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## *FOCUS*

### **European Integration**

In 2008, the CEPII celebrates thirty years of research. The former issue of this Newsletter overviewed CEPII's works in two areas: international trade, and exchange rates. In this issue, at the eve of the French EU presidency, we focus on Europe from four angles: the single market, enlargement, tax competition and fiscal policies. European integration appears in CEPII's publications in 1986, with the common agricultural policy, and further in 1992 and 1993, at the time of the European Monetary System crisis. From 1995 onwards, the Centre has published regularly on European subjects.

#### **The single market**

Ten years after the Single European Act came into force, the CEPII shows that the most pessimistic scenarios have proved misplaced. They anticipated inter-industry specialisation of European countries, accentuating their differences with the risk of making the single monetary policy ill-designed. In fact, specialisation has developed *within* industries, along quality ranges. However, the most optimistic expectations have also proved wrong: the European market is not really unified. In the late 1990's, the "border effect", which limits trade when a border has to be

crossed, is still there. If there is one field where the single market remains still to be created, to a great extent, it is services. In 2006 we explain the gains that could be expected from liberalisation of the different modes of trading services in Europe and emphasise the importance of business services as the most dynamic sub-sector.

## Enlargement

In June 1993, the Copenhagen Summit laid down the membership criteria for future members of the European Union. We note then the differences in export capacities which justifies the choice of an enlargement in several waves. The April 2003 *Lettre du CEPII*, shows that the shock of enlargement should materialise more through the complex effects of market integration than through the mere opening up of the economies. Joining the European Union implies adopting the single currency eventually. To do this, the new members must comply with the Maastricht nominal criteria and, in particular, participate in ERM-2 for two years at least. In November 2002 the CEPII underlines the risks of the stabilisation of exchange rates coming into conflict with the need for catch-up growth. From this point of view, there is a divergence between small applicants, which confirm their eagerness to adopt the Euro (Slovenia adopted it on 1st January 2007), and large countries, less inclined to give up exchange-rate flexibility (April 2004).

## Tax competition

In December 1999 *La Lettre du CEPII* evaluates the impact of a reduction of one percentage point in the corporate income tax rate on inward foreign direct investment to be about 4%. With the 2004 enlargement, it was to be feared that tax competition would increase: corporate tax rates were almost systematically lower in the new member states. The CEPII points out that tax incentives are justified in these peripheral countries. However, given their relatively heavy taxation on labour, these incentives would be more likely to attract paper profits than real activities. Then, Western member states should, on the one hand, worry about the conditions for new Member States to catch up, and on the other hand, consider enhanced co-operation on tax issues seriously. In this mindset, the June 2005 letter, which notes the regular lowering of corporate income tax rates in both old and new member states, deplors the fact that the European Union, with its lack of tax co-ordination, remains a collection of "small" countries incapable of raising taxes on capital.

## Fiscal policies

The single currency has given Member State fiscal policies a more important place. Faced with a recession, the procedures stipulated in the stability pact would only be tenable if the Union's monetary policy was significantly more expansionist than it had been in the past. Three *Lettres* were devoted to the pact, with, in particular, a criticism of the "exceptional circumstances" included in the initial formulation (November 2004). Finally, two letters published in July-August 2005 and April 2007 bitterly note the hollowing out of "discretionary" fiscal policies (i.e. excluding "automatic stabilisers"). On the whole, the letters dealing with European issues call for greater consistency between the different co-ordination schemes (stability pact, tax co-ordination and the Lisbon strategy) and between Member States, while pleading in favour of continued opening up of markets, especially in the field of services.

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## ON THE RESEARCH AGENDA

### Estimating Services Trade Potentials

Using a Eurostat database on international trade in services, we estimate the services trade potential of European Union countries over the period of 2000 to 2005. Our estimation procedure is a 2-step gravity model that separates bilateral trade flows into origin-, destination-, and bilateral-specific components. In the first stage of our model, we explain the volume of bilateral trade by observed bilateral characteristics (distance, common language, common border) and exporter and importer fixed effects. The idea in the 2nd stage is then to compare these fixed effects with the volumes predicted by observed country specific variables (population, GDP/capita, multilateral openness), which allows us to isolate under-performing and over-performing countries.

Since domestic market regulation, measured by the OECD Product Market Regulation (PMR) indicator, impacts negatively on services trade, how much would the PMR indicator have to be reduced in order for any given country to reach its trade potential? In which country is this 'required' reduction a realistic policy variable? Our estimates reveal that for many countries, the required PMR change is out of reach: the loosening of domestic regulation alone will not be sufficient to unleash their trade potential. Ultimately, this suggests that other structural features (education, tax schemes, firm structure) are also likely to play an important role in accounting for untapped services trade potential.

Vianney Brandicourt & Cyrille Schwellnus

### Quality Sorting and Trade: Firm-Level Evidence for French Wine

Why do some firms perform better on export markets than others? In the seminal papers of Melitz (2003) and Bernard, Eaton, Jenson, and Kortum (2003) the answer is productivity differences. An alternative proposal is vertical differentiation. A significant literature points out that quality differences influences greatly specialization and international trade patterns. Baldwin and Harrigan (2007) suggest an original model of trade where firms differ in their ability to produce high quality goods. They show that, when firms' selection onto export markets is quality-driven, only firms producing the highest quality (at the highest price) supply the most difficult (less "attractive") foreign markets, i.e. small, remote and competitive ones. On the empirical side, measures of quality are rarely available, forcing reliance on proxies like prices (or unit values) and market shares.

This study contributes to the quality and trade literature regarding data and method. Studying French wine exports, we match firm-destination-level export flows and firm-level-quality ratings from wine guides, such as Robert Parker's. Hence, "direct" quality measures are compared to "inferred" quality (unit values and market shares). Using French custom data, we estimate the weight of firm-level quality on firm-level destination-specific exports. Methodologically, we develop new predictions for the heterogeneous quality model, relating conditional means of quality, export prices and quantities, to market attractiveness measures.

Our data fit the main predictions of the model. We show firms with higher measured quality are more likely to export, export more, and charge higher prices. Champagne and (to a lesser extent) red burgundy exhibit quality sorting using direct measures.

Matthieu Crozet, Keith Head & Thierry Mayer

### **The Impact of Tariff-Rate Quotas Administrative Methods on Trade and Welfare**

Since the Agricultural Agreement at the Uruguay Round, Tariff-Rate Quotas (TRQ) have been implemented in order to establish minimum access provisions and to grant the current access provisions.

Modelling TQRs as a multilateral trade policy instrument instead of bilateral ones, as most papers still do, would help to estimate more properly the impact of TQR administrative methods on trade and welfare. The aim of this research is to model multilateral TRQs under the most used administrative methods in terms of trade volume (First-Come/First-Served, Historical Importers) in a partial equilibrium approach. MAcMapHS6-v2, improved with de Gorter and Kliauga (2006) database for TRQ administrative methods as well as the WTO (2006) database included in report TN/AG/S/22, and BACI databases from CEPII provide all the needed data for calibration. This first step in our research could lead us to envisage an empirical application following the recent WTO proposal concerning multilateral TRQs in agriculture. Nevertheless, our ambition remains the implementation of these TRQ modelling improvements in the Mirage CGE model.

Yvan Decreux, Mariana Deheza & Priscila Ramos

### **OLGAMAP: a Model for Analysing Pensions Reforms**

Most of pensions are financed by PAYGO systems that are vulnerable to population ageing shocks, while pension funds are still very limited (except in the US, the UK and Japan). During the last 15 years, most countries have adopted reforms, more or less ambitious, in order to solve the problem of pension sustainability. In general, pension reforms concern the age of retirement, the contribution rate and the replacement ratio.

In order to analyse the effects of the pension reforms adopted in France, Germany and the UK, the CEPII has developed an OLG model with heterogeneous agents (OLGAMAP). The model lies halfway between pure general equilibrium models with rigorous microfoundations and accounting models where macroeconomic environment remains exogenous.

Since first simulations show the magnitude of pension deficits, Olgamap will be updated to integrate recent demographic projections, recent reforms as well as endogenous choices of the retirement age. This new version will then be used to point out the uncertainty that characterises these simulation exercises concerning the demographic evolution, the labour market aspects (unemployment rates, participation of elderly) and labour productivity.

Xavier Chojnicki & Ricardo Magnani

### **Market Potential Database**

In recent years, research in international economics has benefited from detailed and consistent data on bilateral trade volumes, industrial production and tariffs. Put together, they may offer important insights of the evolution of the globalization process, industry specialisation and labour

reallocation.

In 2005 CEPII developed TradeProd, a dataset that combines these groups of information in a compatible industry classification. A new version is now available, which expands figures in production, provides bilateral trade based on new and highly disaggregated data, and adds bilateral data on trade policy (tariffs and NTB) at the industry level. Information is disaggregated at the ISIC (rev2) 3-digit industry level (28 industrial sectors) over the period 1980-2004 for production and bilateral trade, and 1989-2001 for bilateral protection data. Trade data is based on a new database developed by CEPII, BACI, that uses mirror flows (harmonized to warrant consistency), which increases the coverage of the trade data, especially for developing countries.<sup>1</sup>

This dataset will be used to generate new indicators of globalization and specialisation, particularly oriented to measure the evolution of the world economic geography of countries and manufacturing sectors over a period of 25 years. These variables, termed market potential and supplier access, link countries' export capacities to bilateral trade and transport costs, competition level and national expenditures. Several studies have found the impact of these variables on factor rewards, especially national wages and GDP per capita. In our study we will contribute to this literature by estimating these impacts at industrial levels and using panel data techniques. These economic geography variables will be proposed in another companion dataset.

Rodrigo Paillacar

1 See The CEPII Newsletter, N°32 & N°34, Database section  
For more information on BACI go to: <http://www.cepii.fr/anglaisgraph/bdd/baci.htm>  
For more information on TradeProd go to: <http://www.cepii.fr/anglaisgraph/bdd/TradeProd.htm>.

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## *DATABASES*

### **CHELEM - International Trade: new classifications**

CHELEM,<sup>1</sup> born in the late 1970s, is the first database created by the CEPII. It is composed of three sections, linked by a common geographic classification covering the whole world and by a set of indicators. The sections are: CHELEM-IT on international trade, CHELEM-GDP on GDP at current, constant and constant PPP prices, population and exchange rates, and CHELEM-BOP on Balances of Payments. New geographical classifications have been set in 2006, with breaking the world down into 80 or 94 countries and areas, taking into account the new countries formerly joined together in Yugoslavia, the USSR or Czechoslovakia. New aggregates were created as well, in order to stick to changes in geopolitics, like E27 standing for European Union with 27 member States.

From the beginning, bilateral trade data in CHELEM have been broken down in 71 products categories (plus the non elsewhere specified). The database offers also aggregations in 11 production chains, 10 intermediate sections, 6 production stages or 4 sectors. Since July 2006, two more breakdowns (and their attached aggregations) can be carried out: GTAP and ISIC. The GTAP classification in 43 categories of exchanged products is consistent with the international social accounting matrix computed by the GTAP project,<sup>2</sup> thus permitting using CHELEM in computable general equilibrium models (CGE). The ISIC<sup>3</sup> classification at 4 digits (147 categories of exchanged goods in CHELEM), 3 digits (79 categories) or 2 digits (35 categories), links CHELEM international trade data with national accounts data (production, employment). Finally several aggregations are proposed, for instance an aggregation in four technological levels as defined by the OECD.<sup>4</sup> An illustration is presented below with the European Union.

The E27 accounts for a large proportion of world trade (38% in 2006), but when intra-E27 is excluded this share falls to 17 % (see Table 1). For both intra and extra-EU trade " medium-high"

technological products market shares are the highest. Market shares have remained high for all levels of technology for manufactured products since 1993. Non-manufactured products are less exported and their market share has declined.

Table 1

**World Market Shares by Technological Levels for European Union at 27**  
(in %)

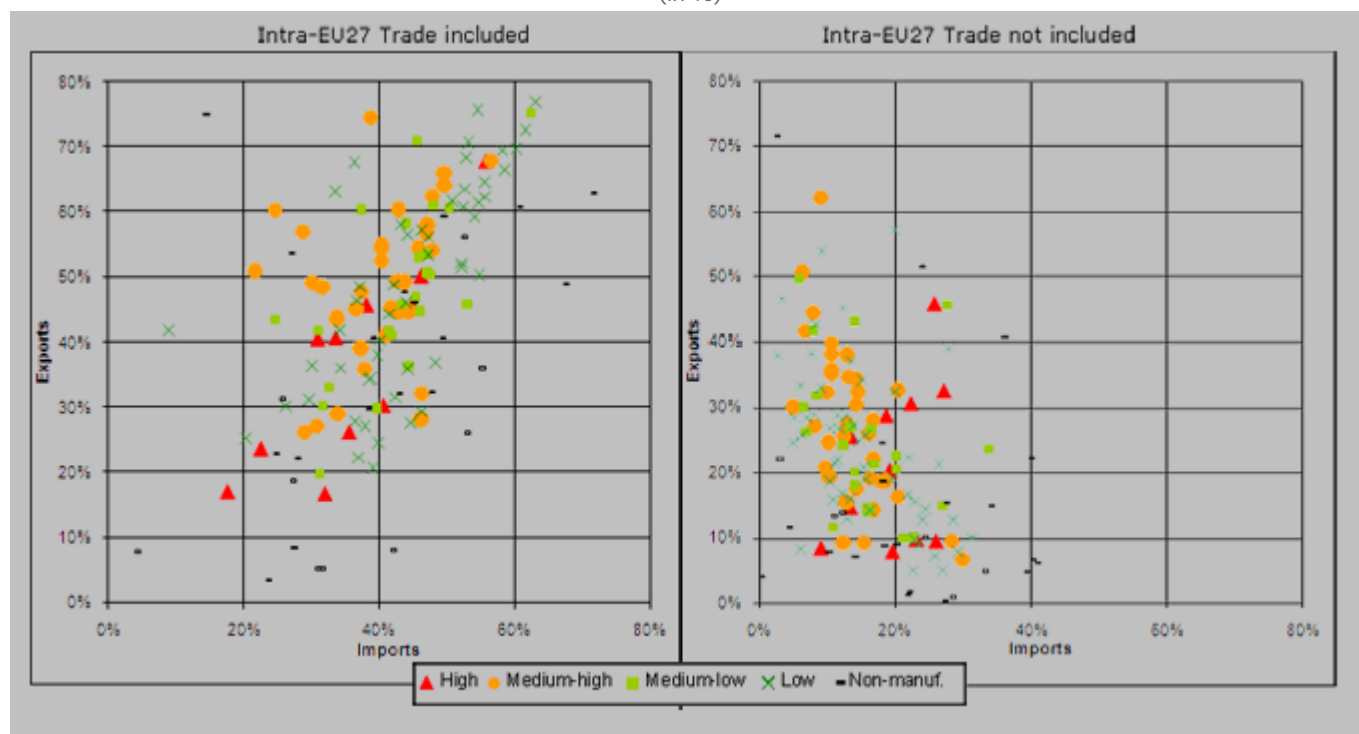
	intra-EU27 included		intra-EU27 not included	
	1993	2006	1993	2006
Total	41.5	38.4	20.1	17.1
By technology				
- High	34.2	37.2	18.6	18.8
- Medium-high	48.9	50.4	26.3	25.8
- Medium-low	44.9	39.5	21.3	16.5
- Low	45.7	42.4	19.6	17.4
- Non-manuf.	26.7	17.2	11.6	5.9

Source: CHELEM - International Trade (March 2008 release)

The ISIC-4 digits breakdown in 147 categories is detailed enough to drive specialization analyses by technology level, for instance to compare the shares of the E27 in world exports and imports (see Graph 1). When intra-E27 trade is included, all observations lie along the first diagonal. There are no systematic surpluses in high technological goods. Exported and imported goods are similar. When intra-trade is excluded, the set of observations is instead perpendicular to the diagonal: imported and exported goods are not the same ones. Trade surpluses are obvious in most medium technological products, which shows a clear specialization of E27 in these categories.

Graph 1

**Share of EU27 in World Exports and Imports in 2006 by ISIC Categories**  
(in %)



Source: CHELEM – International Trade (March 2008 release).

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de Saint Vaulry A. (2008), Base de données CHELEM – commerce international du CEPII, Working Paper, N° 2008-09

Alix de Saint Vaulry

1 French acronym for Comptes Harmonisés sur les Echanges et L'Economie Mondiale (Harmonized Accounts on Exchanges and World Economics).

2 Global Trade Analysis Project, [www.gtap.org](http://www.gtap.org)

3 International Standard Industrial Classification of All Economic Activities.

4 OECD – STI Scoreboard 2001 « Towards a knowledge-based economy », Annex I

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## *WORKING PAPERS*

### **International Trade Price Indices**

N° 2008-10, June 2008

Export and import price indices are useful instruments in international economics. We document here TradePrices, the database of aggregated and sectoral trade price indices for all countries, computed using unit values given by BACI, the CEPII's database of international trade at the product-level covering the period 1995-2004. Its rich country dimension allow an international comparison of prices evolutions. We compute "common" Laspeyres and Paasche indices but also "superlative" Fisher and Tornqvist indices, in both chained and fixed-base forms (chained Laspeyres and Paasche are also provided in their geometric form). In a first part, we discuss the characteristics of these different aggregation methods. In particular, we highlight the links between statistical methods and economical assumptions about implicit elasticity of substitution between goods. In a second step we describe the data. An exhaustive sensitivity analysis is done in order to determine the appropriate way to deal with technical difficulties, such as the treatment of measurement errors in bilateral unit values. Finally, this paper provides some stylized facts illustrating the necessity to provide a trade price database allowing international comparison and the usefulness of both aggregated and sectoral trade price indices to study international economics. TradePrices database and SAS programs are freely available online, offering to users the possibility to choose the most accurate index for each particular purpose.

Guillaume Gaulier, Julien Martin, Isabelle Méjean & Soledad Zignago

### **CEPII'S CHELEM-Trade Database**

N° 2008-09, June 2008

This text is a technical paper for the CHELEM-TRADE users. The database contains international trade statistics by exporting and importing countries/zones and by products over some forty years. The paper describes the database, the sources, classifications and methods as well as the associated indicators. It also discusses the main inconsistencies and statistical issues. (in French)

Alix de Saint Vaulry

See also the Diaporama, in english, describing building methods of CHELEM International Trade Database

### **The Brain Drain between Knowledge Based Economies: the European Human Capital Outflows to the US**

N° 2008-08, June 2008

This paper uses the 1980, 1990, 2000 and 2006 U.S. micro censuses data to document the magnitude and nature of European human capital outflow to the United States. While emigration is about a small number of individuals, the share of Europeans who are leaving is increasing as one

moves along the educational distribution and ladder of occupations that matter the most in the knowledge economy. Next, using productivity based brain drain indices it is found that aggregate human capital conveyed by emigrants has increased since the 1990s. Finally, as a better understanding on the nature of human capital embodied in European emigrants, I show that the Europeans earn a positive wage premium relative to the US natives. Moreover, this premium is higher for the most recent expatriates cohorts, providing further evidence that the quality of European emigrants has increased.

Ahmed Tritah

## Currency Misalignments and Exchange Rate Regimes in Emerging and Developing Countries

N°2008-07, April 2008

Pegged exchange rates are often pointed out as more prone to risk of overvaluation, because their real exchange rates have a tendency to appreciate. We check this assumption empirically over a large sample of emerging and developing countries, by using two databases for de facto classifications by Levy-Yeyati and Sturzenegger (2003) and by Reinhart and Rogoff (2004). We assess currency misalignments by estimating real equilibrium exchange rates taking into account a Balassa effect and the impact of net foreign assets. Pegged currencies are shown to be more overvalued than floating ones.

Virginie Coudert & Cécile Couharde

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## RECENT PUBLICATIONS

### ECONOMIE INTERNATIONALE, QUARTERLY

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## **International Exposure of French Banks: Balancing Opportunities and Risks**

N° 273, December 2007

As a number of European banks was touched by the American subprime crisis, there is a new urgency to consider the pros and cons of the ongoing globalization of the banking sector. In this letter, we aim to describe foreign exposures of French banks and compare them to the situation in other developed countries. Foreign subsidiaries and branches of French banks have brought them new sources of profits. However, these profits appear to be more modest when we consider higher risks of investing in countries with unfamiliar cultures, poor quality of institutions and uncertain business environment. In addition, the globalization of banking has diminished the benefits of diversification and has increased the risks of contagion.

Olena Havrylchuk & Emilia Jurzyk

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## *FORTHCOMING*

### **L'Economie mondiale 2009**

Conference organized by the CEPII, for the release of the book

September 10 , 2008

### **Mondialisation et crise : deux défis**

Conference organized by the CEPII, the CIREM & Groupama

September 25, 2008

### **Monnaies internationales**

Conference organized by the CEPII & the IMF

October 2, 2008

### **Sixth ELSNIT Annual Conference on Integration and Trade**

Conference organized by the ELSNIT

October 24-25, 2008, Florence, Italy

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