the EU-2. Mainly for Slovenia (19.6%), Slovakia (7.8%), Poland (6.8%) and Hungary (6.4%) a high impact of labour tax revenues received from the outgoing workers on the total monthly labour tax revenues is observed. It proves that also sending Member States benefit from respecting minimum wages in the Member state of employment and the collection of the proper amount of social contributions and income taxes. Otherwise, these labour tax revenues will be much lower.

The real annual impact of posting of workers on the labour tax revenues will, however, be lower since the posting period will not be equal to 12 months. The duration of the posting period was on average 119 days in 2012 and 100 days in 2013 (Pacolet and De Wispelaere, 2014a). [54] Therefore, an average posting period of 3 months is taken into account. It decreases the annual financial impact of posting of workers to 0.2% of total annual labour tax revenues *(Table 1)*. The annual impact on some EU-13 Member States, in particular Slovenia, remains relatively high.

53 Eurostat: Annual net earnings [earn_nt_net]. Based on the sector of activity there might be large wage differences of the posted workers. However, no breakdown by sector of activity could be made which is of course an important methodological limitation.

54 Some caution is required when drawing conclusions since only 8 Member States reported figures on the average duration of the posting period. The use of a general duration is an important methodogical limitation since the duration of the posting period strongly varies among Member States. Also, taxation law probably will have an impact on this posting period as only during the first 183 days taxes will be paid in the sending Member State.

Table 1 **Monthly labour tax revenues (by type), total and estimated for posted workers under current rules, in € million, by sending Member State**

	PDs A1 issued	Employers' social contributions (1 month)			Employees' social contributions (1 month)			Personal income (1 month)			Total (1 month)			Total (Annual)		
		Total	*Posted*	*as %*	*Total*	*Posted*	*as %*	*Total*	*Posted*	*as %*	*Total*	*Posted*	*as %*	*Total (12 months)*	*Posted (3 months)*	*as %*
BE	57,061	2,786	40.9	1.5%	1,376	20.3	1.5%	2,864	32.2	1.1%	7,026	93.4	1.3%	84,317	280.2	0.3%
BG	12,621	140	5.2	3.7%	81	3.7	4.6%	80	2.5	3.1%	302	11.5	3.8%	3,620	34.4	1.0%
CZ	12,500	1,268	8.0	0.6%	404	2.6	0.6%	457	3.3	0.7%	2,129	13.9	0.7%	25,545	41.6	0.2%
DK	2,578	16	0.0	0.0%	177	0.3	0.2%	3,736	2.6	0.1%	3,929	2.9	0.1%	47,143	8.6	0.0%
DE	196,751	15,002	95.2	0.6%	14,173	100.9	0.7%	14,563	69.5	0.5%	43,738	265.6	0.6%	524,850	796.8	0.2%
EE	10,748	154	7.7	5.0%	11	0.5	4.0%	70	4.3	6.1%	235	12.5	5.3%	2,824	37.4	1.3%
IE	2,998	419	0.8	0.2%	155	0.3	0.2%	1,076	0.7	0.1%	1,650	1.9	0.1%	19,801	5.6	0.0%
EL	1,507	773	0.9	0.1%	735	0.5	0.1%	519	0.1	0.0%	2,026	1.5	0.1%	24,309	4.6	0.0%
ES	61,245	7,210	37.0	0.5%	1,486	7.8	0.5%	4,779	15.0	0.3%	13,476	59.8	0.4%	161,706	179.3	0.1%
FR	114,413	19,593	89.0	0.5%	7,031	34.9	0.5%	10,146	31.9	0.3%	36,770	155.7	0.4%	441,241	467.2	0.1%
HR	8,716															
IT	25,812	12,142	17.1	0.1%	3,138	5.1	0.2%	10,245	9.4	0.1%	25,525	31.6	0.1%	306,300	94.7	0.0%
CY	66															
LV	2,673	107	1.4	1.3%	49	0.6	1.3%	93	1.1	1.2%	248	3.1	1.3%	2,977	9.4	0.3%
LT	11,152	200	7.5	3.7%	60	2.2	3.6%	84	2.8	3.3%	344	12.4	3.6%	4,123	37.3	0.9%
LU	27,948	175	9.9	5.7%	187	9.9	5.3%	207	7.5	3.6%	570	27.3	4.8%	6,836	81.9	1.2%
HU	65,677	624	42.0	6.7%	410	27.3	6.7%	423	23.6	5.6%	1,457	92.9	6.4%	17,486	278.7	1.6%
MT	236	16	0.0	0.2%	16	0.0	0.2%	28	0.0	0.2%	59	0.1	0.2%	712	0.4	0.1%
NL	24,503	2,717	6.2	0.2%	3,477	14.3	0.4%	3,742	4.0	0.1%	9,937	24.6	0.2%	119,242	73.7	0.1%
AT	32,693	1,791	21.7	1.2%	1,566	13.5	0.9%	2,281	7.8	0.3%	5,638	43.0	0.8%	67,651	128.9	0.2%
PL	256,564	1,570	105.8	6.7%	1,545	112.4	7.3%	799	47.2	5.9%	3,914	265.4	6.8%	46,971	796.1	1.7%
PT	80,754	701	42.7	6.1%	501	19.8	3.9%	482	24.5	5.1%	1,684	86.9	5.2%	20,210	260.7	1.3%
RO	50,985	625	30.5	4.9%	315	18.0	5.7%	287	14.5	5.1%	1,226	62.9	5.1%	14,717	188.8	1.3%
SI	81,817	172	32.6	19.0%	225	44.7	19.8%	153	30.2	19.8%	550	107.5	19.6%	6,598	322.5	4.9%
SK	51,635	401	31.5	7.8%	178	13.5	7.6%	147	11.9	8.1%	726	56.9	7.8%	8,707	170.7	2.0%
FI	2,811	1,475	1.6	0.1%	497	0.5	0.1%	1,370	1.1	0.1%	3342	3.1	0.1%	40,103	9.4	0.0%
SE	2,550	2,476	1.9	0.1%	25	0.4	1.7%	5,249	0.9	0.0%	7750	3.3	0.0%	93,004	9.9	0.0%
UK	26,692	7,135	6.4	0.1%	5,143	5.5	0.1%	63,878	8.2	0.0%	76156	20.2	0.0%	270,935	60.6	0.0%
Total	1,225,706	79,685	643.5	0.8%	42,965	459.5	1.1%	74,177	356.8	0.5%	196,827	1,459.8	0.7%	2,361,929	4,379.3	0.2%
EU-15	660,316	74,410	371	0.5%	39,670	234	0.6%	125,136	215	0.2%	239,215	821	0.3%	2,227,650	2,462	0.1%
EU-13	565,390	5,276	272	5.2%	3,295	225	6.8%	2,620	141	5.4%	11,190	639	5.7%	134,279	1,917	1.4%
EU-2	63,606	765	36	4.7%	396	22	5.5%	367	17	4.6%	1,528	74	4.9%	18,337	223	1.2%

* Only for EU-28 receiving Member States

** CY and HR: no data available.

Source Own calculations based on Pacolet and De Wispelaere, 2014, Eurostat and EC, 2014b.

To what extent the possibility to post workers already creates social convergence across Member States in terms of higher labour tax revenues is also calculated. If these workers would be employed in their Member State of origin (taking into consideration 67% of the average wage in the sending Member State for a single person without children) labour tax revenues from these workers would decrease by 40% *(Table 2*) (the decrease will even be higher if we assume that these posted workers would be unemployed in their sending Member State). However, the positive impact of posting workers on the labour tax revenues varies markedly between the EU-13 and EU-15 Member States. Labour tax revenues from these persons living in the EU-13 Member States decrease by 77% if these workers would not be posted but employed in their Member State of origin. This outcome is the result of an important flow of posted workers towards higher-wage Member States. The current rules on posting facilitate the possibility to receive higher labour tax revenues from the posting of workers, in particular by the EU-13 Member States. This could also lead to upward convergence. If the rules on posting would be changed towards the *'lex loci laboris'* principle these labour tax revenues would disappear for the sending Member States and would as a consequence also remove the possibility to create convergence. However, the marginal impact of posting on total tax revenues limits of course to a high extent the opportunity to create upward convergence of welfare states and social protection schemes. At the same time a negative pressure on welfare states and social protection schemes might occur, in particular in the EU-15 receiving Member States, as a possible result of job displacement or lower tax revenues following a negative pressure on wages (i.e. leading to a 'race to the bottom'). However, as mentioned before, this risk of job displacement and lower tax revenues turns out to be rather limited when one considers the limited number of posted workers in practice.

A tax harmonisation based on the source principle results in similar labour tax revenues compared to the current rules on posting. The results of the applied methodology for the baseline scenario (application of the tax wedge of the sending Member State) and the alternative scenario (application of the tax wedge of the Member State of employment) are shown in *Table 3*. In general, the sending Member States would receive 3% more labour tax revenues when the tax wedge of the Member State of employment would be applied. This increase in labour tax revenues would mainly be realised by the taxation of personal income taxes (+ 9%). There is almost no impact on the taxes collected from social security contributions (+ 2% (employer) and - 2% (employee)). Considering the ambition to create 'social' convergence, special attention should be attributed to the impact of this change in the 'new' sending Member States. Where labour tax revenues from posted workers will decrease by 2% in the 'old' sending Member States, a higher increase of revenues will be realised in the 'new' sending Member States (+8%). However, in absolute figures and as share of total labour tax revenues the impact of this legislative change will be very limited. This implies that also a change of the rules on posting to a tax harmonisation based on the source principle hardly influences the development of national welfare states and their social security schemes taking into account the currently low number of workers being posted.

Table 2 ***Monthly*** **labour tax revenues (by type) estimated for posted workers if they would be employed in their Member State of origin and % difference compared to current rules, in € million, by sending Member State**

	Employers' social contributions		Employees' social contributions		Personal income		Total		
	Wage and tax rate of MS of origin (in € million)	*% difference current rules*	*Wage and tax rate of MS of origin (in € million)*	*% difference current rules*	*Wage and tax rate of MS of origin (in € million)*	*% difference current rules*	*Wage and tax rate of MS of origin (in € million)*	*Difference amount current rules (in € million)*	*% difference current rules*
BE	40.9	0%	20.3	0%	32.2	0%	93.4	0.0	0%
BG	0.6	-89%	0.4	-89%	0.3	-89%	1.3	-10.2	-89%
CZ	2.8	-65%	0.9	-65%	0.7	-80%	4.4	-9.5	-68%
DK	0.0	0%	0.3	-2%	2.5	-2%	2.8	-0.1	-2%
DE	93.6	-2%	99.2	-2%	68.3	-2%	261.0	-4.6	-2%
EE	2.2	-71%	0.1	-71%	1.1	-75%	3.4	-9.0	-73%
IE	0.6	-31%	0.2	-31%	0.5	-31%	1.3	-0.6	-31%
EL	0.5	-42%	0.3	-42%	0.1	-42%	0.9	-0.6	-42%
ES	26.3	-29%	5.6	-29%	10.7	-29%	42.6	-17.2	-29%
FR	83.6	-6%	32.7	-6%	29.9	-6%	146.3	-9.4	-6%
HR									
IT	13.5	-21%	4.0	-21%	7.5	-21%	24.9	-6.7	-21%
CY									
LV	0.3	-76%	0.1	-76%	0.2	-78%	0.7	-2.4	-77%
LT	1.4	-81%	0.4	-81%	0.5	-81%	2.3	-10.1	-81%
LU	9.9	0%	9.8	0%	7.4	0%	27.2	-0.1	0%
HU	9.6	-77%	6.2	-77%	5.4	-77%	21.3	-71.6	-77%
MT	0.0	-47%	0.0	-47%	0.0	-68%	0.1	-0.1	-55%
NL	5.8	-7%	13.3	-7%	3.7	-7%	22.8	-1.8	-7%
AT	21.5	-1%	13.4	-1%	7.7	-1%	42.6	-0.4	-1%
PL	22.2	-79%	23.6	-79%	7.9	-83%	53.8	-211.6	-80%
PT	18.2	-57%	8.4	-57%	6.7	-73%	33.3	-53.6	-62%
RO	4.5	-85%	2.6	-85%	1.8	-88%	8.9	-54.0	-86%
SI	12.8	-61%	17.6	-61%	5.2	-83%	35.6	-71.9	-67%
SK	8.6	-73%	3.7	-73%	1.6	-87%	13.8	-43.0	-76%
FI	1.5	-4%	0.5	-4%	1.0	-4%	3.0	-0.1	-4%
SE	2.0	-3%	0.4	-3%	1.0	-3%	3.4	-0.1	-3%
UK	6.1	-5%	5.3	-5%	7.9	-5%	19.3	-0.9	-5%
Total	389.1	-40%	269.6	-41%	211.7	-41%	870.4	-589.4	-40%
EU-15	324.0	-13%	213.7	-9%	187.0	-13%	724.7	-96.0	-12%
EU-13	65.1	-76%	55.8	-75%	24.7	-83%	145.7	-493.4	-77%
EU-2	5.1	-86%	3.1	-86%	2.1	-88%	10.2	-64.2	-86%

* CY and HR: no data available.

** % difference will be lower than 0 given that the labour conditions of the Member State of origin remain applicable if these are more favourable to posted workers.

Source Own calculations based on Pacolet and De Wispelaere, 2014a and Eurostat

Table 3 ***Monthly*** **labour tax revenues (by type) estimated for posted workers in alternative scenario and % difference compared to current rules, in € million, by sending Member State**

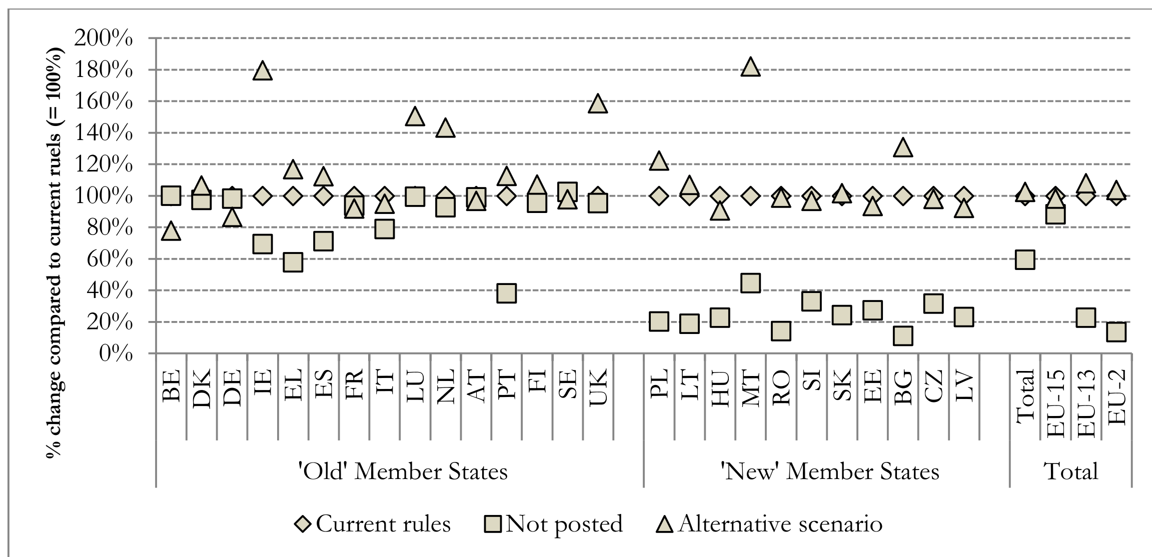
	Employers' social contributions		*Employees' social contributions*		*Personal income*		*Total*		
	Rate of MS of employment (in € million)	*% difference current rules*	*Rate of MS of employment (in € million)*	*% difference current rules*	*Rate of MS of employment (in € million)*	*% difference current rules*	*Rate of MS of employment (in € million)*	*Difference amount current rules (in € million)*	*% differecne current rules*
BE	32.3	-21%	24.5	21%	16.0	-50%	72.8	-20.6	-22%
BG	6.1	17%	4.9	32%	4.0	59%	15.0	3.6	31%
CZ	5.9	-26%	4.3	69%	3.4	1%	13.6	-0.3	-2%
DK	1.5	0%	0.8	146%	0.8	-69%	3.1	0.2	7%
DE	104.0	9%	67.6	-33%	58.6	-16%	230.2	-35.4	-13%
EE	5.7	-26%	2.1	356%	3.8	-10%	11.7	-0.8	-6%
IE	1.5	76%	0.9	177%	1.0	42%	3.3	1.5	80%
EL	0.7	-23%	0.6	18%	0.5	347%	1.8	0.3	17%
ES	32.9	-11%	17.9	128%	16.4	10%	67.3	7.5	13%
FR	63.5	-29%	36.9	6%	43.0	35%	143.5	-12.3	-8%
HR									
IT	14.6	-15%	8.2	62%	7.3	-23%	30.0	-1.5	-5%
CY									
LV	1.3	-7%	0.8	28%	0.8	-28%	2.9	-0.2	-8%
LT	5.9	-21%	3.9	79%	3.5	26%	13.3	0.9	7%
LU	20.1	102%	9.6	-2%	11.4	52%	41.1	13.8	51%
HU	34.3	-18%	29.2	7%	20.9	-11%	84.4	-8.5	-9%
MT	0.1	179%	0.1	60%	0.1	27%	0.2	0.1	82%
NL	15.4	147%	8.9	-38%	10.9	175%	35.2	10.6	43%
AT	16.9	-22%	14.0	4%	10.7	38%	41.6	-1.4	-3%
PL	130.8	24%	108.7	-3%	85.4	81%	324.9	59.5	22%
PT	49.1	15%	24.8	25%	24.1	-1%	98.0	11.1	13%
RO	26.8	-12%	19.2	7%	16.3	12%	62.3	-0.7	-1%
SI	43.4	33%	35.6	-20%	25.2	-16%	104.2	-3.3	-3%
SK	25.0	-21%	18.8	39%	14.1	19%	57.9	1.0	2%
FI	1.7	12%	0.7	44%	0.9	-18%	3.4	0.2	7%
SE	1.7	-11%	0.7	72%	0.8	-18%	3.2	-0.1	-2%
UK	16.3	155%	8.4	52%	7.3	-11%	32.1	11.9	59%
Total	657.6	2%	452.1	-2%	387.3	9%	1,497.0	37.2	3%
EU-15	372.2	0%	224.6	-4%	209.7	-3%	806.5	-14.2	-2%
EU-13	285.4	5%	227.5	1%	177.5	25%	690.5	51.4	8%
EU-2	32.9	-8%	24.1	11%	20.3	19%	77.3	2.9	4%

* CY and HR: no data available.

Source Own calculations based on Pacolet and De Wispelaere, 2014a and Eurostat

Figure 9 provides an overview of the estimated percentage changes in labour tax revenues if posted workers under current rules (= 100%) would be employed in their Member State of origin or if there would be a change of the rules on posting by a tax harmonisation based on the source principle. As mentioned before striking differences between 'old' and 'new' sending Member States appear. Posting has a huge positive impact on the tax revenues of the 'new' sending Member States given that most of their outgoing workers are temporarily employed in high-wage Member States. A tax harmonisation based on the source principle would only have a limited impact on the tax revenues of most of these 'new' sending Member States since the average tax rates of the 'new' and 'old' Member States are quite similar to each other.

Figure 9 **Estimated percentage change in labour tax revenues between current rules (=100%), no posting and the alternative scenario (tax harmonisation based on the source principle)**



* CY and HR: no data available.

Source Own calculations based on Pacolet and De Wispelaere, 2014a and Eurostat

Conclusion

The number of workers who provide services on a temporary basis in an EU/EFTA Member State (= receiving Member State) other than the competent Member State (= sending Member State) has risen strongly in recent years. These posted workers are, however, taxed in a different way than 'national' workers since the taxation level of the sending Member State is applied. Yet, these rules are only applicable for a maximum period of 24 months in social security coordination law and for a maximum period of 183 days in taxation law. Nonetheless, those differences in taxation between the sending and the receiving Member State might lead to a tax and competitive advantage, which will create a financial incentive for 'foreign' service providers, posted workers but also for contractors and even national governments of the sending Member State. Based on administrative figures it is questionable if the 'tax advantage' is currently a real threat for the receiving Member States. However, more research is required to assess in detail the social and economic impact of posting under current rules on sending and receiving Member States.

It appears that the sending Member States receive monthly approximately € 1.5 billion taxes from labour of the posted workers under current rules which is equal to 0.7% of the total monthly labour tax revenues of the sending Member States. However, the annual budgetary impact will be lower if also the posting period will be taken into account. The marginal impact of posting on total labour tax

revenues limits, however, the opportunity to create upward convergence of welfare states and social protection schemes.

The sending 'new' Member States are clearly more dependent on the labour tax revenues of posted workers as share in the total labour tax revenues than the sending 'old' Member States. Also, labour tax revenues from these persons living in the sending 'new' Member States would decrease by 77% if these workers would not be posted but employed in their own Member State of origin. This outcome is the result of an important flow of posted workers towards higher-wage Member States. It proves that sending Member States benefit from respecting minimum wages in the Member state of employment and the collection of the proper amount of social contributions and income taxes. Otherwise, these labour tax revenues will be much lower.

An alternative scenario, more specifically a tax harmonisation based on the 'source' principle (i.e. paying labour taxes at the taxation level of the receiving Member State in the sending Member State), could be introduced in order to remove bilateral tax rate differences and to create convergence in terms of higher labour tax revenues received by the new EU-Member States. This alternative scenario increases labour tax revenues from posted workers 'only' by 3% compared to the current situation, in particular since labour tax rates of the 'new' and 'old' Member States are quite similar to each other. However, more research is required to define and assess alternative legal options given that also other options are thinkable, in particular the application of the *'lex loci laboris'*.

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