CESifo DICE REPORT

Journal for Institutional Comparisons

VOLUME 4, NO. 4 WINTER 2006

The international platform of Ludwig-Maximilians University's Center for Economic Studies and the Ifo Institute for Economic Research, Munich

CESifo DICE Report ISSN 1612-0663
A quarterly journal for institutional comparisons
Publisher and distributor: Ifo Institute for Economic Research e.V.
Poschingerstr. 5, D-81679 Munich, Germany
Telephone ++49 89 9224-0, Telefax ++49 89 9224-1462, e-mail ifo@ifo.de
Annual subscription rate: €50.00
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Editor of this issue: Wolfgang Ochel
Copy editing: Anne Heritage, Paul Kremmel

DICE Database: www.cesifo.de/DICE

CESifo DICE Report

Volume 4, Number 4 Winter 2006

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The EU Directive on Free Movement

The New Directive on the Right of Citizens of the Union and their Family Members to Move and Reside Freely within the Territory of the Member States – what Changes does it Bring?*

Ana Herrera de la Casa and Michal Meduna**

In the first days of the European project, only workers benefited from free movement as this right was initially conceived as an economic and professional right relevant to the Internal Market.

Throughout the years, this right was extended to all categories of Union citizens. A major breakthrough was reached with the introduction by the Maastricht treaty of citizenship of the Union which confers on Union citizens a number of civil and political rights amongst which the right to vote and to stand as a candidate in the municipal and in the European Parliament elections in the Member State of residence.

Citizenship of the Union also confers to Union citizens the right to move and reside freely within the Union. By virtue of Article 18 of the Treaty establishing the European Community every citizen of the Union has the right to move and reside freely within the territory of the Member States subject to the limitations and conditions laid down to give it effect.

The right to move freely is one of the most visible advantages that Community law offers to nationals of the Member States, and citizenship of the Union is destined to be their fundamental status.

In order to remedy previous sector-by-sector, piecemeal approach to the right of free movement and residence and to facilitate the exercise of this right, on 23 May 2001 the Commission presented a proposal for a directive. The text was adopted finally on 29 April 2004[1].

Directive 2004/38/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States replaced a complex legal regime consisting of nine directives and one regulation and integrated important case-law. This represents an advantage of legibility and transparency. It brings free movement rights under the umbrella of citizenship of the Union.

Main innovations of the Directive

The extension of family reunification rights for Union citizens

Those Union citizens who move to another Member State must be assured that their family may remain united. This touches directly upon the human dimension of the right of free movement.

Under previously applicable Community law, the family members were the spouse of the Union citizen, their descendants who are under the age of 21 years or are dependent and their dependent relatives in the ascending line.

The Directive extended the definition of family member who can accompany or join a Union citizen in the host Member State to the partner with whom the Union citizen has contracted a registered partnership on the basis of the legislation of a Member State if the legislation of the host Member State treats registered partnerships as equivalent to marriage.

In addition, with a view to maintaining unity of the family in a broader sense, the Directive provides that

* The opinions expressed in this article are authors' own and do not represent the position of the institution to which they belong.

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[1] OJ L 158 of 30 April 2004, p. 77.

Member States must facilitate entry and residence of other family members not covered by the above definition of family member. This obligation concerns not only any other family members who in the country from which they have come are dependents or members of the household of the Union citizen having the primary right of residence, as was the case under previous legislation, but also to those persons who require the personal care of the Union citizen for serious health grounds and the partner (irrespective of sex) with whom the Union citizen has a durable relationship duly attested. The Directive imposes on Member States an obligation to undertake an extensive examination of the personal circumstances and to justify any denial of entry and residence to these persons.

Facilitation of the right of entry

The importance the Community legislature attaches to the protection of family life is demonstrated in this Directive not only by the extension of family reunification rights to other family members but also by the obligation it imposes on Member States to issue family members who do not have the nationality of a Member State with a visa as soon as possible and on the basis of an accelerated procedure.

Another innovation is that the Directive has incorporated previous case law of the European Court of Justice stressing that the right to move and reside freely is granted directly to the beneficiaries of this right by virtue of their status of a Union citizen or member of his family who is not a national of a Member State, so, at the border, when they do not have the necessary travel documents or if required, the necessary visas, the Member State concerned must before turning them back, give them every reasonable opportunity to obtain the necessary documents or have them brought to them within a reasonable period of time or prove by other means that they are covered by the right of free movement and residence.

In addition, the Directive provides that possession of a valid residence card issued exempts family members who are not nationals of a Member State from the visa requirement.

Simplification of the conditions and formalities linked to the right of residence

One of the main objectives of the Directive is the simplification of the conditions and of the administrative formalities linked to the right of residence. The basic idea is that additional obligations to those applicable to nationals of the host Member State should be limited to the strictly necessary. For periods of residence of up to three months no conditions or formalities apply except for the possession of a valid passport or identity card for Union citizens.

For periods of residence of more than three months and up to five years, the Directive maintains the conditions attached to the right of residence: Union citizens must be either workers or self-employed persons or else have sufficient resources for themselves and their family members not to become a burden on the social assistance system of the host Member State (for students a declaration of resources suffices) and comprehensive sickness insurance coverage in the host Member State. However, the Directive has replaced for Union citizens the obligation to obtain a residence card by a simple registration with the relevant authorities of the host Member State. This requirement is considered sufficient to satisfy the legitimate interest of the host Member States to be informed with respect to population movements in their respective territories. The registration scheme is optional and already several Member States have decided not to subject Union citizens to any administrative procedures in this respect.

The deadline for registration may not be shorter than three months from arrival in the host Member State and a registration certificate shall be issued immediately on presentation of the documents proving compliance with the conditions attached to the right of residence, which are listed in an exhaustive manner in order to prevent that administrative practices or divergent interpretations become an obstacle to the exercise of the right of residence.

Family members who are third country nationals will continue to require a residence card.

Introduction of a right of permanent residence

The essential innovation of the Directive is the introduction of a permanent right of residence. This is acquired by Union citizens and their family members after five years continuous and legal residence in the host Member State. This right shall no longer be subject to any conditions. After a sufficiently long period it may be assumed that Union citizens have developed close links with the host Member State and that they have become an integral part of its

society. This justifies the granting of a right of residence which might be qualified as reinforced. In addition the integration of Union citizens who are durably installed in a Member State is a key element to promote social cohesion which is a fundamental objective of the Union.

New rights for family members

Another important innovation of the Directive is that it grants new rights to third country family members of Union citizens. The Directive provides that under certain conditions they maintain their right of residence in case of death or departure of the Union citizen and in case of divorce, annulment of marriage or termination of registered partnership.

By virtue of the Directive the Union citizen's death shall not entail loss of the right of residence in the host Member State of his family members who are not nationals of a Member State and who have resided there for at least one year before the Union citizen's death, provided they fulfil themselves the conditions attached to the right of residence.

In case of departure of the Union citizen, the possibility to retain the right of residence is foreseen only for children who follow a course of study in the host Member State and for the parent who has actual custody of the children.

In event of divorce, annulment of marriage or termination of registered partnership, third country family members can retain their right of residence in the host Member State only under certain strict conditions provided they fulfil themselves the conditions attached to the right of residence.

In all cases, they retain their right of residence exclusively on a personal basis.

Retention of the right of residence in case of non compliance with residence conditions

The Directive has preserved the possibility for Member States to terminate the right of residence of Union citizens if they no longer fulfil the conditions attached to their right of residence. However, it has introduced a series of guarantees: Member States may only expel inactive Union citizens who have become an *unreasonable* burden on their social assistance system and recourse to social assistance in the host Member State may not entail automatically an expulsion measure.

Member States thus have an effective tool to protect their public funds against welfare shopping of economically inactive persons. However, while exercising it, Member States must observe the procedural and material safeguards that apply for cases of expulsion on grounds of public order, public security or public health.

Right to equal treatment

The Directive recalls the right to equal treatment laid down in Article 12 EC and provides for two specific derogations to this right. Inactive migrant Union citizens and their family members are not entitled to social assistance during the first three months of residence. The host Member State is not obliged either before the acquisition of the right of permanent residence to grant maintenance aid for studies (loans or grants) to Union citizens other than workers, self-employed persons or their family members. Equal treatment applies fully to persons having the permanent right of residence.

Increased protection against expulsion on grounds of public policy, public security and public health

By taking on board a number of principles derived from case-law, the Directive circumscribes better the notion of public order and security and aims at flanking the right of residence with efficient guarantees. It also introduces a series of novelties with regard not only to issues of procedure but also of substance.

It refers explicitly, at the request of the European Parliament, to the principle of proportionality, so any measures taken on grounds of public policy or public security must comply with this principle and take into account the length of stay in the territory, age, state of health, family and economic situation and the social and cultural integration into the host Member State and the extent of links with the country of origin of the person concerned.

The Directive introduces a reinforced protection against expulsion. The host Member States may not adopt an expulsion decision against Union citizens or their family members irrespective of nationality who have the right of permanent residence on its territory except on serious grounds of public policy or public security. An even more extensive protection is afforded to Union citizens who have resided in the host Member State for the previous ten years or who

are minors because an expulsion decision may not be taken against them unless the decision is based on imperative grounds of public security.

The Directive also reinforces the procedural guarantees in particular by ensuring access to judicial redress against all measures restricting free movement on grounds of public order, public security or public health.

State of play regarding transposition of the Directive into national law

Member States had to bring into force the laws, regulations and administrative provisions to comply with the Directive and communicate them to the Commission by 30 April 2006.

The majority of Member States are experiencing serious delays in transposition of the Directive. The Commission opened infringement procedures in accordance with Article 226 EC against 17 Member States in June 2006 for non-communication of national transposition measures.

The Directive provides that the Commission shall submit a report on the application of the Directive to the European Parliament and to the Council no later than 30 April 2008 together with any necessary proposals notably on the opportunity to extend the period of time during which Union citizens and their family members may reside in the territory of the host Member State without any conditions.

National measures adopted so far have not yet been thoroughly checked by the Commission for compliance with the Directive. However, initial checks of adopted legislative instruments and the meetings with Member States' experts held to assist them with transposition have identified a number of provisions of the Directive which Member States might have difficulties to transpose correctly to the detriment of Union citizens and their family members.

As already stressed above, the Directive extended family reunification rights of Union citizens inter alia by imposing a clear obligation on Member States to facilitate, in accordance with their legislation, the right of residence of other family members and to partners. Member States might face problems with correct legislative transposition and administrative implementation of this rule in so far as it requires taking into account of legislative institutes sometimes unknown to them.

Although the Directive exempts family members from the visa obligation if they hold a valid residence card issued by any Member State, some Member States only exempt from the visa obligation family members holding a residence card that they themselves have issued.

As the Directive abolished residence permits and replaced them by a much simpler registration scheme and registration certificates, some Member States have difficulties with the format and possible lack of security of such documents.

Member States have also posed many questions on what is to be considered as an *unreasonable burden on the social assistance system of the host Member State* that could trigger an expulsion measure. What should be clear in this respect is that the Directive has listed the criteria laid down by the case law of the Court which may be used on a case by case basis by Member States for this purpose and forbids automatic expulsions following recourse to social assistance.

Another provision of the Directive that could trigger a number of problems with correct transposition is the Article providing for the right of equal treatment on grounds of nationality subject to specific derogations. The heart of the matter lies not only in correct evaluation whether the national rule or administrative practice really discriminate against Union citizens in comparison with nationals by treating similar situations in a different manner or different situations in a similar manner but also in the assessment of whether the difference in treatment can be justified and does not go beyond what may be proportionate.

Remedies open to Union citizens

Directive 2004/38/EC meets the requirements laid down by the Court to be directly applicable. Union citizens and their family members can therefore rely directly on the provisions of the Directive against any opposing national provisions and national courts are obliged to apply them. Making use of means of redress available at national level enable Union citizens as a rule to assert their rights directly and personally. Where they have suffered damage, for example, only the national courts can award them reparation from the Member State concerned. They may

also file a complaint with the Commission services which may open an infringement procedure.

An ever more popular and effective way of solving the problems of misapplication of Community law on free movement of persons is addressing SOLVIT with the problem. SOLVIT is a problem-solving network operated by Member States in which they work together to solve problems that arise from incorrect application of Community law concerning Internal Market by public authorities without recourse to legal action. The Commission provides the facilities for the whole network and can offer help to speed up the resolution of problems, if needed.

SOLVIT has been operational since July 2002 and has successfully dealt with hundreds of cases. More details can be found at *http://europa.eu/solvit.*

Conclusion

This Directive represents an important step in the definition of a strong concept of citizenship of the Union. It improves the previous arrangements and meets the concerns expressed by citizens in a number of ways. Firstly, by bringing together the content of the previous nine directives and one regulation as well as the relevant case-law into one single legislative instrument, it gives this right more transparency and makes it easier to apply both for our citizens and for national administrations. Secondly, it reduces administrative formalities. Thirdly, it extends Union citizens' family reunification rights and grants family members new rights in case of death or departure of the Union citizen or dissolution of marriage or registered partnership. Fourthly, it introduces a permanent right of residence after five years of uninterrupted residence and finally it reduces the scope for Member States to end the beneficiaries' right of residence and increases protection against expulsion.

The Directive has the potential to make an enormous difference for the good of the millions of Union citizens who currently reside abroad and the many more who will want to do so in the future. In the last four years the Union has achieved a great deal in the areas of security and justice. The new Directive represents an essential step in ensuring that we can say the same as concerns European citizens' freedom.

The EU Directive on Free Movement and Access to Social Benefits

Kay Hailbronner*

The Maastricht Treaty, which established the European Union, like the preceding Treaty of Rome, did not challenge the legislative competence of EU Member States over their social systems. The entitlement to social benefits, particularly in the area of social welfare, has been and will remain for the foreseeable future a matter of national law. Harmonisation is basically limited to EC employment law aimed at providing common standards of protection throughout the Community.[1] Even among the EU-15, the different levels of income precluded any harmonisation of social welfare legislation. With the EU enlargement of 2005 and with the accession of Rumania and Bulgaria in 2007, the differences in social benefit standards have become even larger, thereby excluding any attempt of a communitarisation of social welfare legislation beyond the determination of minimum standards of social assistance, as laid down in the Charter of Fundamental Rights of the European Union in the chapter on solidarity.[2]

The development of the legal system

This does not mean that EC law is completely irrelevant to the question of access to social benefits. Article 12 EC Treaty contains a general clause on the non-discrimination of all EU citizens "within the scope of application of the Treaty" and "without prejudice to any special provisions contained therein". Such special provisions may particularly be found in the EC Treaty rules on movement of workers and other economically active persons, like self-employed persons or service providers. There has never been any serious doubt that the establishment of the European internal market requires equal access in labour conditions as well as access to related social benefits. In addition, rules were soon enacted for a coordinated social security system with regard to typical "risks" like accidents, retirement, death, illness, unemployment, family, etc. for workers that make use of the freedom of movement.

Article 12 of the EC Treaty, however, has not been interpreted as a tool to expand equal access to social benefits to all EU citizens and their family relatives irrespective of their contribution to the tax yield of the host state. The basic distinction between economically and non-economically active Union citizens remained an essential feature even with the extension of free movement rights for students, retired persons and other non-economically active Union citizens by three directives between 1990 and 1992.

All three directives took great care to provide residents' rights only for those who can support themselves, in order to exclude risks for the social systems in the Member States by immigration of persons who might become a burden on the social assistance systems of their host Member States. The debate was clearly focussed on the concern of some Member States that due to the substantial differences in the social systems of Member States the extension of free movement without additional requirements might create problems and provoke invitation to social welfare immigration.

The European Court's concept of social solidarity

Although the special provisions for equal treatment of workers were originally tied to conditions of employment and work, the European Court has used the equal treatment clause laid down in the basic regulation for workers not as a limiting system but as examples of a broader equal treatment clause by interpreting social advantages as benefits that are generally granted to national workers primarily because of their objective status as workers or by virtue of the mere fact of their residence on the

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[1] See Agreement on Social Policy, attached to the Maastricht Treaty, and the 1989 European Social Charter.
[2] See in particular Art. 7 ff., Meyer (2003, 323 et seqq.).

national territory, and the extension of which to workers, who are nationals of other Member States, therefore, seems suitable to facilitate their mobility within the Community.[3] In addition, the Court enlarged the concept of discrimination by developing its rulings on indirect discrimination. The concept of "indirect discrimination", applied in *O'Flynn* and other cases as a prohibition of measures which affect essentially migrant workers or the great majority of those affected as migrant workers, or where there is a risk that national measures may operate to the particular detriment of migrant workers has contributed largely to enhance the effectiveness of freedom of movement of workers.[4] Finally, the Court has interpreted the personal scope of application of the Treaty provisions on freedom of movement to workers as widely as possible, including also persons partially dependent upon social welfare, as long as they exercise a genuine and effective economic activity which is not of such a small scale as to be purely marginal and ancillary.[5]

In addition, the definition of workers was interpreted in a very wide sense, embracing also persons taking up a university study following a short period of work in order to subsequently claim social benefits for students. The danger of abuse has not really been considered as a serious objection against such extensions. Social benefits were even granted for university studies in the home country of migrant workers and their family relatives, although comparable social benefits for students might not exist. Recently, the Court has even extended such benefits under the initial Association Agreement between the EC and Turkey to Turkish nationals active in a labour market in an EU Member State.[6]

By and large, this development was accepted by the Member States particularly since the original concern that free movement might lead to incalculable burdens for their welfare systems proved to be largely unfounded, as non-economically active Union citizens remained outside of the scope of general welfare systems. This was confirmed by the Court in *Brown,*[7] which held that assistance given to students for maintenance and training fell in principle outside the scope of the EC Treaty for the purposes of the non-discrimination principle. Similarly in *Lebon*[8] the Court ruled that jobseekers were entitled to equal treatment only with regard to access to employment but not with regard to social assistance benefits.

The path, however, changed with the Court's use of the European citizenship concept enshrined in Articles 17-21 EC Treaty. Starting with the *Sala* decision, the Court eliminated step by step the distinction between workers entitled to full access to social benefits and non-economically active Union citizens who in principle are only entitled to residence subject to sufficient resources for living.

In *Sala,* a Portuguese national who neither qualified as a worker nor as a person entitled to free movement under the 1990 directives on free movement of non-economically active Union citizens due to the lack of sufficient resources, was nevertheless declared as being entitled to social benefits such as a child-raising allowance.[9] The Court did not only overrule its previous case law but in deviation from the explicit conditions of secondary Community law stated that all Union citizens "lawfully" resident were under the non-discrimination clause of Article 12 EC (ex-Article 6) entitled to social benefits, including benefits reserved under regulations No. 1408/71 and No. 1612/68.

In a sequence of judgements, the Court has relied upon Union citizenship as an instrument to overcome the distinction between economically active and non-economically active citizens. In *Grzelczyk,*[10] and more recently in *Bidar,*[11] the Court awarded assistance for students in the form of a minimum income under Belgian law and a subsidised loan provided under British law to cover maintenance costs. In *Trojani,* the Court decided that a French national residing in Belgium for some time at a campsite and subsequently in a Salvation Army hostel is entitled to the Belgium minimex, a kind of social welfare payment, although his work for the Salvation Army could clearly not be considered as work in the sense of Article 39 EC Treaty.[12] Finally, in *Collins* the Court decided that an Irish-American dual national was entitled to claim jobseekers allowance according to British law "in view of the establishment of a citi-

[3] See for instance case 207/78, 1979 (E.C.R.) 2019, *Even*, at para. 22.
[4] See Barnard (2004, 236 et seqq.).
[5] See case C-237/94 (1996), E.C.R. I-2617, *O'Flynn.*
[6] See ECJ of 7.7.2005, case C-374/03, *Gürol/Bezirksregierung Köln,* NVwZ-RR 2005, 854; see also ECJ of 15.3.1989, case 389/87 and 390/87, *Echternach und Moritz,* Rec. Recueil, Rec. 1989, 723.
[7] Case 197/86 (1988) E.C.R., 3205, *Brown.*
[8] Case 316/85, (1987) E.C.R., 2811, *Lebon.*
[9] See case C-85/96, *Sala v. Freistaat Bayern* (1998), ECR I-2691.
[10] Case C 184/99 (2001), E.C.R. I-6193, *Grzelczyk*.
[11] *Bidar v. London Borough of Ealing,* case C-209/03 [2005] ECR I-2119.
[12] *Trojani v. Centre public d'aide sociale de Bruxelles,* Case C-456/02 [2004] ECR I-7573.

zenship of the Union and the interpretation in the case-law of the right to equal treatment enjoyed by citizens of the Union", subject, however, to making entitlement to a jobseeker allowance conditional on a residence requirement.[13] In *Ioannidis,*[14] the Court awarded unemployment benefits for persons looking for employment that had been refused by the Belgian authorities on the grounds that the Greek applicant had received his professional training not in Belgium but in Greece.

The reasoning of the Court has basically followed the same line. Union citizenship is declared to be the fundamental status of nationals of the Member States, enabling those who find themselves in the same situation to enjoy the same treatment under law irrespective of their nationality.[15] The Court follows from the fundamental status of citizenship that a citizen lawfully resident in the territory of a host Member State can rely on the non-discrimination clause of the Treaty in all situations that fall within the scope of the subject-matter jurisdiction *(ratione materiae)* of Community law. The Court then usually goes on to point to some provisions, whereby the particular activity of the persons in question is covered by some provisions of the Treaty, in the case of students by the harmonisation of laws and regulations aimed at encouraging the mobility of students and teachers. The Court argues that the situation of such persons is within the scope of application of the Treaty, in the case of students for the purpose of obtaining assistance whether in the form of a subsidised loan or a grant intended to cover maintenance costs.[16] Similarly, in the case of jobseekers, the Court argued in *Collins* that, in view of the establishment of citizenship of the Union, it is no longer possible to exclude from the scope of Article 48(2) of the Treaty – which expresses the fundamental principle of equal treatment, guaranteed by Article 6 of the Treaty – a benefit of a financial nature intended to facilitate access to employment in the labour market of a Member State.[17] In *Trojani,* although briefly referring to the limitations under secondary Community law, the Court holds that a social assistance benefit, such as the Belgian minimum income, falls within the scope of application of the non-discrimination clause of the Treaty. Therefore, a citizen of the Union who is not economically active may rely on Article 12 EC Treaty when he has been lawfully resident in the host Member State for a certain time or possesses a residence permit. In *Ioannidis,* the Court referred to the *Collins* judgment, arguing that social benefits for persons looking for employment are covered by the free movement of workers.[18]

In the decisions mentioned, the Court has not gone so far as to declare all limitations as non-existent. The Court has also avoided declaring secondary Community law provisions requiring sufficient means of subsistence as void or not in accordance with Article 18 EC Treaty. Starting from the basic assumption of equal treatment, new limitations and conditions, however, have been drawn that are not necessarily identical with the principles laid down by the Member States in secondary Community law.

In *Collins,* the Court points to the right of a Member State to make the grant of a jobseekers' allowance dependent upon a "genuine link" that exists between the person seeking work and the employment market of that state.[19] In the case of students, for the granting of assistance to cover maintenance costs, a "certain degree of integration into the society of that state" is considered as a legitimate condition.[20] Although Belgium in *Ioannidis* was allowed to distinguish on the basis of the existence of a factual connection between the host state and the Union citizen, the Court considered it inadmissible to differentiate as to whether a school certificate had been obtained. This criterion could not be considered as evidence for a factual and effective connection of a Union citizen with the labour market of the relevant host country.[21]

The most remarkable feature of the Court's reasoning is that the Court does not hesitate to attribute to Community law a different meaning than would follow from an interpretation on the basis of the objective wording of the provision, its systemic context and its purpose. Union citizenship and the principle of proportionality are used to promote what appears to be a postulate of migration policy instead of an interpretation of relevant primary and secondary Community law.[22] The reasons given for the disregard of secondary Community law are frequently unconvincing. In *Grzelczyk,* the Court relies on the

[13] *Collins v. Secretary of State for Work and Pensions,* Case C-138/02 [2004] ECR I-2703.
[14] *Office national de l'emploi v. Ioannidis,* case C-258/04, Europäische Zeitschrift für Wirtschaftsrecht, EuZW 2005 p. 663.
[15] See *Grzelczyk,* loc. cit. n. 4, para. 31.
[16] *Bidar,* loc. cit. n. 17, para. 42.
[17] *Collins,* loc. cit. n. 19, para. 63.
[18] *Ioannidis,* loc. cit. n. 20, para. 22.
[19] *Collins,* loc. cit. n. 19, para. 69.
[20] *Bidar,* loc. cit. n. 17, para. 57.
[21] *Ioannidis,* loc. cit. n. 20, para. 31.
[22] For a more detailed analysis of the Court's rulings on student maintenance grants, see *Bode* (2005, 326–33).

Preamble of Council Directive 93/96/EEC of 29 October 1993 on the right of residence for students (Students Directive),[23] which explicitly makes reference to the previous Court rulings to clarify that maintenance grants for students do not fall within the scope of application of the Treaty. The Court takes this explanation in the Preamble as a principle of a "certain degree of financial solidarity between nationals of a host Member State and nationals of another Member State".[24]

Since *Sala,* the Court has relied on these statements irrespective of all objections by Member States based upon a danger of immigration into the welfare state. The most recent example concerns the Belgian practice of requesting proof of sufficient resourses of a Union citizen by a written declaration if support is promised by third persons. The Court decided that a Member State may not require that a "partner" assuming financial responsibility has to subscribe to a formal legal obligation, arguing that the cessation of financial support is always a possible risk.[25]

The Union Citizenship Directive 2004/38

Directive 2004/38/EC[26] has for the first time established a single legal instrument for all Union citizens regardless of their economic activity. The differences between economically active and non-economically active Union citizens have not been fully given up in favour of a uniform status of a "Union citizen". For a period of up to three months, all Union citizens have the right of residence, subject only to the obligation of having a valid passport or identity document. However, after three months, for non-economically active Union citizens, the residence rights can be made subject to the proof of sufficient means of existence and health insurance. A new provision provides for a special right of permanent residence for Union citizens who have resided legally for a continuous period of five years in the host Member State. This right is not subject to the general conditions laid down in Chapter III of the Directive for a right of residence for more than three months (in case of non-economically active citizens, particularly sufficient resources for themselves and their family members to avoid becoming a burden on the social assistance system).

Directive 2004/38/EC of 29 April 2004 explicitly deals with the right of Union citizens to be granted social benefits under the equal treatment clause in Article 24. The principle of equal treatment of all Union citizens and their family members that have a right of residence or permanent residence is derogated for the first three months of residence generally or, where appropriate, for a longer period that jobseekers may be entitled to, as long as they are continuing to look for work and have a genuine chance of being hired.[27] The same rule applies with regard to students concerning maintenance aid, including whether they are obliged to provide maintenance grants for studies, including student loans, prior to the acquisition of a right of permanent residence. The only exception is made – according to the established rulings of the Court – with regard to workers or self-employed persons or their family members or persons retaining such status.

It would be premature, however, to conclude from this system a right to terminate the residence of Union citizens that become dependent on social welfare. Article 14 of the Council Directive 2004/38/EC of 29 April 2004 on the retention of the right of residence provides that the right of residence for up to three months is retained so long as they do not become an "unreasonable burden" on the social assistance system of the host Member State. The Preamble of the Directive provides little guidance as to the interpretation of this provision. According to the Preamble it is left to the Member States to decide whether they will grant assistance. In fact, however, a Member State may frequently not have much choice, since an "unreasonable burden" on the social system will be difficult to prove. Under national law, Member States will generally have to provide social assistance.

What criteria could be used to determine the unreasonableness of a burden? In any individual case it will hardly ever be possible to demonstrate this. The social system as such cannot be substantially affected by an additional beneficiary. "Unreasonableness" indicates a requirement to draw a balance between private and public interests. In case of disputes, courts, however, will hardly have many choices in order for quick decisions to be taken on preliminary residence rights.

[23] Council Directive 93/96/EEC of 29 October 1993, loc. cit.
[24] *Grzelczyk,* loc. cit. n. 4, para. 44.
[25] ECJ of 23.2.2006, C-408/03, NVwZ 2006, 918.
[26] Directive 2004/38/EC, loc. cit. n. 15.

[27] Ibid., Art. 24(2). The extension of the three month limit for those seeking employment is contained in Art. 14(4)(b).

As to residence rights in the Union subsequent to the initial three months' period, Article 14 of the Directive in accordance with Article 7 on the conditions of entry and residence (sufficient resources) makes the "retention" of the residence right dependent upon fulfilment of the conditions contained in Articles 7, 12 and 13 ("as long as they meet the conditions therein"). Again, however, this does not mean that residence may immediately be terminated if non-economically active Union citizens no longer fulfil the requirements of Article 7. An expulsion measure shall not be the "automatic consequence" if a Union citizen or his/her family members take recourse to the social assistance system of the host Member State.[28]

The phrase taken literally from the *Grzelczyk* judgment is not explained further. The Preamble repeats the phrase in connection with the "unreasonable burden" test.[29] The host Member State, therefore, should examine whether it is a case of temporary difficulties and take into account the duration of the residence, the personal circumstances and the amount of aid granted in order to consider whether the beneficiary has become an unreasonable burden on its social assistance system.

In summary, the Directive has taken up some of the European Court's decisions concerning the applications of Union citizenship regarding access to social benefits. Article 24 of the Directive states that all Union citizens residing on the basis of the Directive shall enjoy equal treatment with the nationals of that state "within the scope of the EC Treaty". Notwithstanding the repetition of this reservation as to the scope of the EC Treaty, which is laid down in Article 12 EC Treaty, the Directive to that extent is based upon the Court's assumption that access to all social benefits, including welfare grants and maintenance grants for students in principle falls within the scope of application of the non-discrimination clause of the Treaty. However, in contrast to the European Court's rulings, the Directive seeks to maintain the traditional distinction between economically and non-economically active Union citizens, making the residence right of the latter category dependent upon proof of sufficient means of subsistence and comprehensive sickness insurance. In addition, Union citizens for the first three months of residence, and jobseekers even for a longer period, are excluded from access to social assistance. Students are not entitled to maintenance aid for studies before they acquire a right of permanent residence. These provisions will have to be interpreted by taking into account the Court's rulings relating to equal access to social benefits if there is a genuine link with the domestic labour market.

Article 12 EC Treaty prohibits discrimination on the ground of nationality of Union citizens only "within the scope of application of this Treaty and without prejudice to any special provisions, contained therein". While the Court has used Union citizenship to state that access to social benefits, including welfare benefits, are within the scope of application even for non-economically active persons, this does not yet mean unlimited access to social benefits. The Court, however, has adopted a methodologically doubtful path by interpreting the requirements of "sufficient resources for Union citizens and their family members not to become a burden on the social assistance system of the host Member State" as a clause that is subject to the principle of proportionality and interpreted in the light of the newly created principle of financial solidarity. The European Parliament's report of 15 December 2005[30] has taken up this reasoning. It emphasises that EU citizenship is linked, regardless of the country of birth or origin, to the granting of social rights, including the right to work and to study and the right to social protection (health, retirement and other benefits).

Unfortunately, the Member States that may well be subject to internal EU migration driven by social assistance motives have failed to state unequivocally that there is no economic, social and political basis for an uncontrolled immigration into the social welfare systems for non-economically active Union citizens and their family relatives. Instead, in an erroneous perception of the relationship between the legislator and the European Court, they have chosen to leave it to the Court to solve their disputes, incorporating in the Directive vague provisions like the clause referring to an unreasonable burden on the social security system of the host Member State. In addition, they have chosen to establish a system of rewards for those who have managed to secure a lawful residence for a continuous period of five years. According to the Court's rulings "lawful" by no means is to be interpreted as having resided even as a worker or on the basis of sufficient economic resources. Judging from the European Court's re-

[28] Ibid., Art. 14(3).
[29] Directive 2004/38/EC, loc. cit. n. 15, Preamble, recital 16.
[30] Report Committee on Civil Liberties, Justice and Home Affairs, Report Catania, A 6-0411/2005.

quirement on terminating a Union citizen's residence it is basically a question of time rather than of resources to require permanent residence status.

Whether this will lead to an instability of the social systems of Member States remains to be seen. Much will depend on the economic development within the new EU Member States and their ability to adjust to the level of wages of the old Member States. The economic consequences of such effects seem to have been largely neglected. The Court has never even considered the potential economic impact of its social benefits legislation.

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Did the European Free Movement of Persons and Residence Directive Change Migration Patterns within the EU? A First Glance

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In April 2004, the European Parliament and the Council of the European Union adopted Directive 2004/38/EC "on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States", the so called "European Free Movement of Persons and Residence Directive". The adoption of the Directive is controversial and has triggered debates across Europe. This is especially the case in Germany with its well developed welfare state. Some experts argue that the free movement of persons represents a basic condition for making a single European market fully effective. People would move from areas with low economic opportunities to the centres of economic activity. The outcome would be a better allocation of production factors within the European Union (Sachverständigenrat, 2004, 117–118). Other experts, however, raise concerns about potential welfare tourism. According to them, people would move from areas with low social standards towards regions with more generous social support. The result would be a free ride to the social welfare state (Sinn 2004, Sinn and Ochel 2003 and Sinn et al. 2003).

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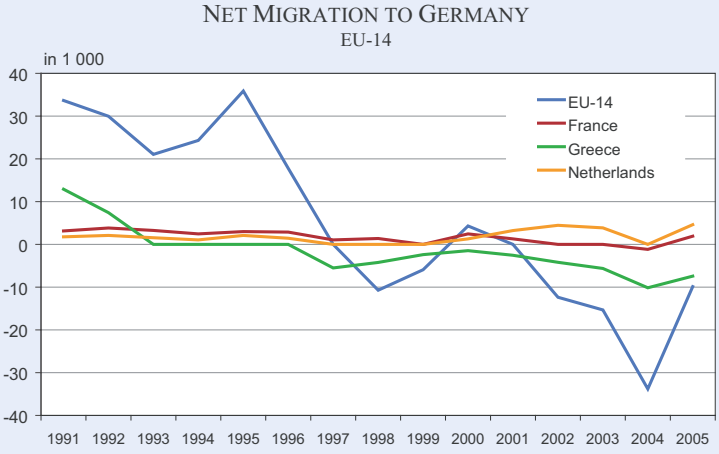
Who is right: the optimists, who expect low levels of economic arbitrage migration or the pessimists, who expect high rates of social benefits arbitrage migration? In the following, we aim to bring together a variety of aspects related to the European Free Movement Directive and its potential influence on migration patterns within the EU. First, migration trends of EU-14 nationals (old EU Member States excluding Germany) to Germany are examined. In this context, we look at flows as well as at the composition in terms of age structure and employment status. We focus on the "old" EU members because transitional arrangements (TAs) have excluded free mobility for the eight new Eastern European member countries for the moment. The acquis communautaire will be fully applicable in all Member States after a two-phased transition period of five years (with a review after three years) and a possible prolongation for individual Member States for an additional two-year period. Sweden and Ireland decided not to apply any TAs to the new EU states from the beginning of their EU membership (on 1 May 2004). The UK abolished ex-ante restrictions and has kept a Workers Registration Scheme only. Greece, Portugal, Finland and Spain lifted the restrictions in 2006. Most of the other EU countries have decided to abandon the restrictions in the near future. Only Austria and Germany are still applying the TAs in a rather restrictive way – most probably until the TAs irrevocably come to an end on 30 April 2011. Thus, we cannot consider the effects of the "Free Movement and Residence Directive" for the migration flows from Eastern Europe to Germany in isolation from the last two years.

Secondly, in particular in the context of welfare tourism, the Swedish case after EU-enlargement cannot be ignored and is thus dealt with here. Sweden was one of the countries that did not apply any TA to new EU Member States. Thus, it is useful to have a closer look at whether changes in the migration flows to Sweden can be observed after such a short period.

The theory of immobility could provide some insights into a rather slow and weak reaction to the lifting of mobility restrictions within the EU. Using what we call the *Insider-Advantage Approach,* we

argue that it is reasonable to expect lower rather than higher intra-European migration flows. Lastly, we turn to the impact of immigration on public finances. The literature that includes third country-nationals provides a useful starting point and would suggest that the European experience of the effects on public coffers is mixed.

Figure 1



Source: Federal Statistical Office Germany; own calculations.

While taking into account the scarce evidence available at this early stage of the Directive, we conclude that arguments sustaining the probability of large changes in migration patterns within the EU, in particular towards countries with generous welfare systems, are not justified. At least for the moment and with regard to the first – still limited – empirical evidence, we conclude that the European Free Movement of Persons and Residence Directive has not had a statistically significant impact on the size and structure of European migration flows. Furthermore, we would not expect that intra-European migration flows will reach a dimension posing any serious threat to jobs, wages and public coffers in the destination countries in the future. Quite the contrary: intra EU migration might help to overcome some of the economic and demographic challenges of the future.

Migration trends of EU-14 nationals to Germany

In the case of Germany, a net outflow of migrants originating from the EU-14 has been registered since the early 1990s. This net loss migration peaked in 2004, when Germany experienced an inflow of 92,931 EU-14 nationals against an outflow of 126,748. When looking at the migrants by nationality in more detail, the picture for the year 2005 presents itself as follows in the table below. For some of the listed countries there was a significant outflow of residents from Germany.

Main in-/outflows from EU-14 to Germany in 2005

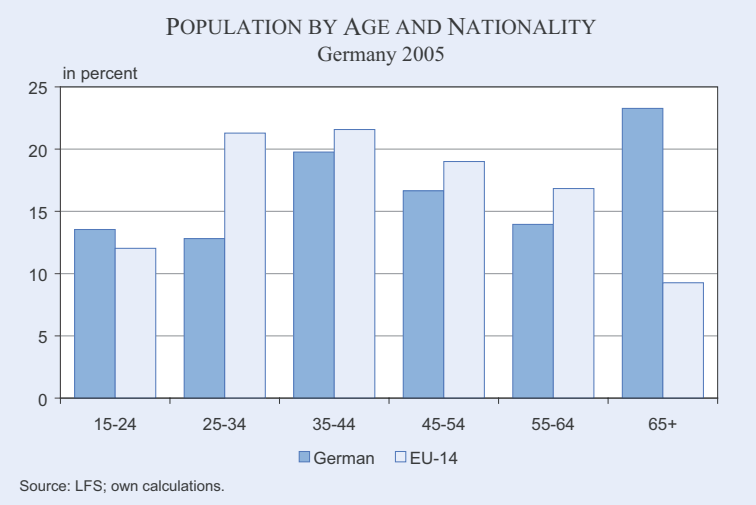
Nationals	Leaving	Arriving
Italian	27,118	18,349
French	10,354	12,260
Greek	16,391	8,975
Dutch	5,479	10,088
UK	7,864	7,853
Spanish	8,185	7,147
Portuguese	6,912	5,010

Source: Federal Statistical Office Germany.

Especially nationals from the traditional labour exporting countries such as Greece, Spain, Italy and Portugal exhibit a negative net migration, while a clear net gain in migration is noted with regard to nationals from France and the Netherlands. However, our own calculations using data from the Federal Statistical Office of Germany show that even though there is a slight increase in the inflows of EU-14 nationals to Germany for the year 2005, the overall flows still represent a net loss in migration.

Besides observing these trends in migration flows and stocks, it is imperative to determine further their disaggregated composition. Only a closer look at the individual characteristics of migrants would allow an assessment of their likelihood of being or becoming welfare migrants. First, the age structure of migrants can provide valuable insights both into their potential labour market performance (i.e. the younger they are the more motivated they should be) and their prospective dependence on social benefits (e.g. old-age pension). When looking at the age structure of EU-14 nationals in Germany in 2005, one can easily observe that the majority is fairly young. Whereas for the categories "under 25 years" and "above 65 years" the figures for EU-14 nationals are below those for Germans, EU-14 nationals are over- represented in the working age categories. As far as the age category of 25 to 34-year-olds is concerned, the figure for the EU-14 nationals is considerably higher than that for Germans. Given that the number of migrants aged below 25 is relatively small, no major additional education-related costs are to be expected.

Figure 2

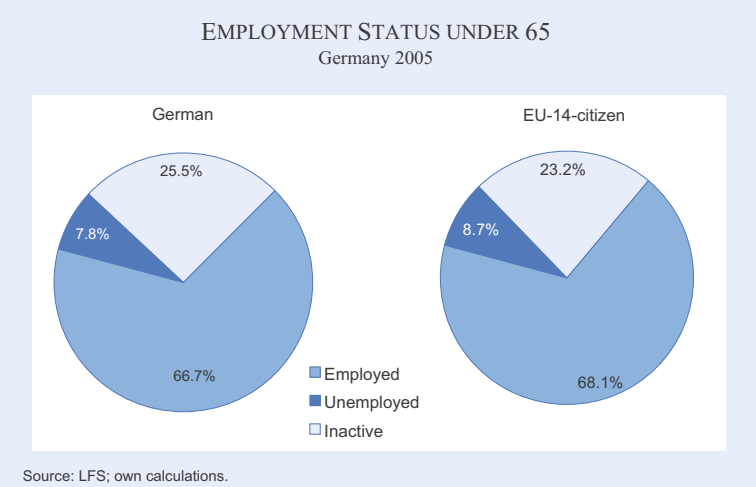


Source: LFS; own calculations.

Secondly, the employment status of EU-14 nationals under 65 years in comparison with Germans of the same age is an important indicator for determining their likely dependence upon social benefits. A total of 68.1 percent of the EU-14 population present in Germany in 2005 was employed, while the equivalent figure for Germans was 66.7 percent. Their unemployment rates seem to be slightly higher than those of Germans, but this is also a result of their higher participation rates in the labour force.

In general since the early 1990s there has been a constant trend towards a net loss in migration of EU-14 nationals to Germany, a trend that reached its height in 2004. For 2005, the overall migration level of EU-14 nationals was still negative, even though a slight upward trend was observed. Net loss migration figures were particularly high for nationals from Italy and Greece in 2005, both of which are countries with relatively unattractive social welfare systems.

Figure 3



Source: LFS; own calculations.

EU-14 nationals present in Germany in 2005 were fairly young and well-represented in the working age categories of 25–54 years, with a particularly high share in the age group of 24 to 34 years. Finally, nationals from EU-14 countries display high employment levels, which are even slightly higher than those of Germans.

Welfare tourism to Sweden?[1]

Together with Ireland and the UK, Sweden did not introduce the TAs in the context of the EU-enlargement to Central and Eastern Europe. It allowed the free movement of workers and was the only country to grant unrestricted access to its social welfare system. This unlimited access to the welfare system could have theoretically resulted in an increase in welfare tourism; however, this has not proven to be the case.

First results indicate that immigration to Sweden from the ten new Member States did not become an uncontrolled flood. Data on residence permits for work purposes show that the number of EU-10 citizens increased from 3,800 in 2003 to 5,200 in 2004. Numbers have since decreased to 4,500 in 2005. The data are not fully comparable; however, the general trend is clear: inflows have been very moderate and even declining.

Furthermore, fears of welfare tourism did not materialise, as utilisation of social welfare benefits so far has been very limited.

Under EU Regulation 1408/71, which aims at fostering the free movement of persons between the Member States, any person entitled to family benefits in any EU Member State has a right to benefits for his/her family members even if these live in another Member State. These family benefits include benefits for children and parenthood, housing allowances as well as study allowances.

[1] This section is based on a recent publication by Tamas and Münz (2006).

In practice, any EU citizen working in Sweden could export these benefits to his/her family members living in another EU Member State. A report covering the period from March to December 2004 found that the possibility of exporting social benefits to the ten new Member States had only been used to a very limited extent. Rather, social family benefits for families with children were more commonly exported to the Nordic countries.

As commissioned by the Swedish government, the Unemployment Insurance Inspectorate presented quarterly reports on EU certificates from each Member State that involve payment of Swedish unemployment insurance coverage. The quarterly reports for the third and the fourth quarter in 2004 indicated only low levels of usage. Among 800 applications to export unemployment insurance, only four involved a new Member State in the third quarter, and nine out of 740 in the fourth quarter.

Moreover monitoring measures were also directed at social security benefits in accordance with the Social Services Law. A report presented in 2005 noted that, as of September 2004, there had been no significant increase in utilisation of such social benefits since enlargement (Tamas and Münz 2006). Therefore, concerns about a potential abuse of the social welfare system – Sweden acting as a magnet for social tourism – were unfounded.

Immigration and public finances[2]

When examining the social welfare effects of migration, it is useful to have a closer look at the literature on the impact of immigration in general – i.e. including third-country nationals.

The European experience with immigrants' contribution to the public coffer is mixed. In a number of countries such as Austria, Belgium, Denmark, France, the Netherlands and Switzerland immigrants are apparently more dependent on the welfare system than the native population. However, in several other countries, such as Germany, Greece, Portugal, Spain and UK, immigrants make a similar or even higher contribution to the treasury compared to natives (IOM 2005).

A Home Office study calculated that immigrants make a positive net contribution to the UK economy (Gott and Johnston 2002). It estimates that in 1999/2000 immigrants in the UK contributed US$ 4 billion more in taxes than they received in benefits. Furthermore, if intergenerational considerations are taken into account, the contribution made by immigrants may be higher since second generation immigrants, i.e. children of immigrants, are likely to be net tax payers.

Germany has had very large immigrant inflows, including ethnic Germans from Central Europe and CIS countries, labour migrants, asylum seekers and family members joining spouses or parents already living in this country. Germany also has a progressive tax structure and rather generous welfare provisions. Thus, the immigrant fiscal transfers ultimately depend on immigrant employment opportunities, given rigid labour markets (Bevelander 2000). A recent ILO study stressed that 78 percent of immigrants in Germany are of working age and, thus, an average immigrant makes a positive net contribution, up to EUR 50,000 over his/her lifetime (ILO 2004).

The latest study on the share of immigrants' contribution to the public coffer, published in October 2006, concludes that immigrants contributed on average EUR 1,840 more to the tax and social security system in Germany in 2004 than they received in benefits. If calculated on the basis of the 15 million people in Germany with a migration background (including foreigners, naturalised migrants and persons who have migrant ancestors), the surplus would be even higher, given that naturalised migrants and persons who have migrant ancestors are generally better educated and integrated than more recent migrants (Bonin 2006).

The Swedish example highlights how public transfers to foreign-born persons are sensitive to two key determinants: education and residence status. For example, if refugees in Sweden had had the minimum (or compulsory) level of education in 1992, then their public finance transfers would have been negative for almost their entire life. On the other hand, if the Swedish foreign-born residents had been admitted as non-refugees with university education, then the public finance transfers would have exceeded the average Swedish-born contribution by a three-fold margin. However, the refugee portion of the Swedish population did not result in a positive transfer, and this led to calls for a limitation in the

[2] This section is primarily based on a new study by Münz et al. (2006). See also similar conclusions in Diez Guardia and Pichelmann (2006).

admission of foreign-born persons in general (DeVoretz 2006).

Another example shows that the specific skill and origin structure of the immigrants in Spain resulted in positive effects both economically and for the social security system (OECD 2003). EU foreigners who bring capital with them (usually elderly British, Dutch and German pension receivers) increase demand, e.g. real estate prices grew by 30 percent per year for the period 1995-2001. They also contribute through direct and indirect taxes. The highly skilled pay relatively high income taxes, while they are often accompanied by investment flows, require less per capita spending and have limited claims to the Spanish pension and social security system. This is partly the case also with temporary workers, who are net contributors to the treasury in the short run.

In Italy, successive regularisation programmes have resulted in very large numbers of legalised immigrants joining the formal sector, thus widening the tax base and enhancing social security revenue (OECD 2005).

Different studies mentioned here used different methodologies, i.e. in the benefits and contributions considered, the area of analysis, and in the way the value of the services provided was calculated. However, the size and direction of the public finance transfers clearly depend, first of all, on the characteristics of the immigrants: education and skills, age, family status, and countries of origin. Second of all, public transfers towards migrants seem to depend also on their mode of entry and on the access to the educational system and the labour market, the recognition of qualifications and skills, and thus on the integration policy of the receiving country. Accordingly, the employment rates of EU-15 nationals in other EU-15 countries are high (as already shown for the case of Germany). The average employment rate within the EU is 67.0 percent: 73.6 percent for males and 60.4 percent for females (Münz et al. 2006).

A question of immobility

Compared to the United States, Europe is characterised by relatively low rates of mobility of people. As far as intra-EU mobility is concerned, this pertains to occupational and geographical movements within as well as between the EU Member States (European Commission 2002). This is also the case with regard to the East-West migration patterns. There have been many econometric studies forecasting the East-West migration potential. Independent of the methodology, this research tends to show a long run migration potential in the range of two to four percent of the source populations. Cumulated over 15 years this is about three million people, or about 1.2 percent of the working-age population of the EU-15 and certainly not enough to affect the EU labour market in general. However, some countries and regions in Germany and Austria could face some short-run adjustment problems and labour market disturbances (Diez Guardia and Pichelmann 2006, 16).

Nevertheless, from a more long-term perspective, it remains the case that less than two percent of Europeans currently live in a country other than their own. The phenomenon of immobility has traditionally been explained by high transport and transaction costs or institutional obstacles and risk adversity. While transport and transaction costs have been falling and progress has been made in the EU to remove obstacles to migration, internal movement rates have had a tendency to decrease substantially since the late 1960s and 1970s, and mobility between the EU Member States is still low.

An alternative approach to explaining immobility is what we call the *Insider-Advantage Approach* (Fischer 1999). This approach stresses that during periods of immobility at a particular location individuals invest in the accumulation of location-specific skills, abilities and assets. Here, we differentiate between insider advantages according to their origin (work- or leisure-related) and specificity (firm-, place- or society-specific).

Place-specific advantages make the individual particularly attractive for all or at least some firms in his/her region of work. Examples of such insider advantages are expertise in the location-specific preferences, desires and habits of clients or insider knowledge of the peculiarities of the political situation in a region. Society-specific advantages broadly emanate from the social relations and political activities an immobile individual builds up within the society in which he/she is residing (lobbying, political networks). Examples of leisure-oriented place-specific insider advantages can range from information about the "good-value-for-money" Italian restaurant to knowledge about the cultural events and the local housing market. Society-specific leisure-oriented

insider advantages capture the utility increase a decision-maker and his/her family get from having friends, being socially integrated, accepted and active at a certain place of residence. These insider advantages result from a locational investment in social capital that encompasses a wide range of human contacts, from family relations and friendships to membership of clubs and political parties. Mobility generally leads to a loss of most of these assets and requires new investments in obtaining a "ticket to entry" at a new place of residence (Fischer et al. 2000).

The empirical experience of the old EU clearly shows that people's social and cultural ties to their local environment are an important obstacle to intra-EU migration. Most people want to live, work and stay immobile where they have their roots. People usually prefer the status quo to an unfamiliar or insecure change. The simple abolishment of legal impediments to migration is usually insufficient to overcome individual (microeconomic, social and cultural) obstacles to migration and to overshoot the value of immobility. Intra-EU labour migration has proved to be mainly demand-determined: it usually depends to a major extent on the needs and employment opportunities in the immigration countries.

In the EU, trade has reacted much faster and more elastically to economic integration than labour. The removal of formal and informal protectionist obstacles led to a strong increase in intra-community trade. The equalisation of good and factor prices expected on the basis of the neoclassic Heckscher-Ohlin-Samuelson international economic theory thus materialised through trade rather than through the increased mobility of labour. To an important degree, trade has so far replaced the economic demand for internal migration in the EU.

It might be that empirical evidence from the previous lifting of mobility restrictions does not apply to the EU enlargement to the East. However, we believe that we have good theoretical arguments (i.e. the neoclassical trade theory of the Heckscher-Ohlin-Samuelson models and their factor-price-equalisation-theorem) and strong empirical evidence that again, as in all the years before, the improvement in the standard of living in Eastern Europe due to full EU membership will invoke a very effective anti-migration impact. Rather sooner than later, the intra-EU migration of relatively poorly qualified workers might follow a migration substituting the neoclassical Heckscher-Ohlin-Samuelson pattern. Trade and capital flows will more or less replace the need for strong migration flows of rather unskilled workers. It is cheaper to move standardised products and machines than people. However, the migration of relatively highly qualified workers might follow the Ricardian (or New Growth) pattern of a self-feeding, dynamic core-periphery process. People with skills and knowledge might go to the centres that make them more attractive for capital and skilled workers in a next round. Rich agglomerations and poor periphery regions might be the long-term consequence. Thus welfare tourism might then be the end but certainly not the beginning of an intra-EU mobility story.

Conclusions

This paper has briefly reviewed some available evidence and noteworthy arguments as to why the European Union Directive 2004/38/EC is unlikely to change the current intra-EU mobility patterns significantly or to boost the welfare migration of EU nationals. The evidence presented revolves around two general observations. First, EU citizens have been rather immobile until now and migration between EU Member States has not yet become a means of stabilising asymmetric shocks in Europe. Second, the observed migration flows are mainly triggered by labour market conditions, such as income differentials or higher unemployment rates, especially in the regions of origin. Therefore, EU nationals changing their residence inside Europe are a positively selected group both in terms of their personal characteristics (such as age or education) and of their labour market performance (participation and employment rates, as well as wages).

Moreover, the theoretical arguments for immobility discussed above make a continuation of these observed patterns, even after the full implementation of the Directive 2004/38/EC, the more plausible. Not only will Europeans stay predominantly immobile, but those who move are more likely to be attracted by differentials in economic conditions between regions than by the variation in welfare provision across countries. This is in line with predictions based on neo-classical migration models, which underline the self-selective nature of migration: only the highly motivated will have incentives to overcome mobility barriers, and they will choose among potential destinations by maximising the returns to their human capital. Higher wages, uneven income

distributions and flexible labour market conditions are therefore more attractive for this group than welfare payments.

Finally, it is precisely the much debated case of migration from Eastern Europe following EU enlargement that provides one more rationale in our argumentation. Although some authors have used the higher propensity of East Europeans to migrate in order to predict a flood into those EU-15 countries which provide the more generous welfare benefits, a refined look at current patterns disproves this notion. While previous econometric studies found some small effects of welfare magnets on the migration decisions of EU-15 nationals, these are levelled out in the case of East-West migrants. Apart from income differentials and labour market conditions, there are particularly strong network effects and social interactions (like learning or herding) that determine the dynamics of migration flows and thus entirely offset any effects of variations in welfare institutions. However, the interaction between the social dynamics of migration choices and welfare provisions is not yet fully understood and will remain on the research agenda in the near future.

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The EU Directive on Free Movement – A Challenge for the European Welfare State?

Wolfgang Ochel*

The EU Directive on Free Movement (Directive) has extended the right of free movement to non-gainfully employed (inactive) Union citizens. At the same time, this group of persons has been given access to the welfare benefits of host countries. Moreover, the right of residence of gainfully employed EU citizens (employees and self-employed persons) has been broadened. People falling into this category already had the right to take up residence in other EU member countries. Nonetheless, permanent right of residence after a stay of five years was only granted if the applicants had sufficient resources to ensure that social assistance will not be applied for in the future. The Directive has done away with this restriction. Gainfully employed Union citizens will be granted a right to permanent residence on the sole basis of five years of uninterrupted legal residence. They will have a right to the same welfare benefits which the host country provides to its own nationals.

In the following we examine the extent to which these measures provoke migration to those countries with the highest levels of welfare benefits. Since the Directive was not implemented in national laws and regulations until 2006, the answer to this question cannot be based on an ex-post analysis of migration flows. Rather, the approach pursued here is to quantify the incentives to migrate based on a number of model cases. In this article, Poland is taken as the country of origin and Germany as the host country.

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Union citizens' right to move and reside freely in the EU

The right to free movement and residence in the EU has been considerably extended since its founding in 1957. At its inception, free movement was conceived of as an economic freedom. Workers were guaranteed freedom of movement and self-employed were guaranteed freedom of establishment. However, those not gainfully employed had no right to establish residence outside their own country. Since the beginning of the 1990s, the right to stay in another member country than one's own is no longer tied to participation in the economy. This was expressed clearly in the Directives on Free Movement and Residence of the early 1990s which provided, under certain conditions, a right of residence for students, retired persons and other inactive persons. In 1993, the Maastricht Treaty explicitly provided (in Article 18) that every Union citizen, whether gainfully employed or not, has the right to move and reside freely within the territory of Member States. The implementing regulations and the relevant decisions of the European Court were developed further and summarised in Directive 2004/38/EC (Hailbronner 2006).

The Directive provides for graduated regulations governing residence: no conditions are imposed on a Union citizen and his family members for residence in another member country other than valid identity papers for a period of up to three months. For a stay of between four to sixty months, a residence certificate is required. In order to obtain it, the Union citizen must establish his residence in the host country and register with the relevant authorities. At the end of five years of uninterrupted legal residence,[1] the Union citizen is entitled unconditionally to permanent residence.

Granting a residence certificate for *inactive Union citizens* in the period between the fourth and the sixtieth month requires that they should have means of subsistence sufficient for the entire stay and that they should have adequate health insurance. These

[1] Temporary absence of up to six months in a year does not affect the continuity of residence.

requirements are designed to ensure that social assistance will not be applied for. Health insurance coverage is considered to be adequate when it is – in the case of Germany - equivalent to statutory health insurance. Since access to statutory health insurance in Germany is subject to restrictive conditions (see Box 1), as a rule, foreigners from other EU countries will have to obtain health insurance from private insurers. *Self-employed persons* are entitled to a residence certificate, provided they exercise a gainful economic activity.

Box 1

Health insurance available for a Pole residing in Germany

A Voluntary coverage in Germany's statutory health insurance
Requirements according to Art.9 of the Social Code V:
- Absolved from the insurance requirement of Polish Social Insurance (ZUS)
- During five years before being absolved, at least 24 months, or immediately before being absolved uninterruptedly at least 12 months insured in Poland's National Health Fund (Narodowy Fundusz Zrowia – NFZ)

Additional conditions imposed by the German Federal Ministry for Labour and Social Affairs:
- Prior insurance coverage for at least one day in Germany.

B Coverage by a private provider of health insurance in Germany

C **No** possibility exists to continue insurance coverage in Poland if residence is changed to Germany.

Source: Compilation by CESifo.

When a Union citizen registers in Germany, the registration office proceeds on the assumption that the requirements for residence are fulfilled if the person registering declares that they are. Unless there are prima facie grounds for doubt, no enquiries are instigated before issuing the certification requested. And in the ensuing five years no check on the fulfilment of the conditions for permanent residency is carried out unless the Union citizen applies for welfare benefits. In such a case the authority responsible for foreigners, after having been informed by the Social Assistance Office, can examine whether the requirements for residence continue to be fulfilled. In the case of an *inactive Union citizen* the required amount of means of subsistence should not exceed the threshold defined for social assistance for nationals. At the same time, no uniform amount for means of subsistence should be fixed. On the contrary, regional differences and the personal situation of the applicant must be taken into account. Merely claiming social assistance is not sufficient grounds for expulsion, but only laying a claim to excessively high benefits. What is excessive is, however, left unclear. Gainfully *self-employed persons* are required to exercise an independent activity. The intensity with which this activity must be exercised is also not defined by law. It is, however, not necessary that the self-employed person should be able to cover his living expenses from the exercise of the activity completely.

Access of Union citizens to the systems of social assistance of host countries

As long as *inactive* EU citizens had no right to take up residence in other member countries, they could not claim welfare benefits in those countries. The extension of the right of free movement to them, however, has changed the situation radically (see Box 2):

- During a stay of less than three months, inactive Union citizens are not entitled to social assistance. Parity with citizens of the host country is not provided.[2]
- During a stay lasting between four and sixty months, inactive Union citizens are as a matter of principle entitled to welfare benefits, although the requirement of sufficient resources and adequate health insurance coverage is designed to ensure that this entitlement remains theoretical. In case the resources are exhausted sooner than expected or when health insurance coverage is not adequate, then the Social Assistance Offices grant benefits even though the conditions for residence are not fulfilled. If the host country wants to avoid this, the Union citizen's stay must be brought to an end (Sander 2005, 1016). As set out above, this involves an examination by the authority responsible for foreigners as to whether the claims to welfare were inappropriate.
- After a stay of five years, the Union citizen is entitled to the same welfare benefits as those the host country provides to its own nationals.

Gainfully *self-employed persons* who reside legally in Germany are entitled from the very beginning of their stay to welfare benefits (as a rule, unemployment benefit II which also may supplement own income). During the first five years of their stay, however, the authority responsible for foreigners is authorised to examine whether the conditions for continued residence are still fulfilled (see Box 2). At the end of the five years legal residence the Union citizen has a right to all welfare benefits.

[2] Nonetheless, Article 14 (1) of the Directive does not fully exclude claiming welfare benefits.

Box 2

Entitlements of Union citizens to welfare benefits of the host country

Phase of stay	Rule	
	Inactive persons	Self-employed persons
1–3 months	No entitlement	A fundamental entitlement to welfare benefits exists since the beginning of residence, but the presence of income from economic activity should render this entitlement theoretical. If need is advanced, welfare benefits will be granted; they may supplement income; at the same time it will be examined whether the requirements for rights of residence are still fulfilled (adequate economic activity); the intensity with which this activity must be exercised is not defined by law and will later on be determined by decisions of courts; if conditions are not met, the residence certificate may be cancelled.
4–60 months	As a matter of principle, an entitlement to welfare benefits exists, but the requirement that the Union citizen has sufficient resources and health insurance coverage is designed to ensure that in practical terms this entitlement will not become relevant. In the event that the citizen becomes needy, welfare benefits will be provided; at the same time, the conditions for continued residence will be examined and expulsion may possibly be ordered.	
Five years or longer	Entitled to welfare benefits. Union citizens are placed on an equal basis with citizens of the host country.	

Source: Compilation by CESifo.

Legal migration of inactive persons into welfare systems

The Directive limits the incentives to migrate in that it restricts access to welfare benefits in the host country. The migrating EU citizen must reside in the host country during a five-year waiting period before he can claim welfare benefits. During this waiting period, the migrant must support himself out of his own resources and must pay health insurance premiums in the host country. In the case of inactive persons, income from employment is not relevant, and this means that changing residence to another EU country requires that the migrant should dispose of sufficient financial assets.

According to Borjas (1999) the migration incentives depend on the present discounted value of the net income differential, that is to say the difference of social security benefits (S), which must exceed the costs of migration (MC) plus the present discounted value of living expenses differential (LE). Non-gainfully employed persons will decide to migrate from O (land of origin) to H (host country) if the condition in (1) is fulfilled, where T is the remaining life time and r the discount rate. The living expenses include normal expenditure for subsistence plus health insurance premiums.

$$(1)\quad \int_0^T e^{-rt}\{S_H(t) - S_O(t)\}\mathrm{d}t > \int_0^T e^{-rt}\{LE_H(t) - LE_O(t)\}\mathrm{d}t + MC.$$

Figure 1 describes the migration decision of a 60 year-old Pole who can claim old-age benefits in Poland upon reaching the age of 65. In the upper panel, assets are represented on the vertical axis and time on the horizontal axis. Assets of the amount of AB are required in order to cover living expenses in Germany during the waiting period.[3] In the case of a change of residence to Germany, the migrant's assets will decline as shown by the curve AE. At the point in time E they will be entirely exhausted. At the end of the five-year waiting period, our Pole is a pauper fulfilling the conditions for receiving welfare benefits just sufficient to cover his subsistence-level consumption.

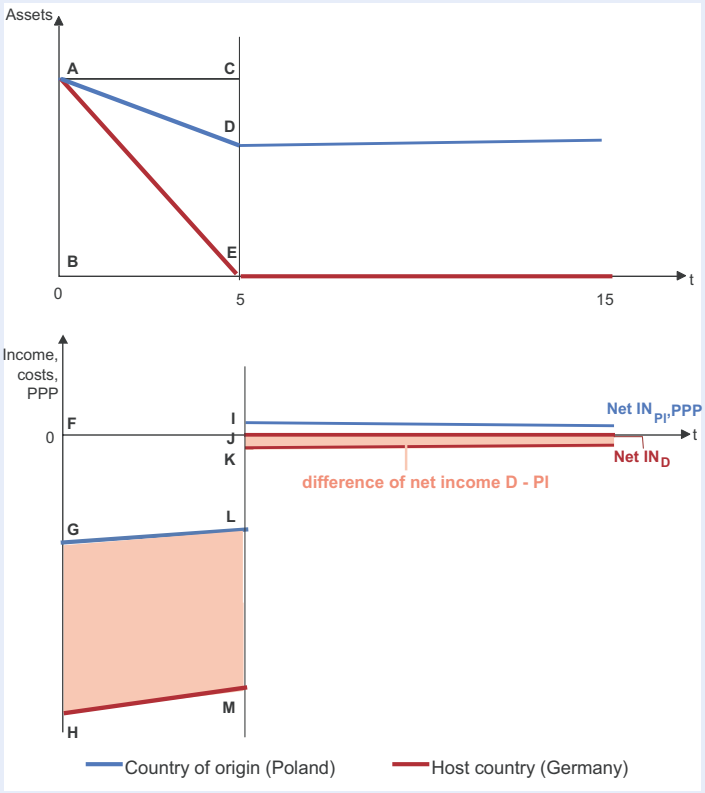
If, however, our person had remained in Poland, he would only have used up part of his initial assets, since the cost of living would be lower and premiums for health insurance would be less. Thus in the case of non-migration only CD of his assets would be used up; at the end of five years he would still own assets amounting to DE.

In the lower panel of Figure 1, annual flows of income and costs that are relevant for the migration decision are shown graphically. They are converted at purchasing power parities. During the waiting period, total expenses associated with the stay in Germany amount to the area FHJM. This can be thought of as negative income. In Poland, on the other hand, the costs of living (including health insurance premiums) are lower (area FGJL). On balance, there is a difference in the expenditure for living expenses during the waiting period amounting to GHLM. After the waiting period there is no surplus of net income that compensates for this difference. The net income (Net IN: social security benefits – living expenses) in Germany is zero

[3] In the graphical presentation, the costs of migration are not considered.

Figure 1

INCENTIVES TO MIGRATE WITH OLD-AGE BENEFIT ENTITLEMENTS IN COUNTRY OF ORIGIN[a)]



a) The incomes and costs in the graph are those for a single person.

Source: CESifo.

whereas it is positive in Poland. Migration to Germany would not be financially attractive.

The scenarios illustrated above are based on calculations that are as realistic as possible. They are based on 2005 values. The decision to migrate requires that our Pole has adequate monetary resources, for he must be able to cover his living expenses in Germany during the first five years out of his own resources. A socio-culturally defined subsistence minimum must be met at all times. In Germany this is defined by the statutory rate for social assistance including subsidies for housing and heating costs of €672 per month for a single person and €1,047 for a couple without children as of July 2005. Moreover, he needs private health insurance with a monthly premium of €600 for a man or €620 for a woman. Given these hypotheses, a single person would need initial assets of €71,876; for a couple without children, the amount required would be €128,100 (Ochel 2007).

Apart from the possession of adequate assets, migration from Poland to Germany also depends on the expected gain in income that must be sufficient to cover the difference in living expenses as well as the direct migration costs (which are neglected in these calculations). In making this calculation, the streams of net income in Poland and Germany must be made comparable, i.e. the difference in the cost of living in the two countries must be taken into account. This has been done here by converting the stream of net income in Poland based on the purchasing power parity of the euro and the zloty. Table 1 shows present values of net incomes. The net income streams have been discounted by a nominal interest rate of 4.5 percent (real interest rate 3.0 percent, inflation rate 1.5 percent). Social assistance which could be claimed in Germany after the waiting period is compared to the old-age benefits which an average employee receives in Poland and the living expenses in the two countries. The comparison shows that starting at age 65, a single person in Germany can expect within the next ten years a net income that is below his net income in Poland by –€5,757. For a couple without children, net income in Germany exceeds the corresponding figure in Poland by €11,973 which is however not enough to compensate for the difference in living expenses during the waiting period. In both cases, changing residence from Poland to Germany is not financially attractive.

Different results are obtained if one assumes a 40 year-old, non-gainfully employed Pole who in the foreseeable future has no expectations of old-age benefits and in case of need has only an entitlement to basic subsistence as defined in the Polish welfare system. In both cases (single person and couple without children) in year 12 the present value of the differences in income exceeds the present value of the differences in living expenses. As long as the citizens considering to migrate expect to live beyond the age of 52 and to receive social assistance or unemployment benefit II in Germany, then migration from Poland to Germany would be financially attractive (Ochel 2007).

Table 1

Financial incentives to migrate from Poland (Pl) to Germany (D) for a non-gainfully employed Pole, in €*

Year 2005 present values

	Single person	Couple, no children
Expenditure during the five year waiting period (year 1 to year 5)		
(1) Living expenses in D[a)]	37,972	59,162
(2) Health insurance premiums in D[b)]	33,904	68,938
(3) Living expenses in Pl, PPP[c)]	19,900	31,008
(4) Health insurance premiums in Pl, PPP[d)]	7,478	14,951
(5) Difference in living expenses D – Pl (1 + 2 - 3 - 4)	44,499	82,141
Income starting at the age of 65 (year 6 to year 15)		
(6) Welfare benefits in D[a)]	60,610	94,432
(7) Living expenses in D[a)]	60,610	94,432
(8) Old-age benefits in Pl, PPP[e)]	37,520	37,520
(9) Living expenses in Pl, PPP[f)]	31,763	49,493
(10) Difference in net income D – Pl (6-7)–(8-9)	–5,757	11,973

* Case: 60 year-old Pole with a claim to old-age benefits at age 65.

[a)] Assumption: The standard of living corresponds to a socio-culturally defined subsistence minimum. In D this is defined by the statutory rate for social assistance including subsidies for housing and heating costs as of July 2005. – [b)] Private health insurance: 60 year old man: €600, 60 year old woman: €620 (anonymous data supplied by financial services firm AWD). – [c)] The cost of living in Pl is calculated on the basis of the cost of living in D (subsistence minimum) adjusted by a conversion factor based on purchasing power parities. The conversion factor is 1.9081 (Feb. 2006, the source is OECD). – [d)] Rate of contribution of 11.2 percent applied to average income of 30,000 złoty and converted to euro (Source: EU MISSOC 2005; OECD Taxing Wages 2004/05, p. 332). – [e)] Net old-age benefits = 0.516 x average net wages = €2,616; €2,616 x 1.9081 = €4,992. (Source: OECD, *Pensions at a Glance*, 2005 Edition, p. 163; OECD, *Taxing Wages 2004-2005*, p. 332). Contributions to health insurance have been deducted. – [f)] Without health insurance premiums.

Source: CESifo.

Illegal migration of inactive persons into welfare systems

Up to now the focus has been on legal migration into the welfare state. Illegal migration might be an alternative. The conditions linked to the right of permanent residence can, however, be circumvented only in part. Establishing residence in the host country and taking out health insurance are absolutely indispensable requirements. With a view to reducing the costs of living during the waiting period, a Union citizen could continue to live in his land of origin, whilst giving the registration office of the "host" country *pro forma* an address of a relative or a friend. This manoeuvre would, however, only be practicable if travel costs are not too high. It is in any case illegal and hence involves risks.

The Directive imposes the requirement that the migrant has adequate financial assets. If the Union citizen desirous of migrating has no assets, one can imagine that relatives or friends might be willing to place the required sum at his disposal temporarily in order to show fulfilment of the requirements. Nonetheless, the migrant will as a rule have to cover his living expenses and health insurance premiums out of his own resources. If assets are not present, then the only way to do this is to work in the informal sector of the economy, which it goes without saying, is also illegal.

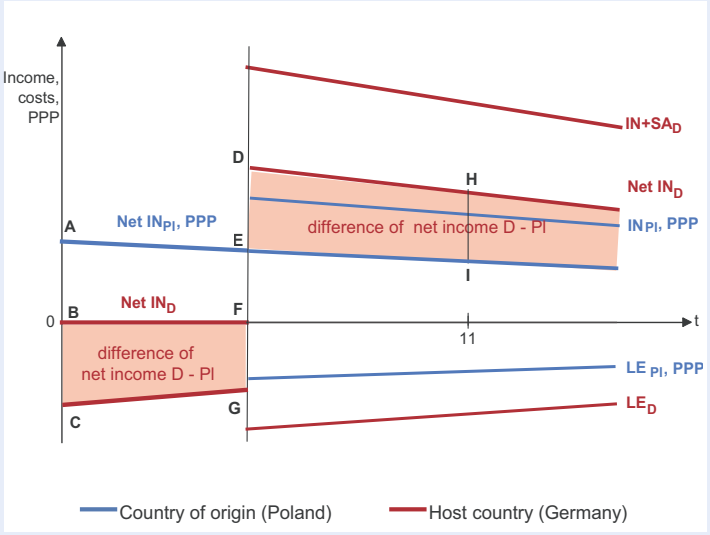
Figure 2 illustrates the migration decision. Initial assets amount to nil (not shown in the figure). During the waiting period, the Union citizen in Germany obtains wages from work in the informal sector which amount to living expenses and health insurance premiums so that his net income is zero. In Poland he receives wages from regular employment leading to a positive net income (area ABEF). After the waiting period is expired, the migrant in Germany can expect income from social assistance and from illegal work. In Poland, he goes on working regularly. At the point in time at which DEHI>BCFG, migration becomes financially attractive.

In Germany, the income from illegal work must cover at least a socio-culturally defined subsistence minimum (that is to say, must at least equal social assistance, which is defined by such a standard); in addition, it must be sufficient to cover health insurance premiums. For a single person, €55,489 is sufficient to fulfil this requirement during the waiting period. The corresponding figures for a couple without children are €98,716. If one assumes that our immigrants would earn an average wage in Poland, then the difference in net income between Germany and Poland becomes –€25,644 for the single person and –€43,152 for the childless couple.

At the end of the waiting period, our immigrant to Germany can expect to receive social assistance or unemployment benefit II. Since welfare benefits minus living expenses in Germany are, on purchasing power terms, less than the net income of an average Polish employee, migration to Germany would

Figure 2

INCENTIVES TO MIGRATE IN THE CASE OF ILLEGAL WORK[a] IN THE HOST COUNTRY



IN: Income; LE: Living expenses; Net IN: Net income (income-costs); SA: Social assistance.
a) The incomes and costs in the graph are those for a single person.

Source: CESifo.

not be financially attractive, unless the migrant goes on working in the informal sector after the waiting period is expired. In the latter case the present value of the net income received in Germany between year 6 and year 15 will be €47,637 more than in Poland for the single person and €88,690 more for a childless couple. For a stay in Germany of eleven, respectively ten, years and abstracting from migration costs changing residence to Germany is financially attractive. However, in the cases examined here, one must bear in mind the risk of not finding work in the informal sector, or the risk of being discovered in an illegal job (Ochel 2007).

Legal migration of self-employed persons into welfare systems

The Directive has broadened the right of residence of self-employed persons. Permanent right of residence after a stay of five years was, up to 2004 according to the Law of Residence of the EEC, only granted if the applicants had sufficient resources. The Directive has done away with this restriction. Self-employed Union citizens are granted a right to permanent residence on the sole basis of five years of uninterrupted legal residence and are entitled to welfare benefits.

As of 1 May 2004 the nationals and enterprises of the new member countries have the same rights of establishment in other member states as the nationals and enterprises of the old member countries. Restrictions on free movement of workers, which may be maintained for up to seven years, mean, however, that branches of enterprises from the new Member States (except for Malta and Cyprus) located in other EU countries are, except for key personnel, not allowed to employ people from their own country.

Freedom of establishment is understood as permitting the establishment of permanent economic activity in another member country. It includes the exercise of an independent economic activity as a self-employed person or the establishment and conduct of an enterprise. This independent economic activity may have the character of free-lance professional work, or commercial, trade or crafts activity.

With respect to a Pole desiring to establish himself as a tradesman in Germany, one must distinguish between trades requiring special qualification (e.g. possession of a master craftsman's certificate) and trades for which no special proof of qualification must be presented. Since the beginning of 2004, 41 craft trades (e.g. mason, plumber, joiner, baker) have been designated as requiring certification of qualification. If the Polish migrant has a qualification in his own country equivalent to the German master craftsman's qualification, then he may enrol in the register of qualified craftsmen in Germany. If the Polish migrant has no such formal qualification, he must have worked at least six years as a self-employed person in the trade or as responsible head of a plant or workshop in Poland before he can exercise the craft in Germany. This period can be shortened to three years if a three year vocational training in the relevant craft can be documented or if the migrant has worked for at least five years as an employee in the relevant area. These periods must be certified by the competent Polish authorities. An other option for obtaining the right to exercise a

craft in Germany is by passing a test (Art. 8 of the German Law Regulating the Conduct of Crafts and Trades).

For the 53 trades which may be exercised in Germany without any formal qualification, the migrants need not fulfil any requirements. These trades run from tilers and parquet-layers to building cleaning contractors or photographers. The same applies for the 57 areas of activity which are classified as being similar to craft trades.

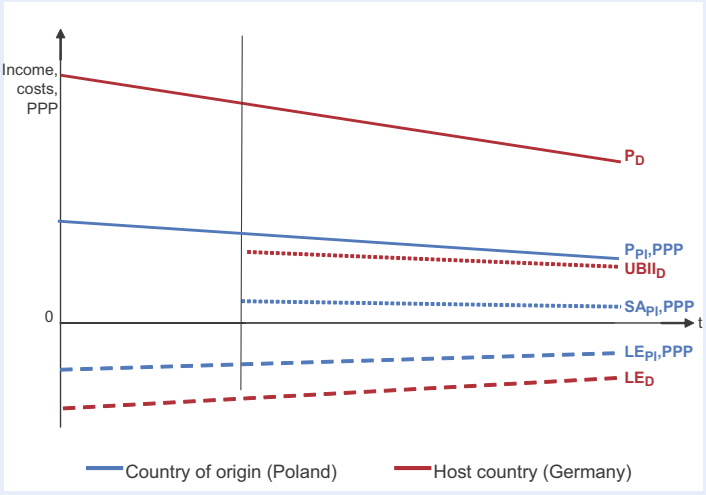
Figure 3 illustrates the migration decision of a 40 year-old Pole who is self-employed. He needs to have initial assets sufficient to establish his business in the new location (not treated here as they may be relevant in Germany and Poland alike); no assets are required to cover living expenses and health insurance since it is assumed that the income needed to cover these will be earned in Germany. During the waiting period, our Union citizen will make a profit (P) out of his self-employed activity in Germany; for comparison the profits to be expected if he had remained in Poland are also shown. After the waiting period is expired, our individual may wish to continue his activity as a gainfully self-employed person. In the event that his business does not prosper, he can in case of need claim unemployment benefit II in Germany (UB II); in Poland the corresponding benefit would be social assistance (SA). The living expenses are shown by LE.

In Table 2, the income (in the form of profits) and the welfare benefit entitlements are compared. The comparison shows that a 40 year-old self-employed Pole will find it attractive to set up a business in Germany; this is equally true during the waiting period and afterwards. The financial incentives to migrate emanate both from better earning prospects and from more generous welfare benefits. For a 60 year-old Pole, migration is financially attractive too. However, a single person should return to Poland at the age of 65, whereas a couple should remain in Germany.

Since April 2004 the German Association of Chamber of Crafts has collected statistics on the establishment of craft enterprises whose proprietors come from the EU-10 acceding countries. On 30 June 2006 there were 18,663 such enterprises in Germany; that corresponded to 2 percent of all craft enterprises in Germany (see Table 3). 97 percent of these enterprises are crafts that are not subject to proof of qualification or are quasi-crafts. Crafts requiring qualification equivalent to that of a master craftsman are, on the other hand, scarcely represented. Craft enterprises with owners from the acceding countries are concentrated in urban centres such as Berlin, Hamburg, Frankfurt and Munich. In the Federal States located near the borders to the new EU countries, there have been relatively few establishments (Hönekopp 2006).

Figure 3

INCENTIVES TO MIGRATE FOR A GAINFULLY SELF-EMPLOYED PERSON[a] IN THE HOST COUNTRY[b]



a) 40 year-old Pole.
b) The incomes and costs in the graph are those for a single person.
Source: CESifo.

Summary and conclusions

Since the beginning of the 1990s, the restrictions on the freedom of movement and choice of residence of EU citizens have been progressively lifted. The Directive which went into force in 2004 laid down new and more liberal rules for movement across borders and for taking up residence in another EU country. Access to welfare benefits in host countries was made easier, although it continued to be tied to certain requirements (Sinn 2004).

The question arises as to what extent these new regulations will provoke migration within the EU from the less developed countries

Table 2

Financial incentives for a Pole taking up self-employment in Germany (D)

in €

Year 2005 present values

		Single person	Couple, no children
Net income during the waiting period (year 1 to year 5)			
(1)	Income in D[a)]	112,740	175,548
(2)	Living expenses in D[b)]	37,972	59,162
(3)	Net income in D (1-2)	74,768	116,386
(4)	Income in Pl, PPP[a)]	45,544	74,174
(5)	Living expenses in Pl, PPP[b)]	19,900	31,022
(6)	Net income in Pl, PPP (4-5)	25,644	43,152
(7)	Difference of net income D-Pl (3-6)	49,124	73,234
Income after the waiting period (year 6 to year 15)			
	– Pole 45 years old –		
(8)	Income in D[a)] or	179,950	278,605
(9)	Unemployment benefit II in D[c)]	60,610	94,432
(10)	Living expenses in D[b)]	60,610	94,432
(11)	Income in Pl, PPP[a)] or	72,695	118,393
(12)	Social assistance in Pl, PPP[d)]	18,587	18,587
(13)	Living expenses in Pl, PPP[b)]	31,763	49,493
	– Pole 65 years old –		
(14)	Social assistance in D (DFM)[e)]	60,610	94,432
(15)	Social assistance in D (LR)[f)]	0	0
(16)	Living expenses in D[b)]	60,610	94,432
(17)	Old-age benefits in Pl, PPP	37,520	37,520
(18)	Living expenses in Pl, PPP[b)]	31,763	49,493

[a)] Hypothesis: Profits of self-employed (after taxes and deduction of health insurance premiums) correspond to the average net income of employees. Source: OECD *Taxing Wages 2004–2005*. – [b)] See Table 1.– [c)] In Germany, self-employed who become unemployed do not receive unemployment benefit I. – [d)] In Poland, social assistance is at most €108 per month and household. Source: EU MISSOC Tables 2006. – [e)] Under the Directive (DFM). – [f)] Under the Law of Residence of the EEC (LR).

Source: CESifo.

to the more developed countries. Since the Directive was not implemented in the member countries until 2006, it is impossible to provide an answer to this question based on an ex-post analysis. Instead, calculations have been made of the financial incentives to migrate in a number of model cases. The countries studied were Poland as the country of origin of the migrants, and Germany as the host country. Since welfare benefits are more generous in Germany, migration into German welfare systems is to be expected. However, the rules and regulations in force impose a waiting period of five years, which must first be bridged. This in turn means that an inactive Polish citizen seeking access to Germany's welfare systems must have at the beginning considerable financial assets. Only few Poles are able to fulfil this requirement. Then too, these persons must be prepared to liquidate these assets during the waiting period with a view to obtaining later welfare benefits in Germany. This is fraught with risks for the migrant, e.g. the risk that he will die during the waiting period, or that there might be a subsequent modification of the rules and regulations in his disfavour.

Apart from the possession of adequate assets there should be a surplus of net income arising from migration. To the extent that after the waiting period there is an entitlement to old-age benefits in Poland, then on a purchasing power parity basis the net income in Poland will exceed the net income to be expected in Germany: there is no financial incentive to migrate from Poland to Germany in such a case. If, however, the Polish citizen has to use up existing financial assets before he can put in a claim for social assistance – and this is in all likelihood the more general case – then there is indeed a financial incentive to migrate to Germany in order to take advantage of the more generous welfare benefits there.

If one considers persons who have no financial assets and who are capable of working, then the calculations show that migration is attractive assuming that they work in Germany in the informal sector; at the expiration of five years, they expect to also receive social assistance or unemployment benefit II. This option is, however, illegal and pursuing it involves considerable risks.

Another option is to exercise an activity as a self-employed person. This is financially attractive too. The financial incentives emanate both from better earning prospects and from more generous welfare benefits. On June 2006 there were 18,663 craft enterprises in Germany whose proprietors came from the EU-10 acceding countries. That corresponds to two percent of all craft enterprises in Germany.

This analysis focuses on financial incentives. However, the social sphere, language and cultural differences between the countries under consideration are also important for the decision to migrate. Then too, individual factors such as life expectancy,

Table 3

Craft enterprises in Germany whose owners come from one of the EU-10 acceding countries (as of 30 June 2006)

Federal State	Total number of enterprises	Enterprises whose owners come from one of the EU-10 acceding countries[a)]	
		Share in %	Number
Baden-Württemberg	125,731	1.0	1,197
Bavaria	179,051	2.1	3,764
Berlin	33,113	6.2	2,050
Brandenburg	37,060	1.0	375
Bremen	4,966	2.3	113
Hamburg	13,800	6.2	851
Hesse	66,324	6.0	4,009
Lower Saxony	78,743	2.3	1,775
Mecklenburg-Western Pomerania	19,355	0.3	58
North Rhine-Westphalia	172,405	1.6	2,825
Rhineland Palatinate	47,558	1.8	850
Saarland	11,390	0.6	73
Saxony	56,869	0.5	303
Saxony-Anhalt	29,289	0.1	25
Schleswig-Holstein	28,815	1.2	360
Thuringia	30,940	0.1	35
Federal Republic	**935,409**	**2.0**	**18,663**

[a)] Registrations since 1 May 2004.

Source: German Association of Chamber of Crafts, Establishment registration statistics; calculations of CESifo.

life plan and the evaluation of risk influence the individual Union citizen's migration decision.

A number of years will have to pass before the effects on the migration into the welfare systems of individual EU member countries arising from the Directive will be known empirically. But it is already possible to say that in enacting the Directive the European lawmakers have undergone a considerable risk. Access to welfare systems has not been cut off but only made difficult by imposing certain conditions. In view of the still rudimentary nature of the financial compensation framework within the EU, it is entirely possible that the freedom of movement that has been accorded will impose excessive demands on the solidarity of Union citizens in the host countries.

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Annex

Selected articles taken from the Directive 2004/38/EC of 29 April 2004

published in the *Official Journal of the European Union*, no. L 158 on 30 April 2004

Text of the Directive	Comments
A. Right of residence for up to three months	
Article 6 (1): "Union citizens shall have the **right of residence on the territory of another Member State for a period of up to three months without any conditions** or any formalities other than the requirement to hold a valid identity card or passport."	During this initial period, entitlement to social assistance in the host country can be excluded in some cases by national law. This follows from the considerations laid down in the preamble of the Directive:
Preamble, No. (21): "However, it should be **left to the host Member State to decide whether it will grant social assistance during the first three months of residence**, or for a longer period in the case of job-seekers, **to Union citizens other than those who are workers or self-employed persons** or who retain that status or their family members, or maintenance assistance for studies, including vocational training, prior to acquisition of the right of permanent residence, to these same persons."	Exclusion is possible only in the case of individuals who are inactive or self-employed. The specific rule by which they can be excluded from receiving social assistance (only!) during the first three months of their stay reads as follows:
Article 24 (2): "By way of derogation from paragraph 1, **the host Member State shall not be obliged to confer entitlement to social assistance during the first three months** of residence or, where appropriate, the longer period provided for in Article 14 (4) (b) [i.e., job-seekers], nor shall it be obliged, prior to acquisition of the right of permanent residence, to grant maintenance aid for studies, including vocational training, consisting in student grants or student loans **to persons other than workers, self-employed persons**, persons who retain such status and members of their families."	With respect to the category of persons and the period of time defined here, there is no "equal treatment" with nationals that is otherwise required by Article 24.
Article 14 (1): "Union citizens and their family members shall have the right of residence provided for in Article 6 [for up to three months], **as long as they do not become an unreasonable burden on the social assistance system of the host Member State**."	Nevertheless, even during this initial period of residence expulsion is possible only if individuals become an "unreasonable" burden on the host country's social assistance system, not a burden as such (see below).
B. Conditions for a right of residence for more than three months	
Article 7 (1): "All Union citizens shall have the **right of residence** on the territory of another Member State **for a period of longer than three months** if they:	Rules regarding longer stays are clearly more important.
(a) are **workers or self-employed persons** in the host Member State; or	Employed persons have a right of residence subject to no further conditions.
(b) have **sufficient resources** for themselves and their family members not to become a burden on the social assistance system of the host Member State during their period of residence and have **comprehensive sickness insurance cover** in the host Member State; (…)."	For other individuals, the right of residence is subject to a proof of having "sufficient resources" and comprehensive sickness insurance coverage, as in the pre-existing law. Closer examination reveals, however, that these conditions have now been weakened.
Article 8 (1): "Without prejudice to Article 5 (5), for periods of residence longer than three months, the host Member State may require Union citizens to register with the relevant authorities."	After three months, individuals can be required to register and give proof that they satisfy the relevant conditions (cf. Article 8 (3)).
Article 8 (4): "**Member States may not lay down a fixed amount which they regard as 'sufficient resources', but they must take into account the personal situation of the person concerned**. In all cases this amount shall not be higher than the threshold below which nationals of the host Member State become eligible for social assistance, or, where this criterion is not applicable, higher than the minimum social security pension paid by the host Member State."	However, the term "sufficient resources" is not to be defined as a fixed amount in national law. Furthermore, no criteria are provided for determing the relevant amount of resources taking into account the "personal situation of the person concerned". Clearly, any specific requirement would have to be made transparent before, and eventually accepted by, the ECJ.

(Annex continued 1)

Text of the Directive	Comments
Preamble, No. (31): "This Directive respects the fundamental rights and freedoms and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union. In accordance with the prohibition of discrimination contained in the Charter, Member States should implement this Directive **without discrimination between the beneficiaries of this Directive on grounds such as** sex, race, colour, ethnic or social origin, genetic characteristics, language, religion or beliefs, political or other opinion, membership of an ethnic minority, **property**, birth, disability, age or sexual orientation."	There may be yet another restriction: It is unclear how absence of discrimination with respect to property, a fundamental commitment stated in the preamble of the Directive, could interfere with a personalised definition of sufficient resources. An extreme implication could be that denying individuals with limited resources the right of residence is effectively impossible. In any case, there is a conflict here implying that the amount of resources required for a given individual may have to be set substantially below the social assistance threshold.
Article 14 (2): "Union citizens and their family members shall have **the right of residence provided for in Articles 7**, 12 and 13 **as long as they meet the conditions set out therein**. In specific cases where there is a **reasonable doubt** as to whether a Union citizen or his/her family members satisfies the conditions set out in Articles 7, 12 and 13, **Member States may verify if these conditions are fulfilled**. This verification shall not be carried out systematically."	The condition of having sufficient resources is relevant during a period of residence of up to five years. Verifying whether it is met is possible if there is "reasonable" doubt, but there shall be no systematic checks.
Article 14 (3): "**An expulsion measure shall not be the automatic consequence of** a Union citizen's or his or her family member's **recourse to the social assistance system** of the host Member State."	In principle, EU citizens are given access to the host country's social assistance system from the very beginning, even though this entitlement is temporarily suspended through the condition of holding sufficient resources (cf. Article 24 (1) below). If resources are depleted faster than expected, claiming social assistance benefits is not in itself a legitimate reason for expulsion (as with Article 6).
Preamble, No. (16): "**As long as the beneficiaries of the right of residence do not become an unreasonable burden on the social assistance system of the host Member State they should not be expelled**. (…)."	This is again evident from the Preamble: Expulsion of individuals claiming social assistance benefits is the exception rather than the rule, restricted to the case where paying benefits is an "unreasonable burden". Claims that are reasonable are justified. There are no criteria for what would be unreasonable. In the case of a dispute, the host country would have to prove that specific claims are unreasonable. In the future, Article II (34) of the EU Constitution, which states that non-employed persons are entitled to full inclusion in their host country's social protection system, will have to be taken into account. Expulsion is not possible in the following two cases (C and D):
C. Special regulations regarding employed persons	
Article 14 (4): "By way of derogation from paragraphs 1 and 2 and without prejudice to the provisions of Chapter VI, **an expulsion measure may in no case be adopted against** Union citizens or their family members if: (a) the Union citizens are **workers or self-employed persons**, or (b) the Union citizens entered the territory of the host Member State **in order to seek employment**. (…)."	First, expulsion is ruled out if individuals have the status of employed persons, also if they are seeking employment (not necessarily being entitled to social assistance benefits in this sub-case, cf. Article 24 (2) above).
Article 7 (3): "For the purposes of paragraph 1 (a), **a Union citizen** who is no longer a worker or self-employed person **shall retain the status of worker or self-employed person** in the following circumstances: (a) he/she is **temporarily unable to work** as the result of an illness or accident;	What also matters in this context are the rules determining that an individual can retain the status of an employed person for an extended period of time.

(Annex continued 2)

Text of the Directive	Comments
(b) he/she is **in duly recorded involuntary unemployment after having been employed for more than one year** and has registered as a job-seeker with the relevant employment office; (c) he/she is in duly recorded involuntary unemployment after completing a fixed-term employment contract of less than a year or after having become involuntarily unemployed during the first twelve months and has registered as a job-seeker with the relevant employment office. In this case, the status of worker shall be retained for no less than six months; (d) he/she embarks on vocational training. Unless he/she is involuntarily unemployed, the retention of the status of worker shall require the training to be related to the previous employment."	In particular, the fact that after one year in employment the status of an employed person is retained effectively implies a right of permanent residence even in the absence of sufficient resources. The only restriction is that individuals have to register as unemployed (and may thus be required to accept a new job that is offered).
D. Right of permanent residence	
Article 16 (1): **"Union citizens who have resided legally for a continuous period of five years in the host Member State shall have the right of permanent residence there.** This right shall not be subject to the conditions provided for in Chapter III [i.e., Articles 6–15, among these the existence of sufficient resources and comprehensive sickness insurance cover]."	Second, expulsion is ruled out if individuals have acquired a right of permanent residence. Formally, this right is granted after a maximum of five years of legal residence without interruptions of more than six months per year. (Only in case of absence for two or more years without interruption is the right lost). After five years, a right of permanent residence is also given to persons who are not employed. It is granted without any further conditions, even if these individuals do not have sufficient resources or comprehensive sickness insurance coverage.
Article 17 (1): "By way of derogation from Article 16, the **right of permanent residence** in the host Member State shall be enjoyed **before completion of a continuous period of five years of residence** by: (a) **workers or self-employed persons who**, at the time they stop working, **have reached the age** laid down by the law of that Member State **for entitlement to an old age pension** or workers who cease paid employment to take **early retirement**, provided that they have been working in that Member State for at least the preceding twelve months and have resided there continuously for more than three years. If the law of the host Member State does not grant the right to an old age pension to certain categories of self-employed persons, the age condition shall be deemed to have been met once the person concerned has reached the age of 60; (b) **workers or self-employed persons** who have resided continuously in the host Member State for more than two years and stop working there as a result **of permanent incapacity to work**. If such incapacity is the result of an **accident at work or an occupational disease** entitling the person concerned to a benefit payable in full or in part by an institution in the host Member State, no condition shall be imposed as to length of residence; (…)"	Employed persons who entered the host country before reaching the statutory retirement age have the right of permanent residence and are thus entitled to receive social assistance benefits as soon as they reach retirment age. A minimum period of stay before this entitlement becomes effective is specified only in case of early retirement (three years of residence, at least twelve months in employment). In cases of incapacity to work, the right of permanent residence is also granted after fewer than five years of stay (in principle, after two years; without any time limit if incapacity to work is a consequence of work injury or occupational disease giving rise to a related benefit entitlement in the host country).
Article 24 (1): "Subject to such specific provisions as are expressly provided for in the Treaty and secondary law, all Union citizens residing on the basis of this Directive in the territory of the host Member State shall enjoy equal treatment with the nationals of that Member State within the scope of the Treaty. The benefit of this right shall be extended to family members who are not nationals of a Member State and who have the right of residence or permanent residence."	After a maximum of five years, Union citizens are thus entitled to claim all the benefits that the welfare state offers its nationals.

Excerpt by Ifo Institute, Munich.

Workplace Training and Labour Market Institutions in Europe*

Giorgio Brunello**

Introduction

Compared to training in general, workplace training is received while in employment, and is usually but not exclusively provided by the employer. Figure 1 shows the differences in average training incidence across European countries, Anglo-Saxon countries and some countries of Eastern Europe. The figure plots both average training participation and average annual hours of training per employee. We notice that the US does not perform "better" than all European countries, because the UK, France and Scandinavian countries have both higher participation and higher annual hours of training. The rest of Europe, including the countries in the "olive belt" (Greece, Italy, Portugal and Spain), does "worse" than the US, and is somewhat closer to the new entries from Eastern Europe.[1] While these indicators need to be considered with care, due to the measurement problems which reduce comparability, they reveal that Europe is very heterogeneous when it comes to training outcomes.

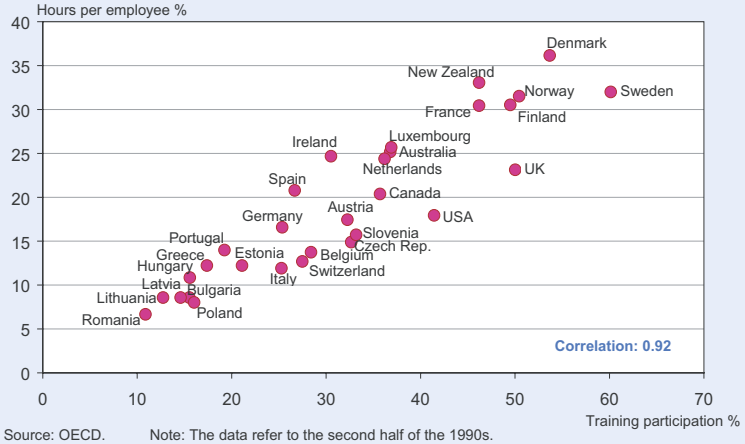
On average, the entire cost of three-quarters of training courses is directly paid by employers, and there is little evidence that employees indirectly pay through lower wages. Large and innovative firms train more than small and non-innovative firms, with the UK being the only European country where this does not hold. Cross-country variation among large and innovative firms is, however, small. Therefore, the lower average training incidence in countries located in the Southern "olive belt" is correlated both to their larger share of small firms and to the fact that these firms train relatively less than firms of similar size in Northern Europe.

In Europe, as in the US, training increases with educational attainment and the skill-intensity of occupations, and decreases with age. The age-training gap is negatively correlated with the employment rate of older workers, reflecting either the impact of training on older workers' employability or their incentive to stay on rather than retire, and invest in their skills. Women take more training than men, but essentially because they pay for their own training more often, while firms do not appear to accommodate their greater demand for training. Importantly, women tend to receive less employer-sponsored training than men when they are young and have more frequent career interruptions due to childrearing. On average, temporary workers are trained less often.

After netting out observable individual characteristics, country effects account for almost one-half of the explained variation in training participation across Europe – net of Germany.[2] Without doubt, part of this variation reflects measurement error and cross-country differences in definitions and perceptions of training. For instance, since training registered in employer and employee surveys is typically formal, significant episodes of informal training are not counted, which is especially problematic for small firms, where a lot of informal training arguably takes place. However, this residual cross-country variation also includes differences in

Training Participation and Training Intensity across Countries

Percentage of employees (aged 25–64 years) taking some training in one year and average annual hours per employee



Source: OECD. Note: The data refer to the second half of the 1990s.

* This essay draws from joint work with Andrea Bassanini, Alison Booth, Maria De Paola and Edwin Leuven, done for the Fondazione Rodolfo Debenedetti, and due to appear in G. Brunello, P. Garibaldi and E. Wasmer, Education and Training in Europe, Oxford University Press.

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[1] The somewhat surprising relative position of Germany in this diagram can be explained by the fact that we are considering only individuals aged 25–64; by so doing, we exclude most apprenticeship training.

[2] Germany is excluded because of the quality of the data.

the institutional and social framework, in government policies and in the macroeconomic conditions.

In this essay, I investigate the relationship between labour and product market institutions and training outcomes. It has been widely recognized that institutions have an impact on unemployment and productivity. I ask whether they also have an impact on training outcomes. I start by reviewing the theoretical and empirical literature and move on to describe the main features of my empirical investigation. I then discuss the results and draw my main conclusions.[3]

Training and labour market institutions: what does the theory have to say?

Institutions play an important role in the theory of training, because minimum wages and trade unions – inter alia – can affect the wedge between wages and marginal productivity. I consider in turn the effects of trade unions, minimum wages, product market regulation and school design. All of these institutions are likely to vary across OECD countries.

Unions

The channels through which union collective bargaining can affect training and pay are potentially quite complex, and it is not immediately obvious that unionism will be associated with positive or negative returns to training. The implications of unionism for training and pay depend, *inter alia,* on the degree of competition in the labour market and on whether the union effect on training is indirect (through the wage structure) or direct (through the negotiation of training).

Some studies argue that, where wages are set collectively by trade unions in an otherwise competitive labour market, wage dispersion is reduced and incentives to invest in general training at the workplace are distorted. This is because union wages cannot be lowered during training and increased after training to allow workers to bear the costs and benefits of general training. In imperfectly competitive labour markets, unions have ambiguous effects on the pay returns to training. In Acemoglu and Pischke (1999), for instance, unions set wages and the firm determines training. Their model predicts that unionism is associated with increased firm-financed transferable training.

When union utility increases with respect to wages and job security or the employment of its members, unions may ensure that covered workers receive higher wages and greater job security by directly intervening in training provision, for example, by making sure that workers' skills are enhanced through more training. Strong unions might therefore be more willing to negotiate better training opportunities for covered workers, especially in non-competitive product markets in which the available surplus is larger.

Where unions improve worker morale and organisation at the workplace, labour turnover may be reduced (Freeman and Medoff 1984). Union-covered firms may therefore have greater incentives to provide training because they are less likely to lose highly productive trained workers. Through this mechanism, unionism may be associated with increased training and productivity, and consequently wages.

Finally, in firms that become unionised, management may respond to higher union wages by more carefully vetting new hires to obtain a better quality workforce. This vetting might also involve induction training. From the supply side, better quality or more motivated workers might self-select into unions jobs if the training opportunities and returns are higher in the union-covered sector. If unions bargain directly over training as well as wages, only workers able to benefit from such training will wish to queue for union jobs, or will be offered such jobs.

Minimum wages

With competitive labour markets, human capital theory predicts that the introduction of a minimum wage reduces investment in training by covered workers, who can no longer contribute to training costs through lower wages. But if the labour market for the low paid is imperfectly competitive or workers are credit-constrained, a minimum wage can increase investment in the general component of training. Why is this the case? The basic rationale is provided by oligopsonistic models, which predict that firms may pay for general training. The oligopsonistic labour market introduces a "wedge" between wages and marginal product. And it can be shown that the introduction of a minimum wage also acts as a type of wedge between wages and marginal productivity. Thus it can actually increase general training over a range of human capital and induce employers to train their unskilled workers (Acemoglu and Pischke 2003).

[3] I refer the reader to Bassanini et al. (2005) for a more detailed presentation of the material used in this essay.

Product market competition and deregulation

Deregulation increases competition in the product market and can affect training in a number of ways. First, deregulation influences real wages and profits after training, and reduces rents. Second, the higher competition induced by deregulation increases productivity by forcing firms to improve efficiency and to innovate. If innovation and skills are complements – see Acemoglu (1997) – firms have a higher incentive to train. By affecting the entry of firms, deregulation also contributes to local agglomeration effects, which might discourage the investment in training by strengthening the risk of poaching.[4] Third, the relative bargaining power of workers can fall because of the higher risk of involuntary turnover and plant closure associated with more product market competition.[5] Rents increase, and training can rise as well.

Schooling institutions

The variation in school design – especially of secondary schools – can affect training outcomes, given the complementarity between education and training. Countries differ in the degree of stratification of secondary education and in the importance of tracking. The design of secondary schooling systems varies considerably across European countries, and an important dimension of such variation is the relative importance of vocational and general education. While comprehensive schooling systems which mix general and vocational education are typical of the UK and Scandinavia, stratified systems, with a much more marked separation of the vocational and general track, are used in Austria and Germany. The rest of the major European countries lie somewhere in between.[6] It is an open question as to whether a more stratified schooling system is conducive to higher training outcomes than a more comprehensive system. If vocational schools in stratified educational systems produce very specialized skills that become rapidly obsolete in the presence of technical progress, more training might be required to update existing skills to match the new technical blueprints. On the other hand, comprehensive schools could produce skills that are too general, and which require additional training to become operational.

[4] See Brunello and Gambarotto (2007) and Brunello and De Paola (2004).
[5] See Bassanini and Brunello (2006) for more details.
[6] See Brunello and Giannini (2004) and Brunello, Giannini and Ariga (2004) for a discussion of these issues.

Previous empirical literature

The empirical papers investigating the different aspects of the relationship between unions and training provide mixed results. Among the first studies in the US, Barron and co-authors (1987) use data from a survey of US employers and find that the proportion of non-supervisory workers covered by collective bargaining has a significant negative effect on total training. On the contrary, Lynch (1992) finds evidence of a positive effect of unions on training in the US National Longitudinal Survey of Youth (NLSY).

Beside the Lynch's study, additional evidence of a positive union effect is provided among others by Veum (1995), Arulampalam and Booth (1998), and Booth Francesconi and Zoega (2003). The latter study investigates the impact of union coverage on work-related training and finds that union-covered British men are more likely to receive training and also receive more days of training than workers with no coverage. A positive union effect is also the key result of a recent investigation of unions and training in German data by Dustmann and Schonberg (2004). On the other hand, Black and Lynch (1998) find no link between unions and training.

The available empirical evidence on the effects of minimum wages on training is also rather inconclusive, with recent studies in the United States and the United Kingdom reporting contradictory findings. Recall that in perfectly competitive labour markets, the introduction of a minimum wage reduces training, because some workers are not capable of financing training by accepting lower wages. Conversely, when labour markets are characterized by monopsonistic power, minimum wages may increase employer-provided training of low paid workers.

Early research by Leighton and Mincer (1981) finds that age-earnings profiles are significantly flatter among workers whose wages are bound by the minimum wage, which is interpreted as suggesting that an increase in the minimum wage significantly reduces on-the-job training. In sharp contrast, Lazear and Miller (1981) find no statistically significant relationship between the slope of age-earnings profiles and an indicator of whether the minimum wage is binding or not. However, more recent research by Grossberg and Sicilian (1999) shows that the effect of minimum wages on wage growth could be unrelated to the effect produced on training. As suggested by Acemoglu

and Pischke (2003) minimum wages eliminate the lower tail of the wage distribution and by so doing flatten the slope of the age-earning profile. This effect is independent of the impact of minimum wages on training. Leighton and Mincer (1981) and Neumark and Wascher (2001), using data on individual workers, consider the relationship between the variation of minimum wages across the US states and the investment in training and find that the more binding the minimum wage is, the less likely a worker is to receive on-the-job training.

A widespread concern with the recent diffusion of flexible employment practices, such as temporary labour contracts is that these contracts may be detrimental to economic performance because temporary workers are less likely to be trained. Arulampalam and Booth (1998) investigate the relationship between employment flexibility and training using UK data, and find that workers on temporary contracts are less likely to receive work-related training. Quite in contrast, recent work by Autor (2004) on temporary help firms in the US shows that almost one quarter of temporary help supply firms have received skills training as temporaries. Training in this context not only provides skills but also operates as a screening and a self-sorting device.

The relationship between product market competition and training is significantly less studied in both the theoretical and empirical literature. In the only empirical investigation we are aware of Autor (2004) presents evidence of a negative and statistically significant correlation between the Herfindahl index, a measure of product market concentration, and the training provided by temporary help firms in the US. The evidence on the relationship between firing costs, employment protection and training is also rather limited. Bishop (1991) is one study in the area, which reports that the likelihood and amount of formal training are higher at firms where firing a worker is more difficult. Acemoglu and Pischke (2000) argue that there are complementarities between regulation regimes and training systems, and that reducing firing costs and increasing employment flexibility could reduce the incentives to train.

There is substantial evidence that the *quantity* of education and training are complements (Leuven [2005] for a review), and there is also evidence that the strength of this complementarity depends on whether training is provided on-the-job or off-the-job (Ariga and Brunello 2006). To our knowledge, no empirical research has been done so far on the relationship between the *quality* of education and training. Since quality depends on the design of schooling institutions, an important empirical question is which institutions are more conducive to work-related training.

The traditional way of looking at the relationship between pension benefits and training is that deferred payments – such as pensions – reduce turnover, increase incentives, and therefore allow firms to recoup the costs of their investments in training (Lazear 1979). This view suggests that there is a positive relationship between employer-provided training and the generosity of the pension plans designed by firms. If we focus on workers approaching retirement age, however, we notice that these employees face the choice of retiring versus continuing work and investing in further training. The incentive to stay and train is likely to be higher in countries were the implicit tax on continuing work is lower. This tax is defined as minus the change in pension wealth from remaining in the labour market during a given period of time (Duval 2004).

Many European countries have recently changed or are considering reforming the pension system, with a view to increasing its sustainability in the face of persistent ageing. One concern raised by these policies is that a postponement of retirement age might increase the unemployment rate of older workers, who are unlikely to receive the training needed to stay longer in the labour market. To cope with this, some countries in Europe have in place early retirement schemes, which facilitate the transition of older dismissed workers from work to retirement. These systems are expensive for the taxpayer and do not contribute to increasing the participation rate of older workers. In principle, however, the expectation of less generous retirement benefits should positively affect the training of senior workers – both employer and employee-provided – by increasing the expected length of working life after the investment, and the time available to recoup the costs of the investment.

As in the case of the relationship between school design and training, I am not aware of any empirical research which has investigated whether the generosity of mainly public pension schemes has a significant effect on the training incidence of senior workers.

Empirical investigation: the data

My data on individual training events are drawn from the European Community Household Panel (ECHP),[7] Waves II to VIII (1995 to 2001). The ECHP is an attractive source of information because it covers a significant number of European countries with a commonly designed questionnaire. I only consider individuals (i) aged between 25 and 60 years and working at least 15 hours per week; (ii) not employed in agriculture; (iii) present in at least two consecutive waves; (iv) not in apprenticeships or in special employment training schemes.

Since the reference period of each wave may overlap with the period of the previous wave, I run the risk of double counting training spells twice. Rather than losing information or adjusting counts in an ad-hoc way, I prefer to ignore double counting. There is also the problem of omitted spells, which appears to be particularly serious for Germany. Since the data for Germany also miss important information on employer-provided training, as well as on industry affiliation, I have dropped this country from the sample.[8]

I consider all training, independently of whether it is defined as general or as firm-specific, or as paid by the employer or by the employee. As documented in Bassanini et al. (2005) average training incidence is higher in countries with a higher percentage of the population having at least a high school diploma. Not only the quantity but also the quality of education matters. One important area where European secondary schools differ is the degree of stratification or tracking. Compared to the US, where tracking consists of ability grouping within the same comprehensive schooling system, stratification in Europe occurs mainly by separating students into vocational and general tracks, with different degrees of osmosis between tracks. Hannah, Raffe and Smyth (1996) and OECD (2004) classify countries into three groups, depending on the degree of stratification of school curricula: a high stratification group, which includes Germany, Austria, Belgium and the Netherlands; a low stratification group, with the UK, Spain and Scandinavian countries (Sweden, Denmark and Finland); an intermediate group, with the rest of Europe, including France and Italy, which lies between these two extremes. In systems with high stratification, students are divided relatively early into separate tracks, and develop specific and relatively narrow skills in the vocational track. In systems with low stratification, tracking takes place later, if ever, and students receive a broader and more versatile education.

The data on labour and product market institutions come from a variety of sources. Time-varying union density is from the OECD database. This variable has been used in the literature as a proxy of union influence, mainly because of the availability of time-varying data. An important drawback, however, is that the variable of interest in the empirical analysis is union coverage, which might be poorly related to union density. Only in half a dozen OECD economies with predominantly company bargaining do the two go closely together. France, where coverage is high but density low, is a clear example of poor correlation. It follows that, when the extension of union agreements is high, changes in union density are not as informative of union influence on wages, employment and training decisions as when extension is low.

The OECD has developed a measure of the legal or administrative extension of union agreements. Extension makes a collective agreement generally binding within an industrial sector, covering all employees who are not members of its signatory parties. This measure is a dummy equal to one for countries where extension is low (Denmark, the UK and Sweden), two for countries with medium extension (Netherlands, Ireland, Italy, Greece, Finland) and three for countries with high extension (Belgium, France, Spain, Portugal and Austria).[9] Since variations of union density are a good measure of union influence and coverage when extension is low, we define a new variable – the interaction of density with a dummy equal to one for the countries with low extension, and to zero for the remaining countries. This is equivalent to restricting the analysis of the relationship between training and union density to these countries.

I characterize the flexibility of the employment relationship in Europe with three variables – the index of stringency of employment protection legislation (EPL) for regular and temporary workers and the share of temporary workers in the labour force.[10]

[7] The December 2003 release of these data is available at the Department of Economics, University of Padua, under contract n. 14/99.
[8] The German data in the ECHP are derived from GSOEP and exclude many shorter training spells.
[9] See OECD (2004b).
[10] While the index of employment protection for regular workers focuses mainly on firing restrictions, the index for temporary workers considers mainly hiring restrictions.

The data for these variables are also from the OECD database. I use the index of product market regulation developed by Nicoletti and Scarpetta (2003), which measures the stringency of anti-competitive product market regulation – varying between 0 and 6 from the least to the most stringent. Since the indicator covers the period from the late eighties to 1998, I minimize the loss of information by associating product market regulation in year $t\text{-}3$ to training between year $t\text{-}1$ and year t.

I capture the institutions affecting the retirement decision with the implicit tax rate on continued work. This indicator measures the change in pension or social wealth from remaining in the labour market during the five years from age 60 to age 64 and is defined as minus this change divided by length of the interval. Unfortunately, it has been estimated by the OECD only for the year 2003 and does not include Greece (Duval 2004). For the purposes of this study, I shall assume hereafter that the indicator proxies in a satisfactory way expected pension benefits during the second part of the 1990.

The table summarizes the data on time-varying institutions by classifying countries according to whether the relevant variable has increased, remained constant or increased between 1995 and 2001. Union density has declined in all the countries with low extension of union contracts; the share of temporary workers has increased in all countries, with the notable exceptions of Denmark, Ireland and Finland, where it has declined. The index of employment protection of regular employees has remained constant in the large majority of countries, increased in Portugal and declined in Denmark, Spain and Finland; the same index for temporary workers has declined in half of the sample and remained constant in the rest; product market regulation has declined across the board; finally, the expenditure on R&D as a share of GDP has increased in most countries but declined in France, Italy and the UK.

Changes of institutional and other indicators between 1995 and 2001, by country

	Decreased	Constant	Increased
Union density	DK, UK, SW	–	–
Employment protection of regulars	DK, SP, FL	AU, BE, FR, IR, IT, UK, SW, NL	PT
Employment protection of temporaries	DK, BE, IT, SP, PT, SW	NL, FR, UK, IR, GR, AU, FL	–
Share of temporary workers	DK, IR, FL	–	BE, NL, FR, UK, GR, IT, SP, PT, AU, SW
Product market regulation	All countries	–	–
R&D expenditure on GDP	FR, UK, IT	–	DK, NL, BE, IR, GR, SP, PT, FL, SW, AU

The empirical results

I group individual data by country, year, education (college versus less than college) and age (24 to 49 and 50 to 59) and estimate by weighted least squares an empirical specification where the dependent variable is the logistic transformation of the proportion of trained employees in each subgroup. I estimate this specification on ECHP data for 13 countries[11] and the period 1995-2001. Compared to estimates which use individual data, aggregation over groups has the advantage of reducing individual heterogeneity and measurement error in the dependent variable.

Given the host of country and time specific factors which potentially affect training, I need to control for country and time effects with country and time dummies. This implies that I can estimate the relationship between training and labour market institutions only if the latter vary both across countries and over the available time span. Notice that the variation of training across countries and over time can also be due to confounding factors, which operate at the same level of aggregation of the selected institutional variables. Failure to control for these factors could seriously bias my results. To illustrate, suppose that training incidence is affected by country-specific technical progress, and let this variable change over time. By excluding measures of technical progress from the regression, I run the risk of attributing its effects on training to time-varying institutions.

The set of time-varying institutions I consider includes union density interacted with a dummy

[11] These countries are: Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Greece, the Netherlands, Portugal, Spain, Sweden and the UK.

equal to 1 if the extension of union contracts is low, the index of employment protection for regular and temporary employees, the index of product market regulation,[12] the interaction between age in the range 50 to 59 and the implicit tax on continued work and the interactions between the share of R&D expenditure on GDP, no college education – a dummy equal to 1 for individuals with less than college education – and no tracking – a dummy equal to zero for countries with a comprehensive secondary school system. These two dummies are interacted both separately and jointly with R&D expenditure.

The first interaction is expected to capture the disincentive effects on training of higher expected returns from retirement. The second set of interactions investigates whether the effects of technical innovations – captured by the share of R&D expenditure on GDP – vary with the level of educational attainment and with the degree of tracking in secondary schools. Technical change is likely to make narrowly specialized skills obsolete, and it might be necessary as a consequence to re-train more individuals with a less versatile and narrower education than individuals with general skills. If this is the case, I expect the relationship between technical progress and training to be positive and stronger in countries where schooling is more stratified.

There is substantial literature on skill-biased technical change (Katz and Autor [1999] for a review), showing that new technological developments and higher education are complements. Complementarities between innovations and educational attainment imply that new innovations increase the relative demand for college graduates. If training and education are also complements, an implication is that the effect of technical progress, captured by R&D expenditure, is likely to be stronger for individuals with higher education.

Confounding factors include the country and time specific unemployment rate, the share of temporary workers in the labour force and the share of R&D expenditure on GDP. The first two variables are expected to capture cyclical effects and changes in the composition of labour contracts, and the latter variable to proxy technical progress. Ideally, we would also like to include indicators which capture changes in training policy, but the only closely related indicator – the share of expenditure on active labour market policies on GDP – includes almost entirely training subsidies paid out to the unemployed.

Given these premises, my key findings are:

- Training incidence increases with the unemployment rate, which supports the view that firms and individuals engage more frequently in training activities when the opportunity cost of training – in terms of foregone production – is lower (Hall 2000). Training participation also increases with total expenditure on R&D – measured as share of GDP – and this effect is significantly lower for college graduates, which suggests that the latter require less training when innovations occur.
- The effect of union density on training – limited to the countries with low extension of union contracts – is very small and imprecisely estimated. Training turns out to be lower when the share of temporary workers in total employment increases. Therefore, an increase in the flexibility of the employment relationship associated with the introduction and diffusion of temporary labour contracts reduces the incentives of both parties to train. This effect, however, is imprecisely estimated.
- Training incidence is lower when the degree of employment protection of both regular workers and temporary workers increases, although this effect is statistically different from zero at the five percent level of confidence only for the former. How do I explain this? It is well known that employment protection is associated with firing costs, and that these costs have both a transfer and a tax component. While the transfer part could be undone by properly designed labour contracts, the tax component is difficult to undo (Garibaldi and Violante 2002). A common view in this literature is that firing costs increase wages. According to Lindbeck and Snower (1988), these costs increase the bargaining power of insiders by sheltering them from the competition of outsiders. How could this affect training? By raising wages and reducing profits.
  An alternative explanation is selection. When firing costs are high, employers cannot easily dismiss less able or less suitable regular employees and therefore end up with a more heterogeneous regular labour force than employers who can more easily dismiss unsuitable employees. If training and ability are complements, or if labour force heterogeneity imposes a negative firm-specific external-

[12] This index ranges from 0 to 6 and measures the intensity of regulation with respect to: economic and administrative regulation, tariff and other barriers, state control and public ownership, barriers to entrepreneurship, impediments to trade and investment. See Nicoletti and Scarpetta (2002).

ity on individual productivity, employers with a more homogeneous regular labour force should train more.

- Conditional on employment protection, training incidence is lower when product market regulation is higher. Therefore, liberalizing product markets do not damage training incentives, quite the contrary. This evidence does not support the view expressed by Gersbach and Schmutzler (2004) that training should be higher when industrial concentration is high and/or competitive intensity is comparatively low, but is in line with the finding by Autor (2004) that temporary help firms operating in more concentrated markets train more.
- I find that the interaction of age and the implicit tax on continued work is negative and statistically significant. Therefore, the age-training profile of workers in the 50–59 age group is reduced by the expectation of better retirement benefits. An implication of this finding is that pension reforms which reduce the implicit tax on continuing work for those between 60 and 64 are likely to increase the training of senior employees. Thus, the concerns about the labour market prospects for senior workers which often accompany these reforms might be exaggerated to the extent that these workers receive further training. As shown by Bassanini (2006) additional training of senior workers increases their employability.
- Finally, the interaction between R&D expenditure on GDP and lack of secondary school tracking yields a negative and statistically significant coefficient for individuals with less than college education, suggesting that technical progress has for these individuals a positive effect on training where schooling is stratified and a negative effect where schooling is comprehensive. This result points to the possibility that the vocational skills developed in stratified schools require more training and updating in the face of technical innovations. Therefore, countries with less stratified schooling systems have workers endowed with more versatile skills and that need less training to match newly developed techniques than countries with more stratified education systems.

How big are the effects discussed above? It turns out that a 10 percent increase in the share of R&D expenditure is expected to raise the probability of training for college graduates by 8.99 percent. The Lisbon strategy sets at 3 percent the target share of R&D expenditure on GDP, to be attained by 2010. According to my estimates, this would require an increase from the current European average of 1.4 percentage points, close to 87 percent from the baseline. If such an increase could be attained, I expect training participation to increase by 78.6 percent, a substantial amount. The expected increase in the probability of training is even higher for individuals without a college degree, and depends on the nature of the secondary school.

When evaluated at the sample mean values of employment protection, my estimates suggest that a 10 percent increase in the degree of product market regulation would reduce the probability of training by 13.1 percent. Conversely, a 10 percent increase in employment protection would reduce training incidence by 4.91 percent in the case of regular workers and by 1.05 percent in the case of temporary workers.

Conclusions

This essay started by asking whether product and labour market institutions affect training. My empirical investigation conclude that they do. In particular, I find that

- Product market regulation affects training negatively and significantly. Therefore, more competition in the product market is conducive to higher investment in training;
- Labour market flexibility affects training in a less straightforward manner: on the one hand, the diffusion of temporary contracts reduces the investment in training; on the other hand, the reduction in the degree of employment protection increases the provision of training, especially for regular workers. Therefore, labour market reforms that accelerate the diffusion of temporary contracts and at the same time increase the protection of a limited core of permanent employees produce negative effects on the accumulation of human capital taking place mainly in firms;
- Training incidence declines with age and is lower than average for workers who have reached age fifty. The decline is higher, ceteris paribus, in countries with a more generous pension system, because the higher implicit tax on continuing work at age 60 to 64 reduces the expected time horizon required to recoup the costs of the investment. Therefore, pension reforms which reduce the implicit tax are likely to have as a by-product an increase in the training of senior workers;

- There is little evidence that union density matters significantly for training. One reason could be that our measure of unionism does not allow us to fully capture the complexity of this relationship. We have restricted union density to affect training only in those countries where the extension of union contracts is low, and cannot say much on the effects of unions on training in the remaining countries;
- Training and investment in research and development are complements, but the degree of complementarity is lower for college graduates, possibly because the latter have sufficient skills and do not need to be trained or re-trained to be able to cope with innovations;
- Secondary school design has an impact on the relationship between innovative activity and training: when schooling is more comprehensive, high school graduates require less training to adapt to technical progress.

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The Regulation and Privatisation of the Public Water Supply and the Resulting Competitive Effects

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The liberalisation debate on water services in Germany has become a discussion about the modernisation of the water supply. However, even this modernisation strategy contains elements of competition as, according to the concepts of the Federal German Ministry of Economics, it includes, inter alia, the harmonisation of the supply of drinking water and disposal of wastewater with respect to taxation and legal aspects, the introduction of full coverage benchmarking, the tasking of private third parties, as well as incentives for increased co-operation in the water industry (Auer et al. 2003). In view of considerations on the part of the European Commission, following a new legal framework for public-private partnerships, to establish a general tendering obligation for services of water supply and wastewater disposal, the German water industry must now once again face the pressure of liberalisation. Against a backdrop of increased internationalisation in the water industry, the question arises as to how a change in the general framework of the free market in Germany could have an effect on the market structure and supply conditions. Reference points are offered by comparisons between countries with different types of regulation. In the following, the organisation of the water industry in various European countries and the prevailing privatisation models are described, and the effects to be expected from a liberalisation of water supply on the competitive situation are discussed.

Basic regulatory constraints

While the term "privatisation" relates to the ownership structure of the providers, the term "liberalisation" implies extensive free market ideas. Privatisation involves the outsourcing of public services from the public authorities to a privately organised organisation (Meyer-Renschhausen 1996). In the process nothing, however, needs to change in terms of the market or the intensity of competition for the commodity in question. Within the framework of privatisation, it is also possible for a public monopoly to be transferred merely to a private monopoly. In addition, the term "liberalisation" also refers to basic regulatory constraints: liberalisation signifies the cessation of limitations to competition and supply monopolies and results in open competition between several suppliers to attract consumers.

In the supply of drinking water, the pipe network represents a natural monopoly but not the production of drinking water. As drinking water is provided in different qualities, it is not a homogenous commodity like electricity, for example. The operation of the electricity network by a monopoly can be separated from its supply by competing companies. The transport of drinking water by competing providers is essentially more problematic because a complete mixing of various qualities of water would have to be tolerated. The operation of the network and production of drinking water can be separated from one another only with difficulty. The public water supply in Germany therefore, as opposed to other infrastructure areas, is still an exception area under competition law. Despite isolated privatisation of municipal water supply companies, competition does not take place in the sense of a liberalisation of the market. The high fixed-cost component in the supply of water makes the laying of parallel networks by the competing bidder unprofitable – the classical case for a natural monopoly. This is characterised by subadditivity (i.e. a monopolist can supply the relevant market more cost-effectively than two or more companies) as well as through the irreversibility of investments (so-called "sunk costs"). With the presence of "sunk costs", free entry into and departure from the market are not possible. The relevant market is thus not a contestable market in the sense of the theory of "contestable markets" (Spelthahn 1993).

For the German water industry, it is characteristic that environmental and health policy objectives are mainly pursued via the organisation of the water supply (provision of goods and services through regional monopolies in the public domain) and less through the employment of concrete instruments aimed at the respective environmental political objectives (Ewers et al. 2001). The water supply companies in Germany, well-known for their high quali-

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ty of drinking water, have in the past invested ca. 2.5 billion annually in a high technical standard that has increased costs and resulted in rising prices. The price of drinking water alone increased in the 1990s by 40 percent and wastewater charges by 80 percent. Therefore, with respect to municipal water, a high potential for rationalisation was presumed, and the question regarding operational efficiency and the participation of private bidders in water supply companies became increasingly important (Mecke 2000).

Regulation of the water supply in England, France and Germany

A liberalisation of the water supply can take place in different ways. The specific features depend on what form of regulation the market for drinking water is or should be subjected to. In an international comparison three basic types of regulation of natural monopolies for the public supply of water (and disposal of wastewater) can be differentiated: the Anglo-Saxon, the French and the German model. With all three models the aim of regulation is the efficient production of goods and services within the municipal water industry and their political control (Kraemer 1997). These three basic types of regulation of water supply have a specific influence on the form of privatisation in the respective countries. As shown below the degree of privatisation is higher the clearer the division between supervisory bodies and the operational business of water supply turns out to be.

England and Wales: full privatisation

With this form of privatisation, which is found in England and Wales, publicly operated monopolies are transferred as a whole to a private enterprise. Thus we speak of "full privatisation". In this case a sale of the operator firms, including all tangible assets (such as, for example, pipelines, wastewater treatment plants and water catchment systems), to private investors takes place. In England and Wales ten water service companies have been created in this manner, which provide both the supply of drinking water and the disposal of wastewater, and whose shares are sold publicly (in Scotland and Northern Ireland water supply and wastewater disposal on the other hand are still maintained by the public authorities). In addition, there are 12 companies that supply only water (OFWAT 2005). The regulation system follows the principle of "specialised regulation": it consists of separate, independent advisory authorities for the drawing of water and discharge of wastewater, for the quality of drinking water and for water prices and supply conditions:

- The Environment Agency monitors the water quality of rivers and waters used for swimming as well as the environmental effects of the company activities.
- The Drinking Water Inspectorate is concerned with the assurance of the quality of drinking water.
- The Office of Water Services (OFWAT) sets the prices within a defined minimum and maximum, whereby the performance of the individual providers is evaluated.

Price regulation allows the companies to increase their average prices per year by a factor of RPI + K, with RPI being the retail price index and K the additional costs represented through the environmentally and quality-related conditions. The regulating authorities set the prices so that an efficient company can expect a fair rate of return on its original business capital (Kraemer 1997).

France: privatisation through delegation

Privatisation through delegation is the temporarily limited transfer of the responsibility for the operation of water networks to private operators as it is practised in France. In this case the responsibility for the water supply (as for the disposal of wastewater) lies fundamentally with the municipalities which, however, on the whole delegate the provision of services to private companies. The production of goods and services are put out to tender by the municipalities, the facilities for the supply of water, on the other hand, remain the property of the public authority. In the contracts between the municipalities and the companies it is stipulated which costs the private companies may include, as a maximum, in the bill. Three different forms of contract are to be found (Council of Experts for Environmental Questions 2000):

- The franchise agreement: here the private operator takes on the costs for new investment; the duration of the agreement is 20 to 30 years.
- The lease agreement: here the private operator does not bear the costs for new investment, the duration of the agreement is 10 to 15 years.
- The operating agreement: here only partial performances are transferred to the private operator, the duration of the agreement is 6 to 10 years.

Thus the operation of existing water systems can be transferred to a private company either for a relatively short period with the systems generally being retained as municipal property. On the other hand, the construction and operation of systems to be newly produced can be transferred to private companies, whereby at the end of the period the property is transferred to the municipality. Under a franchise agreement the franchise holder builds, finances and operates certain plants for the agreed period. He receives a contractual remuneration, as a rule calculated according to cubic metre of water or wastewater respectively (Kraemer 1997). In contrast to the Anglo-Saxon privatisation model, the ownership of tangible assets remains in the hands of the public authorities in the French privatisation model, i.e. the state and the municipalities or departments. Local government is authorized to choose between direct management or contract management. In the latter case only the operating responsibility is delegated to the private side. The operating licences are awarded by means of a bidding process.

In the six river catchment areas that were formed through the First National Water Law of 1964 two bodies regulate each water supply:

– The Comité de Bassin (Committee of the Catchment Area) and
– The Agence de l'Eau (Water Agency).

The amount of the water tariffs are determined by the Comité de Bassin. In this body, which represents a type of regional "water parliament", the state, the regions, the departments and communes, as well as the water and surface water users are represented. The setting of the objectives and priorities for the various measures are documented in a water management plan. Parallel to the Agence de l'Eau, there is a state public body that carries out the water management measures, levies charges for water usage and water pollution, and allocates benefits for investments and costs for treatment operations (Langenfeld 2000).

Germany: partial privatisation with regulation by the supervisory bodies

In Germany the privatisation debate must be viewed against the background of a traditionally strong municipal administration. The privatisation of the water supply in Germany, in contrast to France and the UK, is only one legal option but in no way a national action (Kraemer and Jäger 1997). The German privatisation model prefers to regulate the privatised concern via its supervisory bodies. By sending representatives of the public authorities into these supervisory bodies, the business policy of the water provider can be influenced. The fixing of prices takes place according to the cost-covering principle. There are basically two different forms of this type of privatisation and one mixed form.

Formal privatisation or organisational privatisation: In this case the task of supplying water is retained by the previous administrator; only the operating agency is transformed into a business form under private law, for example by transforming a municipal department or a semi-autonomous municipal agency into a municipal enterprise. Despite formal privatisation, public structures are maintained which, however, with regard to independence and flexibility, should approximate the management of private companies.

Material privatisation or functional privatisation: Here the administrator delegates his tasks to a private party. The relinquishment of the public inventory of tasks can be revocable or final (Meyer-Renschhausen 1996). A regulation of the privatised company takes place in both cases through the creation of supervisory boards and the naming of supervisors within the company (Kraemer 1997).

Mixed form of privatisation: Well-known in Germany, the so-called "Berlin model" is a mixed form in which private companies participate in a municipal enterprise. With the partial privatisation of the Berlin Water Works (BWB) in 1998, a holding model was selected with which the Federal State Berlin received 50.1 percent of the shares in the strategic controlling holding, Berlinwasser Holding Aktiengesellschaft. The remaining 49.9 percent of the shares in the Berlinwasser Holding Aktiengesellschaft was acquired by an associated incorporated company established by an investor consortium. The business purpose of the Holding is the control and further development of the competitive business and the control of the Berlin Water Works. Thus, the legal form of the Berlin Water Works as a corporation under public law remained unchanged, but the competitive businesses were spun off and were transferred into the Berlinwasser Holding Aktiengesellschaft (Mecke 2000).

The responsibility for water pollution control and the management of surface waters in most of the

German Federal States is distributed over several levels. In the larger area states these are:

- The superior water authority (as a rule the Ministry of the Environment) with the responsibility for strategic decisions.
- The upper, higher or middle water authority which, as a rule, is assigned to the district committees or regional governments and is responsible for the regional water management planning.
- The lower water authority (cities, towns, urban and rural districts as well as water management offices) with monitoring, technical advice and executive functions.

The [German] Federal State Working Group Water (LAWA), which was established in order to harmonise Federal State water laws, is made up of the superior water authorities. The Federal States have also formed working groups for co-ordinating the management of river basins (Mecke 2000).

In the German model the municipal corporations and municipal public utilities are typical for the operation of the infrastructure systems necessary for the water supply, as are the inter-municipal agencies, which were established specifically for these tasks. The German model functions essentially without formal, external regulation of water rates, tariffs or returns on investment. As no private enterprise profit motive is present, only cost-covering rates and public fees for the municipal water services are charged.

Market structures

In the Anglo-Saxon model the existence of a permanent private monopoly has been accepted up to now. At the same time, however, efforts are being made to minimise its negative effects through external regulation. In England and Wales the supervisory authorities set for a certain period of time upper limits for charges to the end user. These limits allow the company to earn a fair rate of return. The state is thus an opposing force to the private enterprises and has to accept an asymmetry of information as long as it does not introduce far-reaching obligations for transparency. The advantage of this model lies in the clear separation between the supervisory authorities, the users of bodies of water and the companies controlled by them and also in the fact that the legislation and the regulation are developed and co-ordinated at the national level (Correia and Kraemer 1997).

In the French regulation model, an element of competition at regular intervals has arisen instead of a continuous, regulating supervision. Temporary contracts between municipalities and private companies regulate the operation of municipal water services. They include, as a rule, a complete packet of services from the operation of the water network via financing to strategic planning. Profits can be limited through the competition of private bidders for the contracts. Indeed, during the term of the contracts, barely any competition takes place. In contrast to the Anglo-Saxon model, the French municipalities still have some influence on the development of their technical municipal systems. This model leads to the formation of large, vertically integrated water and construction companies, which at the same time act as operators of the systems of municipal water supply and disposal of wastewater and as supplier of relevant goods and services.

The German model, on the other hand, is not a regulation model in the normal sense of the word "regulation", as there is no external relationship between private providers or operators and the authorities. Instead of a control of natural monopolies from outside, the public authorities influence the operation of municipal water networks through rights of ownership as the municipalities are involved in the supply companies. Information asymmetries between public administrations and private companies therefore seldom occur. The water supply companies promote a "quasi-competition" as three out of four companies, in accordance with the Municipal Charges Law, raise public charges, which are approved by local governments under the supervision of the Federal States. Here, attention is paid to the principles of cost covering and equivalence in accordance with tariff law, which is examined in the form of price-performance comparisons by the municipal supervisory authorities. The remaining quarter of the providers raise payments under private law and are subject to the anti-trust control of abusive practices. The anti-trust price control is oriented to comparative market concepts and accepts price differences between providers on the strength of clearly defined criteria only (Grobosch 2003).

Effects on competition

In order to classify correctly the effects of different regulating systems on the competitive structure, it is necessary to differentiate between the municipal

water supply on the one hand and the water industry on the other. The former falls into the category of public services (even if they are performed by private parties) as does municipal wastewater disposal. The term "water industry" is, in contrast, more comprehensive; it includes, for example, the production of pipes, pumps and filters as well as measuring and control engineering equipment. Characteristic for the German model is that the operation of the water network is strictly separated from the production and supply of goods associated with the services. In contrast, global players of the international water business operate municipal water systems and are also producers of goods and plant for the supply of water and disposal of wastewater.

The three privatisation models described lead to three clearly distinguishable forms of competition:

- Yardstick-competition between private providers, which is simulated by the regulatory authorities.
- Competition between private operators for the right to temporary operation of natural monopolies.
- Competition in the goods and services markets within the field of water.

In the Anglo-Saxon model there is no direct competition between private providers, either for the consumers or for their supply areas. Yardstick-competition takes place in the form of benchmarking the providers, which is carried out by the supervisory authorities. The regulatory authority also requires information on the markets for goods and services in the field of water, because private providers and operator companies who are also suppliers of these goods can build up regional or sector monopolies or cartels in order to shift profits into non-regulated areas. This applies also to the French model where the competition for the limited operation of local water supply monopolies takes place in the form of a bidding process. In contrast, in the German model, there is no direct competition between municipal institutions; they maintain their natural monopolies at the regional level. Performance comparisons between the various bidders are made by the municipal operators themselves. On the other hand, competition in the water industry is intense and these markets are characterised by numerous small and medium-sized companies. Operators of utilities and the water industry in Germany thus fall in essentially two groups that are clearly separable from each other (Kraemer 1997).

In France private water supply companies were established already in the nineteenth century: in 1853 the Société Générale des Eaux and 1880 the Lyonnaise des Eaux. In 1933 the third largest group, the Société d'Amenagement Urbain et Rural (SAUR), was founded (Spelthahn 1993). Today, these business groups and their successors have the largest shares of the market in the international water business. Under their umbrella all components for complex water management projects (plant manufacture, engineering, surface and subsurface civil engineering, development departments) are part of these competitively and vertically integrated international corporate groups. In the UK, the public facilities of water supply and wastewater disposal were privatised in 1989 in a large-scale national action. Thus the Water Service Companies were created under the umbrella of large, regional holding-companies. Several of these operators, such as Thames Water, Severn Trent Water, Anglian Water and United Utilities, are active internationally (Federal Ministry for Education and Research 2000).

The international markets for water and waste water services are dominated by French and British companies. The world market leaders are the French companies Suez Environnement and Veolia, each serving around 115 million people in 2004 with drinking water

Number of people served by water multinationals
million inhabitants

	Water supply	Waste water disposal	Altogether (with overlaps)
Suez Environnement, France	92.0	62.0	115.0
Veolia, France	87.5	43.5	113.0
Thames Water, United Kingdom	28.0	17.8	45.0
Agbar, Spain	27.4	13.9	30.0
Saur, France	25.6	9.5	27.0
Severn Trent, United Kingdom	11.3	15.6	18.0
Azurix, USA	8.3	7.9	10.0
Anglian Water, United Kingdom	6.6	8.1	8.0
Berlinwasser, Germany	4.0	5.5	7.5
Gelsenwasser, Germany	6.0	3.0	7.0
Biwater, United Kingdom	3.0	6.0	5.5
Remondis Aqua, Germany	0.2	4.0	4.0

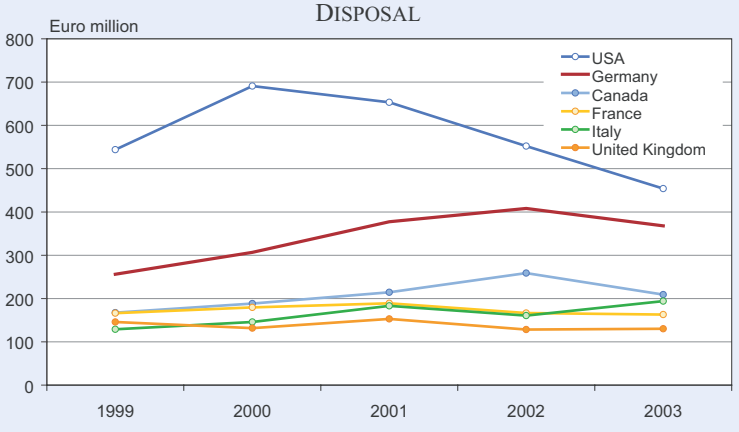
Source: Prof. Dr. K.-U. Rudolph GmbH, modified by author.

and/or waste water services (see Table). The next largest company is the British Thames Water with 55 million customers, which was acquired by the German RWE Group in 2001, but sold again at the end of 2006 to Kemble Water Limited, a consortium led by the Australian Macquarie's European Infrastructure Funds (EUWID 2006). With the takeover of Thames Water, RWE was the only German company that succeeded in catching up with the Global Players on the international water markets. Spanish Agbar lags behind with 30 million customers, followed again by French, British and US companies. The German companies Berlinwasser and Gelsenwasser serving 7.5 million customers and 7 million customers, respectively, are at positions nine and ten. Remondis Aqua serving 4 million people is at position twelve.

With the takeover of Thames Water, RWE has temporarily advanced into the foremost group of global players in the water market. Otherwise the majority of water supply and wastewater disposal companies in Germany is extremely small-sized, splintered and decentralised. 6,655 water supply companies operate 17,849 facilities and around 8,000 wastewater disposal companies operate more than 10,000 wastewater treatment plants (Ewers et al. 2001). Public ownership dominates: 15 percent of the water supply companies are managed as semi-autonomous municipal agency, 16 percent as inter-municipal agency, 6 percent as water and soil management associations, 10 percent as public companies and 20 percent as municipal enterprise. 29 percent are organised in public-private partnership and only 3.5 percent are under a majority controlling interest under private law. In German wastewater management, 20 percent of companies are organised as municipal departments, 43 percent as semi-autonomous municipal agencies, 17 percent as public law corporations, 13 percent as inter-municipal agencies or water and soil management associations and less than 8 percent as arrangement under private law (BGW – ATV-DVWK 2003). In Germany, there are 81 water providers per million customers. In England and Wales, on the other hand, there are only 0.46 and in France 0.07 companies per million customers. Some two thirds of the German companies supply an area with between 50 and 3,000 inhabitants and together deliver ca. 4 percent of the total water quantity. Over 90 percent of the amount of water, on the other hand, is delivered by only one third of the companies (Grobosch 2003).

Water management competence in Germany is clearly settled at the municipal level. Admittedly this affects their ability to compete. In contrast, in France the communes, which, in comparison with Germany, are considerably smaller, are not in a position to carry out the supply of drinking water themselves due to the lack of specialist staff and knowledge (Spelthahn 1993). An important advantage of the structures in the German water supply is that the strong communal anchoring of the German providers ensures a high degree of political involvement. The management of surface waters thus has a solid basis as it is oriented towards precaution. Up until now this system has met with strong acceptance by the general public. The high level and efficiency in the technical management are guaranteed because of the close co-operation between water supply companies, industry and government agencies, and the activities of technical-scientific associations that set the rules. Due to the strong functional and organisational fragmentation, the impact of the German water industry on the decision process in the European Union is, however, rather small. Because of the strong division of organisational competence (water supply and wastewater disposal companies, construction firms, plant constructors, component suppliers, consulting firms, engineer offices, water laboratories and research institutes), the German water industry fails to create an integrated appearance on the international market. As a result, Germany cannot compete in the steadily growing market segment of complete turnkey solutions (planning, construction, operation, maintenance,

EXPORTS OF EQUIPMENT FOR WATER SUPPLY AND WASTEWATER DISPOSAL



Source: VDMA.

invoicing and customer service), in which, above all, enterprises from France and the UK dominate (Federal Ministry of Education and Research 2000). For France, on the other hand, the high share of the private supply of drinking water can, to a considerable extent, be traced back to its historical development. The commodity water was seen as a normal "commercial" good and not, as in Germany, as a part of the existing public precautions.

The argument that the German water industry has a structural competitive disadvantage is, however, no longer as strong if one takes into account not only the markets for drinking water or complete solutions but also the market for water and wastewater technology. Here Germany, with a share of world trade of 16.3 percent, takes second place after the US with a 20.1 percent share. The export quota of German water technology rose from 26 percent in 1999 to 43 percent in 2003, and that with a company structure characterised by small and middle-sized businesses. On average, suppliers and producers of water processing and wastewater treatment systems employ a staff of 50 (Oberhäuser 2004). As US exports declined, Germany was catching up in the years 1999–2003 followed by Canada with 9.3 percent and Italy with 8.6 percent market share (see Figure). France's water and wastewater technology branch follows at position 5 with a share of 7.1 percent of world trade, followed by British companies with a share of 5.7 percent. This suggests that the large, vertically integrated water supply enterprises demonstrate competitive weaknesses in the market segment of water and wastewater technology, because they face too little competitive pressure in their home markets.

Conclusions

In an international comparison, there are three basic models for the regulation of natural monopolies in the public water supply: the Anglo-Saxon, the French and the German model. The delimitation between supervisory bodies and operations in water supply is strongest in the first and weakest in the last. This has led to three basic types of privatisation: "full privatisation", "privatisation through delegation" and "privatisation with regulation by the supervisory bodies". These types have led to three clearly distinguishable forms of competition: yardstick competition between private supply-enterprises simulated by the regulation authorities, competition between private operators for the right to the temporary provision of water supplies, and competition in the product and service markets for the provision of water.

The international markets for the operation of water supply systems and complete solutions are dominated by French and British companies. The typical German plant constructor either does not achieve the critical size for a global player or he lacks the necessary references as an operator of water supply systems. On the other hand, the water supply and wastewater disposal operators lack the financial power in order to compete with the world market leaders. This disadvantage is, however, compensated by the worldwide leading role of German water and wastewater technology. In order for German companies also to be present on the market for complete solutions it would be necessary to make up for a large competitive backlog compared with foreign water companies. To do this, the current strong municipal anchoring of the water industry in Germany would have to be relaxed in favour of the development of vertically integrated water corporate groups that can be competitive in international markets. An adjustment of the market and concentration in the German water sector would be the necessary prerequisite for such an internationalisation. However, the structures of German water supply, proven with regard to the safety of supply and drinking water quality, would have to be sacrificed to achieve this level of competition.

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Income Taxation and its Family Components in France

Fabien Dell and
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Introduction

In many countries, taxpayers are provided tax reliefs if they have dependent children and in some countries tax reductions are granted also for a dependent spouse.[1] These tax reliefs can take the form of tax credits or tax allowances. Another form of tax reduction is the joint taxation of family members along with an income splitting procedure. In countries such as France, Germany and Portugal, the taxable income of both spouses is summed up and divided by two. Each half is taxed according to the ordinary tax schedule, and the tax assessment includes twice the amount of the tax imposed on each half. Under a progressive tax system, this income splitting procedure results in a lower tax duty than under individual taxation if income is divided unequally between spouses.[2]

France is often mentioned as an example for a very generous tax treatment of families with dependent children, since income is not only split between spouses but between spouses and their dependent family members. This unique system is the so called "family tax splitting" or "quotient familial".[3] In the political debate, the relatively high fertility rate in France is often referred to as being the result of the generous tax relief for families with dependent children. Moreover, the high employment rate of mothers with dependent children is also attributed to the French tax system – along with the high availability of public child care.

This article gives a detailed description of the French system of family tax splitting and its development. Furthermore, we address the question whether French family tax splitting, together with the French child benefits, is actually more generous than child benefits and tax allowances in other countries. Finally, we present an overview of the empirical literature on the effect of family tax splitting on work incentives of secondary earners and on its potential effects on fertility.

Family tax splitting in France

Family tax splitting ("Quotient familial") was introduced in France in 1945. The system has been marginally modified since its introduction but the principle remains the same: Joint taxation of spouses[4] is extended to include their children. Family tax splitting means that the splitting divisor is increased according to the number of children. This yields a tax liability "per family splitting factor", which has to be multiplied by the total number of factors (the "splitting divisor") in the household to obtain the total tax liability. Formally, joint taxation with income splitting can be described as follows:

$$T = k \times t\left(\frac{\sum_{i=1,2} y_i}{k}\right)$$

where T is the total tax amount due, $t(.)$ the tax schedule, y_i the income of household member I and the "splitting divisor" k depends on the number of family members. For single individuals, k amounts to 1, for a married couple k equals 2, and under family tax splitting k is increased according to the number of children. In the current French system, the splitting divisor is increased by 0.5 for the first and the second child, and 1 for the third and every subsequent child. Single parents actually living alone are allowed to add 0.5 on top of the children's divisor.[5]

The sum of "factors", i.e. the splitting divisor, depending on the composition of the household can be compared to equivalence scales. Family tax splitting could then be seen as a way of taxing "equivalized taxable income". Although it departs very much from the most common equivalence scales which are

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[1] For an overview of income taxation and its family components in OECD countries, see OECD (2005a).

[2] See Wrohlich et al. (2005) for a detailed description of this "splitting advantage" in France and Germany.

[3] Luxembourg is, to the best of our knowledge, the only country that has the same family tax splitting as France.

[4] Used to be for married spouses only. Since 1999, couples who signed a PACS (civil solidarity compact, also applicable to same sex couples) are treated like spouses.

[5] To prevent non-married couples from benefiting from two "single parent bonus" half factors, single parents have to prove that they effectively lived alone since 1995. The number of half factors granted by the fiscal administration indeed fell steeply after this measure was implemented.

used to take into account "economies of scale" within the household, the French "factors" can be seen as a device aimed at compensating the marginal cost of children. For example, there is empirical evidence pointing at a higher marginal cost of the third child, compared to the second (mainly because of threshold effects concerning housing and some equipment goods, see for instance Ekert-Jaffe 1994).

Beyond such positive justifications for the splitting divisor as it is used in France, studying the process of how it actually was shaped clearly reveals that the main factor was the normative judgement of the legislator throughout the second half of the twentieth century concerning family policies: A "rich and eventful history, where left and right alternately expressed their conception of the role of family and of the situations which, to their opinion, deserve or not the favour of the State" (Piketty 2001, 293).

Under a progressive tax system, family tax splitting implies tax gains (as compared to a situation of individual taxation) that depend on the absolute level of taxable income, the distribution of incomes within the family and the number of children. However, in the current French system of family tax splitting, the tax gains that can be obtained through the children's splitting factors are limited. For the first and the second child, the tax gain is limited to 2,159 euros per year, for the third and every subsequent child, the ceiling is set at twice this amount. The gains related to the "single parent bonus" half share are limited at 1,577 euros per year.

Both the spitting factors for the children and the ceilings of the tax gains have changed over time. When the family tax splitting system was introduced in 1945, the splitting factor was set at 0.5 for each child and there was no ceiling for the tax gains. In the late 1970s, a "large family bonus" was introduced, first by increasing the splitting divisor for families with five children by 0.5 (1979), then for three children (1980). When the left came to power in 1981, a ceiling was introduced for the child-related tax gains. When the right came back to power in 1986, the splitting factor for all children from the third onward was increased to 1; later in 1995, a ceiling was imposed on the "single parent bonus" splitting factor. With a new left wing government in 1997, the system was once again modified, and all ceilings were lowered.[6]

Like Germany and many other countries, France also has a set of child benefits ("Allocations familiales"). All households with two children or more are entitled to receive child benefits.[7] A means-tested benefit can top off these benefits for families with three or more children ("Complément familial"). Moreover, there are other benefits in the tax-benefit system that imply redistribution towards families with children. It is outside the scope of this presentation to give a detailed account of these various devices. Nonetheless, one should keep in mind that these other transfers are of great importance in the overall horizontal redistribution.

The sum of tax gains and child benefits as a function of taxable income is illustrated for different family types in Figure 1.[8] Families with one child and a taxable income up to 8,500 euros per year do not profit from the "Quotient Familial"; nor do they receive child benefits which are only granted from the second child onwards. For one-child families with a taxable income above 8,500 euros, the tax gain from family tax splitting increases with taxable income until a ceiling of about 2,000 euros is reached at a taxable income of some 52,000 euros. For families with two children, the schedule of the tax gains is shifted upward by the amount of the child benefit granted for the second child (about 1,300 euros in 2001) and reaches a ceiling of slightly above 5,300 euros at about 60,000 euros of taxable income. For families with three children, two main differences arise: they benefit from a full "factor" for the third child, and they are eligible for the means-tested complementary child benefit ("complément familial"). The first difference affects high income families: a maximum tax gain of 11,000 euros is reached for 70,000 euros of yearly taxable income. The second difference affects low income families: the complementary family benefit of 1,654 euros in 2001 phases out at 25,000 euros per year and completely disappears at 30,000 euros a year.

Thus, one of the most distinctive features of the French system is that the third child is "subsidized" at twice the amount of the second child. This is in line with a more natalist-oriented family policy in France (Fagnani 2005). As a result of the generous family

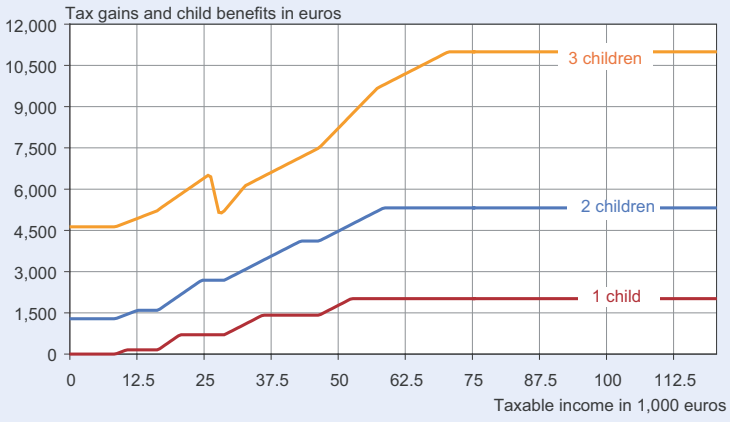
[6] This description sums up the main developments of the family tax splitting since 1945. For a more detailed account, see Piketty (2001).

[7] In 2005, the child benefit amounted to 1,405 euros per year for the second child and 1,800 euros per year for the third and every subsequent child. For children between 11 and 16 years, these benefits are increased by 395 euros per year, for children above 16 years of age there is a supplement of 703 euros per year.

[8] The tax gains presented here are those originating from the 2001 French legislation. This is for the sake of coherence, since the empirical evidence we present rely on data from 2001. There are only minor differences (in the levels of the ceilings) compared to the legislation of 2005.

Figure 1

TAX GAINS AND CHILD BENEFITS FOR A MARRIED COUPLE IN FRANCE 2001



Source: Wrohlich et al. (2005).

tax splitting and the child benefits, more than 70 percent of families with three children do not pay any taxes in France. In the group of families with two children, this is only true for 10 percent (Wrohlich et al. 2005).

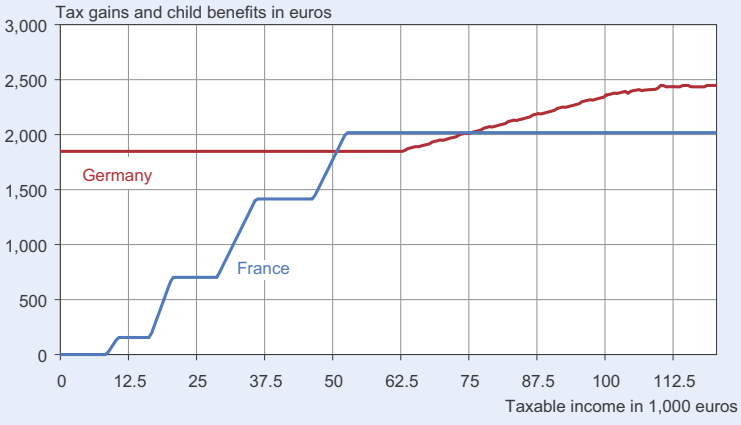
Is the French family tax splitting system really that generous compared to other countries?

Given its unique family tax splitting system, France is often mentioned for its generous tax treatment of families with dependent children. Comparisons with other countries, however, show that the system is indeed not that different from a child tax allowance. This is due to the fact that the tax gain per child resulting from family tax splitting is limited, as outlined above. In Germany for instance, which has a roughly similar income tax schedule and a child allowance ("Kinderfreibetrag") for high incomes, the tax gain for the second child is roughly similar to the one observed in France for very high incomes. However, the gain rises more steeply in France than in Germany, as can be seen from Figure 2.[9] In fact, French family tax splitting is not more generous than the German system of child benefit and child allowance[10] for a large range of the income distribution, at least for families with one or two children.

Baclet et al. (2005) and Wrohlich et al. (2005) have used micro data in order to compare the empirical distribution of average tax rates in Germany and France and have shown that for families with one or two children in the first five deciles, effective average tax rates are lower in Germany than in France (see Figure 3). This is true even though effective average tax rates for couples without children are higher in Germany than in France over the whole range of the income distribution (Baclet et al. 2005). The reason that effective average tax rates for families with one or two children in the lower half of the income distribution are lower in Germany than in France is that Germany grants a relatively generous child benefit of 1,848 euros per year from the first child on. For families with one child, the gains from French family splitting exceed German child benefits only for a small range – between a taxable income of 50,000 and 75,000 euros per year.

Figure 2

TAX GAINS AND CHILD BENEFITS FOR FAMILIES WITH ONE CHILD IN FRANCE AND GERMANY 2001



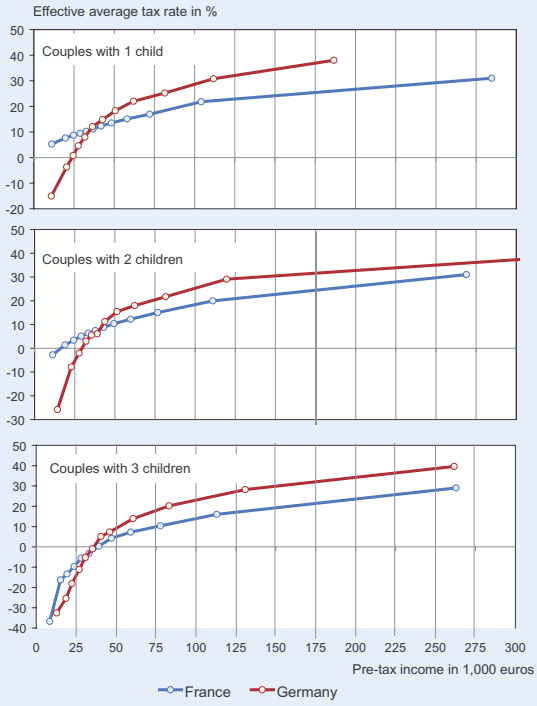
Source: Wrohlich et al. (2005).

A rough comparison with other European countries shows that the French system is indeed not more generous than other systems of cash benefits and tax allowances. A comparison of total family support through tax

[9] For a more detailed comparison of the tax gains implied by the French system of family tax splitting and German child allowance, see Wrohlich et al. (2005).
[10] In Germany, the child benefit and the child allowance are not granted simultaneously, rather a so-called "higher yield test" (Günstigerprüfung) is applied: If the tax relief from the child allowance exceeds the amount of the child benefit, the tax allowance is granted, if not the family receives the child benefit.

Figure 3

EFFECTIVE AVERAGE TAX RATES FOR DIFFERENT FAMILY TYPES IN FRANCE AND GERMANY 2001



Source: Baclet et al. (2005).

reliefs and cash subsidies for a family with two children and one earner (average production worker) shows that France ranks at the lower end of the total support as percent of gross income (OECD 2005b). While total family support amounts to 11.4 percent of gross income in Germany, 14.1 percent in the United Kingdom, 12 percent in Belgium, 10.7 percent in Italy and even 22 percent in Austria, France only provides 8.5 percent of gross earnings as family support to this type of family. Lower family support is granted in Spain (3.2 percent), the Netherlands (5.4 percent) and most Scandinavian countries. A rough comparison of this kind cannot, of course, provide insight into the relative generosity of the French system in different parts of the income distribution and for different family types, but at least it shows that on average – for families with two children – the French system is not among the most generous ones in Europe.

Family tax splitting and work incentives

Compared to other European countries, the labour force participation rate of mothers with young children is relatively high in France. The employment rate of mothers whose youngest child is under six years of age is 62.2 percent, which is well above the OECD average of 56.1 percent. Moreover, the share of part-time working women with a child under six is below average (26.3 percent versus the OECD average of 31.5 percent; see OECD 2005b). The relatively high employment rate of mothers, however, is most certainly not attributable to the French family tax splitting system but to other factors, in particular the high availability of public child care. As in all systems of joint taxation – whether an income splitting is applied or not or whatever form this income splitting may take – both first and secondary earners have the same marginal tax rate. For the spouse with lower income (either due to lower hourly wages or lower working hours or both) this leads to higher marginal tax rates than individual taxation would imply, thus creating negative work incentives. A comparison of OECD countries shows that France has, like Germany, Portugal, Poland and other countries with joint income tax systems, relatively high effective tax rates on second earners (OECD 2005b).

Empirical studies that have simulated family tax splitting for Germany (Beblo et al. 2004 and Steiner and Wrohlich 2006) have shown that introducing a family tax splitting system would not lead to an increase in female labour force participation. On the other hand, it has been shown for Germany (Steiner and Wrohlich 2004) that individual taxation would lead to a large increase in the labour force participation of married women, induced by the large fall in marginal tax rates for this group that would result from such a policy shift.

Family tax splitting and fertility

French family policy is not only successful regarding the high employment rates of mothers but also with respect to the fertility rate. With a total fertility rate of 1.88, France ranges well above the OECD average of 1.60 and higher than most other European countries such as Germany (1.34), Italy (1.27) and Spain (1.26), and even some Scandinavian countries such as Denmark (1.72) or Sweden (1.65) (OECD 2006). France's high fertility rate has also frequently been attributed to the pro-natalist family policy, in particular the family tax splitting system. The empirical evidence on a causal effect of tax incentives on fertility is, however, rather limited.[11] In particular, there

[11] For an overview of empirical studies on a causal relationship between policy measures and fertility, see Björklund (2006), Lalive and Zweimüller (2005) and D'Addio and Mira d'Ercole (2005).

is no empirical evidence of the impact of the tax system alone on fertility in France. One study by Laroque and Salanie (2004) that tries to quantify a causal effect of financial transfers on fertility shows that the generous reform of the parental leave benefit (Allocation parentale d'éducation, APE) is likely to have had a positive effect on fertility. Cross-country studies usually face the problem that single policy measures such as tax incentives can hardly be disentangled from other policies potentially affecting fertility that vary across countries. For example, availability of subsidized child care, parental leave legislations and availability of part-time employment opportunities also differ across countries. A comparative panel data study by d'Addio and Mira d'Ercole (2005) that controls for a set of policy variables shows that there are positive effects to be expected from higher parental leave benefits (of short duration) and from higher cash transfers to families. However, their simulation results show that fertility would not change in all countries as a consequence of higher benefits (for example the authors find very small effects of an increase in child transfers for Germany and Spain, countries with relatively low fertility rates). Overall, it is most likely that the relatively high fertility rate in France cannot be attributed to the tax treatment of dependent children as such but – if at all – to a policy mix of high availability of child care, generous parental leave benefits from the second child onwards and tax reliefs and cash benefits for children.

Summary and conclusion

The unique tax treatment of dependent children in the so-called "family tax splitting" system as practiced in France has often influenced policy makers in other countries to cite France as having a very generous family policy. As we have shown, the French system of family tax splitting is, however, not that different from child allowances, since the tax gains for the children that can be achieved through the splitting procedure are limited. The amount of the tax relief in France is actually not above the average of OECD countries, at least for families with one or two children. The decisive feature of the French policy is the relatively generous support for the third and every subsequent child. This policy is not only reflected in family tax splitting but also in the scheme of child benefits that increase with the rank order of the child, as well as the parental leave benefit.

We have furthermore reported evidence that family tax splitting per se cannot explain the relatively high employment rate of French mothers, since a joint income tax system always creates negative work incentives for secondary earners compared to a system of individual taxation. The high employment rate of mothers in France can thus be attributed to the high availability of public child care. The question whether family tax splitting can act as an explanation for the relatively high fertility rate in France, has to be left unanswered due to lack of empirical evidence. There is evidence that family policy can in fact affect fertility, however, it seems more likely that the effect stems from a successful policy mix of child care, parental leave, tax allowances and child benefits rather than from the tax system in itself.

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Stability Programmes and Stability Performance of the Euro Member States

The focus of CESifo's Database for Institutional Comparisons (DICE; free access under: *www.cesifo.de/DICE*) is on the verbal country-comparative description of rules and regulations that characterize the institutional setting of an economy. Some of these rules and regulations, however, come in figures instead of words. An example is the "Stability Programmes" which the Euro member countries have to provide annually to the European Commission. As with other data from external sources, the DICE staff tries to present them in a way which lends itself to analyses performed by the DICE user.

Due to space limitations, the Table below shows an abbreviated form of the DICE entry, covering only four countries, while the complete DICE table

Stability programmes and stability performance of the Euro Member States, 1998–2009 budget balance ratio in percent of GDP

		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Austria	1	–2.4	–2.2	–1.5	0.3	–0.2	–1.1	–1.0	–1.9	–1.7			
	2				0.1	–0.1	0.3	–1.1	–1.5	–1.9	–1.4		
	3	–2.2	–2.0	–1.7	–1.5	–1.4							
	4			n.a.	n.a.	n.a.	n.a.						
	5				–0.8	0.0	0.0	0.0					
	6					0.0	0.0	0.2	0.5				
	7					n.a.	n.a.	n.a.	n.a.	n.a.			
	8						–1.3	–0.7	–1.5	–1.1	–0.4		
	9							–1.3	–1.9	–1.7	–0.8	0.0	
	10								–1.9	–1.7	–0.8	0.0	n.a.
Belgium	1	–0.8	–0.6	0.1	0.3	0.1	0.2	0.0	0.0	0.0			
	2				0.2	–0.2	0.2	0.0	0.1	–0.3	–0.9		
	3	–1.6	–1.3	–1.0	–0.7	–0.3							
	4			–1.0	–0.5	0.0	0.2						
	5				0.2	0.3	0.5	0.6					
	6					0.0	0.5	0.6	0.7				
	7					0.0	0.0	0.3	0.5	n.a.			
	8						0.2	0.0	0.0	0.0	0.3		
	9							0.0	0.0	0.0	0.3	0.6	
	10								0.0	0.0	0.3	0.5	0.7
Finland	1	1.3	1.9	7.0	5.1	4.3	2.3	2.1	1.8	1.6			
	2				4.9	3.3	2.7	2.3	2.6	2.8	2.5		
	3	1.1	2.4	2.2	2.1	2.3							
	4			4.7	4.2	4.6	4.7						
	5				4.7	4.4	4.5	4.9					
	6					2.6	2.1	2.6	n.a.				
	7					3.8	2.7	2.1	2.6	2.8			
	8						2.3	1.7	2.1	2.1	2.2		
	9							2.0	1.8	2.1	2.2	2.0	
	10								1.8	1.6	1.6	1.5	1.5
France	1	–2.7	–1.6	–1.3	–1.6	–3.2	–4.1	–3.7	–3.0	–2.9			
	2				–1.4	–1.9	–1.8	–3.7	–2.9	–3.0	–3.1		
	3	–2.9	–2.3	–2.0	–1.6	–1.2							
	4			–1.7	–1.3	–0.9	–0.3						
	5				–1.0	–0.6	–0.4	0.2					
	6					–1.4	–1.0	0.0	0.3				
	7					–2.8	–2.6	–2.1	–1.6	–1.0			
	8						–4.0	–3.6	–2.9	–2.2	–1.5		
	9							–3.6	–2.9	–2.2	–1.6	–0.9	
	10								–3.0	–2.9	–2.6	–1.9	–1.0

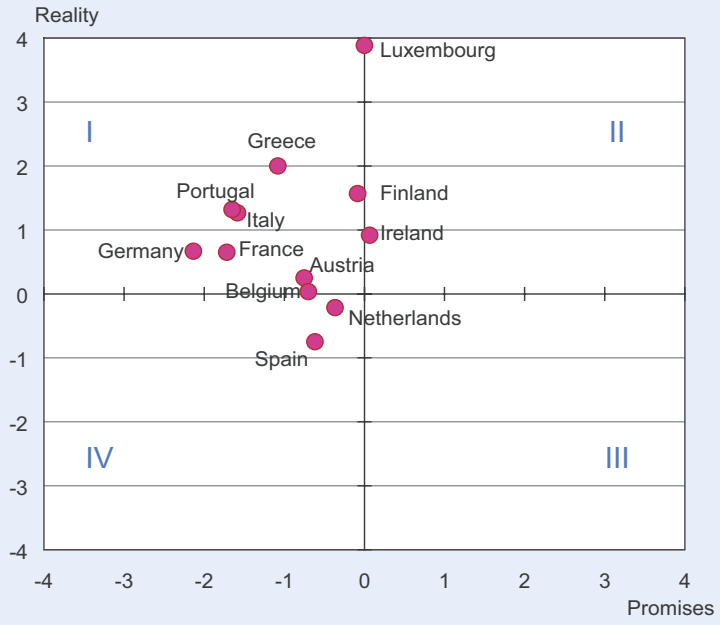
Note: This table is shortended. The original DICE entry contains all 12 Euro members.

Sources:
Line 1: Factual Values, *European Economy*, series A, different issues.
Line 2: Short Term Forecast, *European Economy*, series A, different issues.
Line 3: Stability Programmes as of End of 1998, *European Economy*, series A, March 1999.
Line 4: Updated Stability Programmes as of End of 1999, *Monthly Report European Central Bank*, 3/2000.
Line 5: Updated Stability Programmes as of End of 2000; *Monthly Report European Central Bank*, 3/2001.
Line 6: Updated Stability Programmes as of End of 2001; *Monthly Report European Central Bank*, 3/2002.
Line 7: Updated Stability Programmes as of End of 2002; *Monthly Report European Central Bank*, 3/2003.
Line 8: Updated Stability Programmes as of End of 2003; *Monthly Report European Central Bank*, 3/2004.
Line 9: Updated Stability Programmes as of End of 2004; *Monthly Report European Central Bank*, 3/2005.
Line 10: Updated Stability Programmes as of End of 2005; *Monthly Bulletin European Central Bank*, 3/2006.

entails information for all 12 Euro countries. The *Stability Programmes* relate to three variables which are forecasted for four or five years: GDP growth, budget balance ratio in percent of GDP and public debt ratio, likewise in percent of GDP. While the future GDP growth is mainly a more or less realistic forecast, the other two variables have the characteristic of a target that the country concerned wants to attain – or proclaims it wants to attain. The Table concentrates on the budget balance ratio.

PROMISES AND REALITIES: CHANGES IN BUDGET DEFICIT

Average over six *Stability Programmes* in percentage points



Source: Data: see Table; Calculation and presentation: CESifo DICE.

The first line in each country field informs about the factual values of the budget balance ratio (estimation for 2006). The second line entails short-term forecasts of the European Commission. The other lines (3 to 10) contain the forecasts/targets of the countries concerned in their annual exercise of *Stability Programmes*. Line 3 stands for the first of such *Programmes* (from end of 1998), line 10 for the most recent one (from end of 2005).

With the data presented this way (and in Excel format), it is now easy to answer questions which might be of interest, for example: which countries promised the greatest improvement (i.e. reduction) of their budget deficit ratio but achieved the least? Answering this question involves two simple steps. First, we determine the promise. That is the difference between the budget deficit ratio of the first and the last year of successive *Stability Programmes*. This leads to an average of promised deficit reductions (or increases of surpluses) over the *Programmes*, in percentage points. Second, we determine the reality by calculating the differences of the factual budget deficits for the same years, and arrive again at an average over the *Programmes*. Because the information about factual values goes only until 2007 (forecast of the European Commission) we include only the *Stability Programmes* 1 to 6 (lines 3 to 8 in the Table). The Figure summarizes the results.

Sector I contains those countries which – on the average over the six Programmes – promised to reduce their deficits (or to increase surpluses), but, instead, increased the deficits (or reduced surpluses). Most countries are in this sector. While Germany promised considerable deficit reduction, the factual increase of deficit was relatively low. Luxembourg, by contrast, promised nothing, but the factual increase of the deficit (reduction of surplus) was high. Sector IV contains only two countries, Netherlands and Spain. Both promised a deficit reduction and kept their promise.

R. O.

Statutory Maximum Working Week

For many years there has been a dispute within the EU on the statutory maximum working week. Bargaining about the duration of working time takes place in all European countries within the framework of statutory rules on maximum working times. In the EU and Norway, these should at least respect the provisions of the Directive on certain aspects of the organisation of working time (Directive 2003/88/EC), which include a 48-hour maximum working week (on average over a reference period not exceeding four months), a minimum daily rest period of 11 hours and a daily limit of 8 hours for night-shift workers.

As the table shows, the countries break down into two equal groups – those that set their maximum weekly hours at the 48 hours specified in the EU working time Directive, and those that operate a rather lower limit of 40 hours (or 38 in Belgium). In the first group of 14 countries, the statutory maximum is in excess of average collectively agreed weekly working hours, and of actual or usual average weekly hours – it thus appears to operate essentially as a safety net (though the 48-hour figure often includes overtime – TN0302101S). In the second group of 14 countries, the statutory maximum is much closer to the average agreed or actual/usual weekly hours (and identical to agreed hours in some cases), indicating a more active role for the law in governing working time (though overtime may not be included in this figure).

Statutory maximum working week, 2005

Country	Hours	Country	Hours
Cyprus	48	Austria	40
Denmark	48	Czech Republic	40
France	48	Estonia	40
Germany*	48	Finland	40
Greece	48	Latvia	40
Hungary	48	Norway	40
Ireland	48	Poland	40
Italy	48	Portugal	40
Lithuania	48	Slovakia	40
Luxembourg	48	Slovenia	40
Malta	48	Spain	40
Netherlands	48	Sweden	40
UK	48	Belgium	38

* No explicit weekly maximum in Germany, the 48-hour figure represents an average based on daily maximum rules.

Source: EIRO.

These statutory maximum figures may be exceeded in many countries, in the context of working time flexibility schemes allowing weekly hours to be varied around an average over a reference period as permitted by the EU Directive (TN0308101S). To take some examples:

- In Austria, weekly hours may be varied up to a maximum of 50 over a reference period, by agreement, if an average 40-hour week is maintained;
- in Denmark, the 48-hour maximum must be observed on average within a period of four months;
- in Estonia and Slovakia, the average working week may be up to 48 hours over a four-month period if overtime is included;
- in Finland, weekly hours may be varied (up to 45) over a 52-week reference period, if an average 40-hour week is maintained;
- in Luxembourg, weekly hours may be increased by collective agreement to a maximum of 60 during six weeks a year, in specific sectors characterised by workload peaks;
- in the Netherlands, the 48-hour maximum must be maintained over a 13-week reference pe-riod. If no agreement is reached between employer and trade union (or works council), statutory maximum hours are nine per day, but by agreement daily hours may be extended to 12, as long as average weekly hours do not exceed 60 over a four-week reference period (and do not exceed 48 over a 13-week period);
- in Norway, average weekly hours may vary and be as high as 48, as long as the 40-hour maximum is maintained over a reference period of up to one year. In some specific circumstances, the reference period may be extended;
- in Poland, weekly working time may be varied up to 48 hours over a four-month reference periods, if an average 40-hour week is maintained;
- in Portugal, weekly hours may be increased to 60 by agreement, if the maximum is maintained on average over a reference period;
- in Spain, weekly hours may be higher if a 40-hour average is maintained over a reference period; and
- in the UK, weekly hours may exceed 48 as long as this average is maintained over a 17-week reference period.

W. O.

Reference

EIRO, *Working Time Developments 2005,* August 2006.

Deposit Insurance

Since the 1960s, deposit insurance systems have been introduced in nearly 90 countries (see also DICE Report 2/2005). Deposit insurance is only one of the several possible systems for efficiently dealing with weak banks and for protecting depositors against bank failure. Other systems include the reliance on courts and bank supervision. Deposit insurance can be designed quite differently. (1) The insurer may have more or less authority and responsibility to intervene in a bank. (2) The insurer may have more or less legal power to cancel or revoke deposit insurance for an insured bank. (3) The insurer may be more or less unaffected by political pressure. And (4) the insurer may have more or less access to relevant information about the insured bank.

In a recent paper, Beck and Laeven (2006) conducted an empirical study of the link between deposit insurance and its design, on the one hand, and the fragility of the banking system of a country, on the other. Their dataset covers over 1,700 banks in 57 countries. For the above-mentioned four design characteristics of a deposit insurance scheme, the authors created indicators, each of which can take the value 0 or 1. These indicators are then used as independent variables in multiple regressions, with the dependent variable being an average measure for "distance from insolvency" of a country's banks (see Figure).

The authors show that a stable banking system, i.e. high average distance from insolvency, is primarily related to the interventionist power of the insurer, being statistically significant in all specifications. Highly significant as well, but not in all specifications, are the following variables: power to revoke insurance, independence from political pressure and power as a supervisor. However, the degree of deposit insurance coverage is negatively related to bank stability. This result may reflect the usual concern for moral hazard behaviour – here: imprudent risk-taking by banks – under insurance.

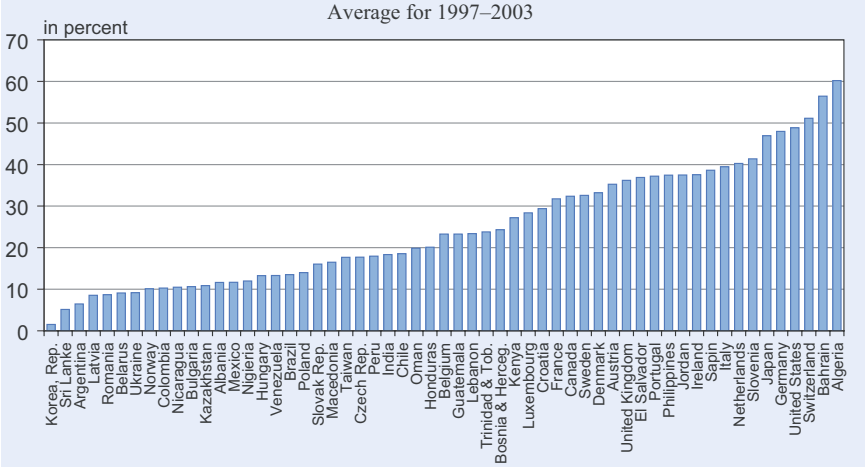
R. O.

Reference

Beck, T. and L. Laeven (2006), "Resolution of Failed Banks by Deposit Insurers: Cross-country Evidence", *World Bank Policy Research Working Paper,* no. 3920.

Distance from Insolvency of a Country's Banking System

Average for 1997–2003



Note: The distance from insolvency is the inverse of the probability of insolvency.

Source: Data from Beck and Laeven (2006).

Staff Training in Early Childhood Education and Care

The importance of children's learning, development and social participation is widely recognised across OECD countries. Increasingly, governments see lifelong learning as the key to human capital formation, the foundation of which is laid in early childhood. Despite this recognition, the professional standing of the early childhood workforce tends to remain low. Training and working conditions for Early Childhood Education and Care (ECEC) staff often contradict public rhetoric about the value placed on young children and the importance of their early development and learning. This is particularly true of the child care sector, where recruitment levels can be inadequate and salaries remain well below those of teachers.

Typically, early childhood educators working closest to the school gate are better trained and rewarded. Staff serving children aged three to six are more likely to hold three- or four-year university (tertiary type A) or two-year college (tertiary type B) degrees. In contrast, staff in settings serving the youngest children are more likely to have varied backgrounds, ranging from no training whatsoever to a post-baccalaureate three-year professional education (tertiary type B) or a two-year college degree (see Table 1). Preparation for the role of ECEC pedagogues, educators and teachers also varies substantially.

Staffing profiles

As can be seen from Table 1, countries have adopted two main approaches to staffing in early childhood services:

- In countries with split regimes (child care/early education), qualified teachers work in early education with children over three years of age,[1] while in the child care sector (services for 0- to 3-years-olds), a mixture of lower-trained staff are employed. In early education, there is a cross-national trend towards at least a three-year tertiary degree for lead professional staff (generally teachers) who have the main responsibility for pre-school children. These teachers are often trained as part of the primary school teacher corps (France, Ireland, the Netherlands, etc.) and may not have their primary training or adequate certification in early childhood studies. In services for younger children, it is difficult to identify across different countries a core professional who works directly with infants and toddlers. In many countries, child care services tend to remain hierarchical with a few professionals (often trained nurses) managing the majority auxiliary staff who care for and interact with the children.[2]
- In countries with integrated services[3] for 1- to 6-years-olds, a core lead professional profile has emerged across services for 1- to 6-year-olds. Tertiary trained pedagogues or early childhood educators work directly with children right across the age range. Trained child assistants, with primary responsibility for care, work alongside these pedagogues. They are not seen as auxiliaries but equal and valuable members of the work team.

Worker profiles

There are basically three types of lead professionals working in early childhood education centres (see Table 2):

The early childhood specialist (pedagogue or teacher) is found in Austria, Belgium, Czech Republic, Finland, Hungary, Italy and Sweden. Significant differences exist between the pre-school specialists from these countries with regard to profiling and training, but a common characteristic is that they are trained specifically to work with young children in the three or more years prior to entry into primary school. Generally, pre-school specialists practise only in early childhood centres.

The pre-primary/primary teacher (or kindergarten/pre-school teachers in Austria, Canada and the United States) work in pre-primary schools, but they are generally trained at the same level and in the same training institution as primary school teachers. This profile is found in Australia, Canada, France, Ireland, the Netherlands, the United Kingdom and the United States. Readiness-for-school is a primary aim of early education in these countries, and pre-prima-

[1] In Australia, Canada and the United States, where public education services are not accessed by a majority of children until age 4 or 5, professionals working with children up to that age have a lower level of qualification.

[2] In France, there is a development towards »early childhood educators« (éducateurs de jeunes enfants).

[3] Early childhood in the United Kingdom is, in principle, integrated under the auspices of the Ministry of Education. Integration, however, is relatively new and neither conceptual nor sector integration has yet been achieved.

Table 1

Trained staff in centre-based ECEC

	Main type of staff	Initial training	Age range covered	Main field of work	Work in primary?
Australia[a)]	Teacher Child care worker[a]	3- to 4-year tertiary type A[b)] degree 2- to 3-year tertiary type-B[b)] to 4-year tertiary type-A (a minority)	0–8 0–5	Pre-school/pre-primary, kindergartens; long day care	Yes No
Austria	Erzieherinnen Kindergartenpädagoginnen	5-year vocational secondary	0–5	Krippen and Hort Kindergarten	No
Belgium-FR	Institutrice de maternelle Puéricultrice	3-year pedagogical – tertiary type B 3-year post-16 vocational secondary	2.5-6 0-3	Ecole maternelle Crèches (or assistant in école maternelle)	No No
Belgium-FL	Kleuteronderwitzer(es) Kinderverzorgsster	3-year pedagogical – tertiary type B 3-year post-16 vocational secondary	2.5–6 0–3	Kleuterschool Kinderdagverblijf	No No
Canada	Teacher Early childhood educator	4-year tertiary type-A (except PEI) 2-year ECE	0–5/5–10 0–12	Kindergarten, pre-kindergarten and primary school Child care, nursery school, pre-school	Yes No
Czech Republic	Učitel mateřske školy Detska sestra	4-year secondary pedagogical or 3-year tertiary type B or teritary type A 4-year secondary nursing school	3–6 0–3	mateřská škola Creche	No No
Denmark	Paedagog[a)]	3- to 5-year vocational – tertiary type B (depending on prior experience)	0–10	Educational, social care, special needs institutions (including day care)	Yes – 6-year-olds and in teams with 6- to 9-year-olds
Finland	Lastentarhanopettaja (kindergarten teachers) Sosionomi (social pedagogues) Lähihoitaja (practical nurses)	3-4-5-year university tertiary type A or 3- to 5-year polytechnic tertiary type B 3-year secondary vocational	0–7 0–6	6-vuotiaiden esiopetus (pre-school class as well as kindergarten)' Päiväkoti (children's day care centre) Avoin päiväkoti	Yes, with 6- to 7-year-olds
France	Instituteurs Puéricultrices Educateurs de jeunes enfants	Bac + 2-years Nurse/mid-wife + 1-year specialisation 27-month post-Bac in training centre	2-6 0–3 0–6	Ecole maternelle Crèches/assistant in école maternelle	
Germany	Erzieherinnen Kinderpflegerinnen	3-year secondary vocational training + 1-year internship 2-year secondary vocational training	0–6	Kindergarten	No

(Table 1 continued)

	Main type of staff	Initial training	Age range covered	Main field of work	Work in primary?
Hungary	Pedagogue Gondozó (child care worker)	3-year tertiary degree 3-year post-secondary vocational training – specialist certificate	0–7 0–3	Ovoda (kindergarten for children 3-7) Bölcsŭde (for children under 3)	
Ireland	Teacher Child carer/child minder	3-year tertiary type A – primary focus Wide variation – many untrained	4–12 0–6	Schools child care centres	Yes
Italy	Insegnante di scuola materna Educatrice	4-year tertiary type A Secondary vocational diploma	3–6 0–3	Scuola materna Asili nido	No No
Netherlands	Leraar basisonderwij Leidster kinder centra	3-year voc. higher education – tertiary type B 2-year post-18 training	4–12 0–4	Bassischool Kinderopvang	Yes No
Norway	Pedagogiske ledere[a)] Assistents	3-year vocational higher education 2-year post-16 apprenticeship	0–7 0–7	Barnehager SFO	Yes, grades 1-4 with 1-year extra training
Portugal	Educadora de infância	4-year university or polytechnic	0–6	Jardim de infância, crèches ATL	No
Sweden	Förskollärare[a)] Fritidspedagog[a)] Barnskötare	3-year university – tertiary type A 3-year university – tertiary type A 2-year post 16 secondary	0–7 0–7	Förskoleclass Förskola Oppen Förskola Fritidshem	Yes – with 6-year olds and in teams with 6- to 9-year-olds
United Kingdom	Qualified teacher Trained nursery teacher Nursery nurse	4-year university tertiary type A 2–year post 16 secondary	3–11 0–5	Nursery classes Reception class Nurseries (or assistant in above)	Yes
USA[a)]	Public school teacher Head start teacher Child care teacher	4-year university – tertiary type A CDA = 1-year tertiary type B 1 course to 4-year university	4–8 (0–8) 0–5 0–5	Public schools Head start Child care centre	Yes No No

[a)] Staffing varies according to the regulations of each state and territory. – [b)] Tertiary-type A corresponds to Level 5A of ISCED, tertiary-type B corresponds to Level 5B of ISCED. – [c)] There is considerable variation in how these credentials are valued from state to state.

Source: OECD (2006).

Table 2

A simplified typology of lead professionals in early childhood education

Profile	Country	Education
The early childhood specialist, either pedagogues or teachers	Austria, Belgium, Czech Republic, Finland, Hungary, Italy and Sweden	Except Austria and Czech Republic, tertiary degree with dedicated training in ECEC for children 1 to 6 years old or 3 to 6 years old
Teachers, either pre-primary or primary	Australia, Canada, France, Ireland, Netherlands, United Kingdom, United States	Tertiary degree with predominant training in primary education
Social pedagogues	Austria, Denmark, Finland, Germany and Norway	Tertiary diploma or degree with training in social pedagogical care, and specific training for pre-school early education and care

Source: OECD (2006).

ry classes will include a focused introduction to literacy and numeracy through whole and small group experiences.

The social pedagogue has a wider remit than the early childhood specialist and may be trained to work in various settings outside the kindergarten, most notably in youth work and work with the elderly. In the social pedagogy tradition – found in Austria, Denmark, Finland, Germany and Norway – an important study option is to become a social pedagogue specialised in the care, upbringing and learning of young children. The social pedagogue is trained to take a wider view of early learning. The desired professional role is that of "social network expert with a clear educative function".

W. O.

Reference

OECD (2006), *Starting Strong II, Early Childhood Education and Care,* Paris, Chap. 7.

Competition Policy

Institutionally oriented economists as well as law scholars seem to have become increasingly interested in competition policy, as can be seen in recent studies (e.g., Voigt 2006, Borrell 2005 and Forslid et al. 2005). Forslid and co-authors investigate the fact that some countries, like the US and Canada, are (very) early forerunners of competition policy while others have followed only much later. In order to include countries of similar degree of industrialisation, the study concentrates on the 24 "old" and high-income OECD countries (Table 1), while the later entrants (Korea, Mexico, Poland, Czech Republic, Slovak Republic and Hungary) are not considered.

Table 1

Competition laws in OECD countries: Year of introduction and cumulative number of countries

1889	Canada	1
1890	USA	2
1926	Norway	3
1947	Japan	4
1948	UK	5
1953	France, Ireland	7
1955	Denmark	8
1957	Germany	9
1958	Netherlands	10
1960	Belgium	11
1962	Spain	12
1970	Luxembourg	13
1974	Australia	14
1977	Greece	15
1984	Portugal	16
1985	Switzerland	17
1986	New Zealand	18
1988	Austria, Finland	20
1990	Italy	21
1993	Iceland, Sweden	23
1994	Turkey	24

Source: Data from Forslid et al. (2005).

The authors describe the behaviour of firms within a Cournot model and determine firms' profits and households' utility for those countries with and without competition policy (i.e., anti-trust policy). They show that within this setting, the public welfare effect of competition policy is an increasing function of market size. The reason is, simply put, the larger the home market, the lower the pressure from foreign competitors. This lack of competitive pressure in large home markets is then compensated by competition policy. This is also seen to be one reason why small countries tended to introduce competition policy (much) later than larger ones.

Besides country size, the authors consider a second important variable: the costs of international trade, which have dropped considerably in the long term. One could assume that this factor works in the same way as country size, because trade costs reduce foreign competition. The conclusion would then follow that for small countries which (today) face considerably reduced trade costs it would not be necessary or at least less urgent to introduce a competition policy. But even these countries did so, albeit late. The authors show that high trade costs reduce the incentive for a competition policy when the country is large but increase this incentive when it is small.

Finally, the authors speculate about possible competition policies in large and fast growing countries like China or India and conclude that "these countries may never find it in their interest to implement competition policy".

Voigt's paper considers the effects of competition policy on total factor productivity. The work is based on a survey of the competition authorities of 57 countries (see Table 2), who answered 30 questions contained in a questionnaire of 8 pages. For the econometric work the author created four numerical indicators consisting of different sub-variables. The four main indicators focus (1) on legal aspects ("formal basis"), (2) on economic aspects ("economic approach"), (3) on "de jure independence of competition agencies" and (4) on their "de facto independence".

The main result of the econometric analysis is that competition policy, measured by the four indicators, *has* a positive effect on total factor productivity. However, it is difficult to distinguish this effect from that which is exerted by broadly defined institutions and their quality. Moreover, the majority of countries has introduced competition legislation only rather recently (after 1990) so that an effect on productivity may not yet be observable.

Borrell (2005) starts with the fact that competition regimes in the world are quite different. He distinguishes five possibilities (see Table 3): (1) doing nothing, i.e. no anti-trust prohibition, no penalties; (2) ex-ante regime of authorisation, i.e. permission for competition restriction (only) by and after registration; (3) ex-post judiciary regime of negligence. Firms restraining competition can be sued before the judiciary by affected business firms and consumers; (4) ex-post administrative regime of negligence. A

Table 2

Further countries with competition laws

Albania	Guatemala	Philippines
Argentina	Hungary	Poland
Armenia	Indonesia	Senegal
Brazil	Israel	Slovakia
Bulgaria	Jamaica	South Africa
China	Kazakhstan	Taiwan
Costa Rica	Latvia	Tanzania
Croatia	Lithuania	Thailand
Cyprus	Mexico	Tunisia
Czech Republic	Moldova	Uzbekistan
Dominican Republic	Morocco	Venezuela
El Salvador	Paraguay	Zambia
Estonia	Peru	Zimbabwe

Note: Countries already contained in Table 1 have been left out.

Source: Voigt (2006).

competition authority analyses (a) whether competition has been restrained and (b) whether the restrain is illegal. If both questions are answered in the affirmative, affected parties can claim remedies before the judiciary; (5) ex-post strict liability regime. Parties affected by competition can sue the causing firms in tort law, civil law or criminal law processes. The restraint as such is illegal.

The author then asks why countries have opted for one of the different possibilities of competition control regimes. He sets up a model that is based on the theory of law enforcement and comes to the conclusion that what matters is a country's institutional strength. With very weak institutions, firms restraining competition can subvert any anti-trust legislation and will employ resources to do so. Thus, it is better for the country not to have any competition control regime at all. At a moderate level of institutional weakness, with moderate costs for firms to subvert the law, an ex-ante authorisation regime is adequate. For a country with highly developed and strong institutions that make it costly for firms to subvert competition law, an ex-post negligence regime is optimal.

Table 3

Possible anti-trust regimes

Anti-trust regimes	Examples
Doing nothing	Several developing countries
Ex-ante regime of authorisation	Early cartel policy in Britain, Spain; present merger control in European countries and the US; block authorisations of agreements between competitors in the EU (until 2004)
Ex-post judiciary regime of negligence	US: Regime of illegality under the rule-of-reason criteria
Ex-post administrative regime of negligence	In force in most European countries and at the EU level
Ex-post strict liability regime	US: Regime of per se illegality of hard core cartels

Source: Borrell (2005).

R. O.

References

Borrell, J.-R.(2005), "Choosing among American, European, or no Antitrust at all", *Working Paper University of Barcelona.*

Forslid, R., J. Häckner and A. Muren (2005), "When Do Countries Introduce Competition Policy?" *Working Paper Stockholm University.*

Voigt, S. (2006), "The Economic Effects of Competition Policy – Cross-country Evidence Using Four New Indicators", *Working Paper University of Kassel.*

Leave Policies

Working parents today in most countries are entitled to a range of different types of leave. Maternity leave is available to mothers only. It is usually understood to be a health and welfare measure, intended to protect the health of the mother and newborn child, just before, during and immediately after childbirth. Paternity leave is available to fathers only, usually to be taken soon after the birth of a child, and intended to enable the father to spend time with his partner, new child and older children. Parental leave is available both to mothers and fathers, either as a non-transferable individual right or as a family right that parents can divide between themselves as they choose. It is the opportunity to spend time caring for a young child; it usually can only be taken after the end of maternity leave.

Maternity leave

Of the 22 countries we investigated, three have no statutory maternity leave. In the case of the United States, there is a general "family and medical leave" that can be used for a range of purposes, including de facto maternity leave. In the case of Australia and Sweden, leave is available at this time but is not restricted to women, being subsumed into parental leave. However, while leave is paid at a high level in Sweden, it is unpaid in Australia and the United States (see Table).

Statutory leave entitlements

	Maternity leave	Paternity leave	Parental leave		Total post-natal leave months	
Australia	×	×	✓	F	12	(0)
Belgium	✓✓✓	✓✓✓	✓✓	I	9.5	(9.5)
Czech Republic[a)]	✓✓✓	✓	✓✓*	I	36	(36)
Denmark	✓✓✓	✓✓✓	✓✓✓	F	10.5	(10.5)
Estonia	✓✓✓	✓✓	✓✓	F	36	(36)
Finland	✓✓✓	✓✓✓	✓✓✓	F	36	(36)
France[b)]	✓✓✓	✓✓✓	✓✓*	F	36	(36)
Germany[c)]	✓✓✓	×	✓✓*	F	36	(24)
Greece	✓✓✓	✓✓✓	✓	I	9	(2)
Hungary	✓✓✓	✓✓✓	✓✓✓	F	36	(36)
Iceland	✓✓✓	×	✓✓✓	F/I	9	(9)
Ireland	✓✓	×	✓	I	14	(4.5)
Italy[d)]	✓✓✓	×	✓✓	I	13.5	(13.5)
Netherlands	✓✓✓	✓✓✓	✓	I	8.5	(2.5)
Norway	✓✓✓	✓	✓✓✓	F/I	36	(12)
Portugal	✓✓✓	✓✓✓	✓	I	34	(4)
Slovenia	✓✓✓	✓✓	✓✓✓	I	12	(12)
Spain	✓✓✓	✓✓✓	✓	I	36	(3.5)
Sweden[e)]	×	✓✓✓	✓✓✓	F/I	(g)	
United Kingdom	✓✓	✓✓	✓	F	18	(6)
Canada	✓✓✓	✓	✓✓✓	I	12	(11.5)
Québec					16	(15.5)
USA[f)]	× (h)	×	×		0	

Maternity, paternity and parental leave columns: × = no statutory entitlement. ✓ = statutory entitlement but unpaid; ✓✓ = statutory entitlement, paid but either at a low flat rate or earnings-related at less than 50 percent of earnings or not universal or for less than the full period of leave; ✓✓✓ = statutory entitlement, paid to all parents at more than 50 percent of earnings (in most cases up to a maximum ceiling).

Parental leave column: * indicates the payment is made to all parents with a young child whether or not they are taking leave. F = family entitlement; I = individual entitlement; F/I = some period of family entitlement and some period of individual entitlement.

Total post-natal leave column: Unbracketed numbers indicate total length of leave in months to nearest month; bracketed numbers in "total post-natal leave" column indicate length of leave which receives some payment. Column includes both "parental" and "childcare" leaves.

a) Parental leave may be taken until child is three years, but benefit is paid until child is four.

b) Parental leave payment to parents with one child until six months after the end of maternity leave.

c) Parental leave payment after maternity leave until child is two years and means tested.

d) Parental leave is six months per parent, but total leave per family cannot exceed 10 months.

e) 480 days of paid leave per family (divided between individual entitlements and family entitlement), 390 days at 90 percent of earnings and 90 days at a low flat rate; each parent also entitled to 18 months unpaid leave.

f) Parents may take up to 12 weeks unpaid leave for childbirth or the care of a child up to 12 months as part of the federal Family and Medical Leave Act; employers with less than 50 employees are exempt.

Source: Moss and O'Brien (2006).

The period of maternity leave is mostly between 14 and 20 weeks, with earnings-related payment (between 70 and 100 percent) throughout. There are four main exceptions. Maternity leave in Hungary is 24 weeks, in the Czech Republic 28 weeks, in Ireland 34 weeks and in the United Kingdom 52 weeks. In the last two countries leave is not paid for the full period.

There is not much flexibility in maternity leave, indeed taking leave is obligatory in some countries (e.g. German, Italy). Where it occurs, flexibility mainly takes the form of some choice about when women can start to take leave and how much time they take before and after birth.

Paternity leave

Paternity leave usually refers to an entitlement to take a short period of leave immediately following the birth of a child, often associated with providing help and support to the mother. 15 of the 22 countries under review have paternity leave, which (with two exceptions) varies from two to 10 days and is usually paid on the same basis as maternity leave. The two exceptions are: Finland, which provides 18 days of paternity leave, with a further 12 "bonus" days for fathers who take the last two weeks of parental leave; and Portugal which now provides 20 days paternity leave, five days of which is obligatory, i.e. fathers must take leave.

Parental leave and childcare leave

These two forms of leave are considered together here, as childcare leave can usually be taken immediately after parental leave, thereby creating one continuous period of leave. All EU member states must provide at least three months leave per parent for childcare purposes. Four of the non-EU countries in this overview also provide parental leave, the exception being the United States. In six countries, parents can take additional "childcare" leave after parental leave finishes.

Countries can be divided into those where total continuous leave available, including maternity leave, parental leave and childcare leave, comes to around nine to 15 months and those where continuous leave can run for up to three years. In the former camp come Australia, Belgium, Canada, Denmark, Greece, Iceland, Ireland, Italy, Slovenia and the United Kingdom. In the latter camp are the Czech Republic, Estonia, Finland, France, Germany, Hungary, Norway, Portugal and Spain. Sweden falls in between.

Parental leave is a family entitlement in eight countries, to be divided between parents as they choose, an individual entitlement in another 10 countries and mixed (part family, part individual entitlement) in three countries.

A majority of countries (14) provide some element of payment. However, in six cases (Belgium, Czech Republic, Estonia, France, Germany and Italy) payment is rather low. Only eight countries pay an earnings-related benefit pitched at more than half of normal earnings. Finland combines a relatively high level of earnings-related benefit during parental leave with a low flat-rate benefit for home care leave that has supplements for users with additional children and lower incomes. In some cases – notably the Czech Republic, France and Germany – parents on leave receive a general "childrearing" benefit that is paid to all parents with young children, not just confined to those taking leave.

Parental leave can be used in a flexible way. Flexibility takes three main forms. First, the possibility to use all or part of leave when parents choose until their child reaches a certain age (e.g Belgium, Germany, Portugal, Sweden); second, the possibility of taking leave in one continuous block or several shorter blocks (e.g. Estonia, Greece, Iceland, Spain, Sweden); third, the possibility of taking leave on a full-time or part-time basis (i.e. so parents can combine part-time employment with part-time leave; e.g. France, Germany, Portugal, Québec and Sweden).

W. O.

Reference

Moss, P. and M. O'Brien (2006), *International Review of Leave Policies and Related Research 2006,* DTI Employment Relations Research Series, no. 57, London.

Recent Entries to the DICE Database

In the fourth quarter of 2006 the DICE Database (www.cesifo.de/DICE) received about 110 new entries, consisting partly of updates of existing entries and partly of new topics. One special point was the expansion of our new topic "Social Values" with further tables on the values of the inhabitants of major industrial countries with respect to science and technology, labour, environment, equality, family and personal values. Some further topics are mentioned below:

- Economic weight of nations (I-III)
- Employment rate
- Agreements on cross-border employment
- Centralisation of collective bargaining
- Lawfulness of strikes and lock-outs
- Minimum wages
- Unemployment rates
- Active labour market programmes
- Unemployment benefit systems
- Duration of unemployment insurance
- Unemployment assistance benefits.

Forthcoming Conferences

Workshop on International Outsourcing
Helsinki, 1–2 June 2007

CESifo, the Helsinki Center of Economic Research and the Research Unit of Economic Structures and Growth in Helsinki will organise a workshop on international outsourcing. Both theoretical and empirical research contributions belonging to the fields of labour economics, international economics, industrial organsation or organisation theory are welcomed.

Invited speakers include:
- Elhanan Helpman, Harvard University and
- Hans-Werner Sinn, CESifo, Germany.

CESifo/SP-SP Center, IESE Conference on "Complementarities and Information"
Barcelona, 15–16 June 2007

The SP-SP Center of IESE and CESifo will organise a conference on recent contributions to the analysis of complementarities and information. The conference will take place on 15–16 June 2007 at the IESE Business School in Barcelona. The conference aims at bringing together both recent theoretical developments and empirical analysis with applications ranging from international finance (exchange rate crises), monetary policy (transparency), macroeconomics (coordination problems), banking (crises), market microstructure (asset pricing) to industrial organization (mergers).

The editors of the Journal of the European Economic Association (JEEA) have agreed to publish a symposium issue based on the conference. The symposium editors and conference organisers will be Douglas Gale (New York University) and Xavier Vives (IESE and ICREA-UPF).

International Society for New Institutional Economics, Annual Conference
Reykjavik, 21–23 June 2007

The 11th Annual Conference of ISNIE will take place at the University of Iceland in Reykjavik.

CESifo/Ifo Conference on "Do We Need National or European Champions?"
Munich, 16–17 November 2007

EU countries are deeply divided about the role of industrial policy, with preferences ranging from neoliberal approaches to strong government support for national champions. Does this facilitate the sell-out of national economies with hands-off governments, or do interventionist governments harm themselves because they create huge and inefficient corporations? Is economic patriotism legitimate? Should other EU members counter by adopting similar national policies? Do we need a common industrial policy that supports European champions? What is the best way of unleashing Europe's innovation potential? These questions are central to the future position of the European market in the international division of labour, and yet the views about the relative role of the various government levels concerning these questions of competition supervision, regulation and industrial support vary strongly.

Invited papers will be presented by
Philippe Aghion (Harvard),
Martin Hellwig (Bonn),
Paul Seabright (Toulouse) and
Xavier Vives (IESE and INSEAD).

World Values Survey

The World Values Surveys were designed to provide a comprehensive measurement of all major areas of human concern, from religion to politics, to economic and social life, and two dimensions dominate the picture: (1) traditional/secular-rational and (2) survival/self-expression values. The traditional/secular-rational values dimension reflects the contrast between societies in which religion is very important and those in which it is not. The second major dimension of cross-cultural variation is linked with the transition form industrial society to post-industrial societies, which brings a polarisation between survival and self-expression values.

Four waves of the Values Surveys were conducted, in 1981, 1990, 1995, and 1999–2001. The fifth wave of the World Values Survey went into the field on 1 July 2005 and will continue until late 2006.

DICE

Database for Institutional Comparisons in Europe

www.cesifo.de/DICE

The database DICE was created to stimulate the political and academic discussion on institutional and economic policy reforms. For this purpose, DICE provides country-comparative information on institutions, regulations and the conduct of economic policy.

To date, the following main topics are covered: Labour Market, Public Finances, Social Policy, Pensions, Health, Business Environment, Natural Environment, Capital Market and Education. Recently a chapter on Experts' Assessments of Governance Characteristics has been added. Information about Basic Macro Indicators is provided for the convenience of the user.

The information of the database comes mainly in the form of tables – with countries as the first column – but DICE contains also several graphs and short reports. In most tables, all 25 EU and some important non-EU countries are covered.

DICE consists primarily of information which is – in principle – also available elsewhere but often not easily attainable. We provide a very convenient access for the user, the presentation is systematic and the main focus is truly on institutions, regulations and economic policy conduct. Some tables are based on empirical institutional research by Ifo and CESifo colleagues as well as the DICE staff.

DICE is a free access database.

Critical remarks and recommendations are always welcome.
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