

newsletter

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Leverhulme Centre
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Pathological Export Boom and the Bazaar Effect

GEP hosts The World Economy Annual Lecture. This is an event intended to provide an analysis of current issues in international economics by a distinguished speaker. This year GEP invited Professor Hans-Werner Sinn. In this article Hans-Werner offers a brief summary of his talk. Hans-Werner is President of the Ifo Institute for Economic Research and Professor at the University of Munich.

Germany is the world's industrial bazaar. No other country can offer its international clients such a broad variety of industrial products. Germany has 450 hidden world champions for niche products, and is home to 15 of the 20 biggest trade fairs in the world. It is also the world's top exporter of merchandise and the second-largest exporter of goods and services.

But Germany is gradually becoming a bazaar economy in a different sense, because nowadays it specializes in activities that are close to customers, while outsourcing an ever-larger share of its high value-added manufacturing to low-wage countries. In other words, Germany's role in the world economy is gradually shifting from being a producer to a merchant. As a result,

its exports contain an ever-increasing share of imported goods and services, while domestic value-added per unit of export is declining rapidly.

The automobile and electrical engineering industries have been at the forefront of the bazaar economy. To remain price competitive, they have had to rely on imported components. The manufacture of electrical products, such as chips and passive devices, has quite often been shifted completely to Asia, while even



Professors David Greenaway and Hans-Werner Sinn

Export boom, contd...

automobiles that are still assembled in Germany rely heavily on components produced in Eastern Europe.

The decline in the value added per unit of exports does not mean that value-added in exports itself is falling. It only means that export volumes and value-added have decoupled, with German export volumes rising by 1.3% for each 1% of additional value-added in exports. Thus, while the average share of import content in German export is 38%, these imports already account for 53 cents of each additional euro of real exports.

Many believe that specialization in bazaar activities should result in a reduction of value-added in exports. But it is in the very nature of international specialization that value-added in exports rises faster than GDP, and specialization in bazaar activities is no exception. The bazaar effect does not imply that value-added in exports falls, only that export quantities rise faster than the value added contained in these exports.

Is this good or bad? The increase in export-induced value-added that occurs despite the bazaar effect is, in itself, irrelevant for a judgment, because each and every specialization is accompanied by a reduction in value-added in other sectors, owing to underlying movements of capital and labour. There is such a thing as excessive specialization.

An assessment of whether excessive specialization has occurred in Germany must focus instead on the labour market, for it is here where the specialization process is organized. Unfortunately, there is no reason to be optimistic. From 1995 to 2004, a total of 1.09 million full-time equivalent jobs were lost in manufacturing. At the same time, no new jobs were created in the rest of the economy. On the contrary, employment outside manufacturing declined, so that the economy as a whole suffered a net loss of 1.26 million full-time equivalent jobs.

In fact, since the fall of communism, the percentage decline in German industrial employment has been larger than in any other OECD country. In part, this was due to the decline in the former East Germany. But even western Germany holds the second-lowest rank of all developed

countries.

At bottom, the coincidence of unemployment and booming exports can be explained by the high and rigid wages from which Germany still suffers, and these in turn result from aggressive union policies and, in particular, the replacement incomes of the welfare state that act as minimum wage constraints for the market economy. Germany has had the highest hourly labour costs in the world for most of the last twenty years; only recently has Denmark taken the lead due to a revaluation of the krona. Excessive wages destroy the labour-intensive upstream product stages too fast and also impairs other labour-intensive sectors like textiles, simple services, tourism, and construction.

As a result, these labour-intensive sectors must release a lot of labour and capital, which push into the capital-intensive export sectors that are better able to cope with high wages. But, while these sectors therefore grow especially fast, their high capital intensity means that they cannot fully employ the released labour, with the result that some of the unemployed workers have nowhere to turn but the welfare state.

At the same time, since returns to capital are kept low by high wages, very little investment occurs. The excess of savings over investment flows abroad as capital exports. Net investment abroad (including financial investment) has already surpassed domestic investment in recent years. Economic growth and job creation slow, while exports soar. Astonishingly, many interpret Germany's export boom and current-account surplus, which measures these capital exports, as an indicator of the strength of Germany as an investment location.

As the international division of labor proceeds further, the import content of German products will continue to increase, which means that rising exports will go hand in hand with fewer domestic jobs and less income growth. Unless and until German workers accept the need for greater flexibility in the face of global competition, export profits will continue to be invested abroad, reducing overall production costs – and reinforcing the bazaar economy at home without creating additional jobs.

The Heckscher-Ohlin Model: Features, Flaws, and Fixes

In October 2005 Alan Deardorff presented the second series of the Nottingham Lectures in International Economics, sponsored by GEP. This is a yearly event in which an invited scholar exposes his/her research work or reflects upon some of the main and controversial themes in international economics. In this article Alan offers a brief summary of his talks. Alan is Professor of International Economics at the University of Michigan and External Research Fellow at GEP.



Professor Alan Deardorff

The Heckscher-Ohlin (H-O) Model is a marvellous theoretical tool for understanding the world economy. It explains not only the sources of international comparative advantage, but also the effects that trade will have on

patterns of specialization and on real returns to factors of production. In the simple and familiar 2-factor, 2-good, and often 2-country textbook version of the H-O Model, trade, production and factor prices all respond simply and plausibly to the opening of trade and to changes in any barriers to trade. However, if we extend the model in obvious ways to include additional goods and/or additional

countries, the model begins to display behaviours that are not so plausible. This series of lectures focused on these “flaws” in the H-O Model and on various ways that the model might be, or has been, modified to remedy these flaws.

The $2 \times 2 \times 2$ H-O Model has each country producing relatively more of the good that uses relatively intensively its relatively abundant factor, but unless factor

endowments of the countries differ substantially, it permits both countries to continue to produce both goods. Furthermore, if trade costs such as transport costs are included in the model in a simple way (most simply, via Samuelson’s (1952) “iceberg” assumption that the goods themselves are used up in trade), trade, production and factor prices all vary continuously and smoothly with changes in these trade costs. If trade costs fall from a sufficiently high level, the countries move smoothly from not trading at all, through trading while incompletely specializing, and then (if factor endowments differ sufficiently) to trading even more while one or both countries specialize in producing a single good. Thus the model tells a very plausible story and it describes behaviour that seems roughly to match what we see in the world, except of course that the world has more than two factors and far more than two goods and countries.

“In the simple and familiar...H-O Model, trade, production, and factor prices all respond simply and plausibly to the opening of trade...”

Allowing for larger numbers of goods and/or countries, however, causes anomalies in the H-O Model. One of these has long been well known: that if free trade and other conditions for factor price equalization (FPE) are met, patterns of production and trade become indeterminate if the number of goods exceeds the number of factors (see Samuelson (1953) and Melvin (1968)). Thus the model that is intended to predict trade fails to do so in any precise way. This indeterminacy can easily be removed by precluding FPE, for example by assuming trade costs. But then the model predicts a degree of specialization,

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Heckscher-Ohlin, contd...

in either production or trade, that itself is more extreme than one might like. That is, only a limited number of goods can be both produced and traded by each country. And that becomes even more the case as the number of countries also expands. It can be shown that as the number of countries increases, the fraction of all possible bilateral trade flows that can be positive in equilibrium becomes very small, asymptotically approaching zero.

A corollary of this specialization in trade, even with only two goods and three countries, is that the determination of *which* trade flows take place is extremely sensitive, or hypersensitive, to trade costs. That is, an arbitrarily small change in trade costs can cause a country to redirect a substantial trade flow from one partner country entirely to another. Thus trade flows depend discontinuously on trade costs. Likewise, if there are more goods than factors, the same linearity that would cause indeterminacy with FPE causes similar hypersensitivity to trade costs in the determination of which goods a country trades or in the direction of that trade (see Deardorff (1979)). These aspects of hypersensitivity, too, seem to undermine the ability of the standard H-O model to describe reality.

These problems are not new, and they have been addressed over the years, when necessary, by various sometimes *ad hoc* amendments to the H-O model to make it better behaved. Several such amendments are discussed here. Some of these “fixes” of the H-O Model have been widely used for years; others have only recently begun to appear in the literature; and some are currently no more than conjectures.

Space does not permit detailed explication of each of these fixes here. Suffice it to say that each has certain attractive features, but none apparently suffices alone to transform the H-O model into the well-behaved yet tractable tool of analysis that it would be nice to have.

The Ricardo-Viner, or Specific Factors, model of Samuelson (1971) and Jones (1971) is a plausible model of the short run, and it has been used routinely in computable

general equilibrium (CGE) models, but it fails to explain trade more than tautologically. Armington (1969) preferences have also been used by CGE modellers for decades to reconcile their models with the data, but Armington preferences themselves are arbitrary and unjustified. Lumpy countries, as in Courant and Deardorff (1992), may be useful in limiting specialization to regions within a country, but just how helpful this can be is not yet known.

Monopolistic competition among firms producing differentiated products, à la Helpman and Krugman (1985), has become almost as standard a theoretical tool as the H-O Model itself. But while it eliminates the hypersensitivity of bilateral trade flows (see Romalis (2004)), it does not – at least in its standard form – change the H-O predictions about specialization. Melitz (2003) has added productivity heterogeneity of differentiated-product firms to smooth out the behavior of a Ricardian model and Bernard, Redding and Schott (2004) have applied the same technique to a H-O Model, in what may perhaps turn out to be the solution to all of these problems, but that work is too new (at least to me) to judge its success.

There are two final alternative fixes that may hold some promise but have not yet been formally worked out. One would be to let trade costs be variable, rising with the amount of trade, a solution that I suggested in Deardorff (1984) but never thought very plausible. The second would be to take aggregation more seriously, recognizing that economic data inevitably combine as single goods and industries things that in our models ought to be distinct. This has been used somewhat loosely but successfully by Davis and Weinstein (2001) to motivate one of their empirical specifications.

No doubt there are other ways that the H-O model could be amended to make it a more useful descriptor of world production and trade. The challenge will be to find the simplest such amendment that will serve this purpose while keeping the remarkable tractability and elegance of the H-O model.

“Allowing for larger numbers of goods and/or countries, however, causes anomalies in the H-O Model”

Leverhulme Globalisation Lectures 2005

Martin Wolf

Associate Editor and Chief Economics Commentator, The Financial Times

Topic to be announced

9th March 2006

5 pm, University of Nottingham

GEP Strategic Advisory Board

We are pleased to announce that the GEP Management Committee has initiated a GEP Strategic Advisory Board. Its remit is: to receive and review the GEP Annual Report, to review and advise on GEP's on-going Research Programmes, to advise the Centre's Director and Management Committee on the future development of GEP's research agenda and outreach activities.

Members include:

Sir Nicholas Stern, HM Treasury (Chair)

Sir Richard Brook, Director, The Leverhulme Trust,

Sir Colin Campbell, Vice-Chancellor, University of Nottingham,

Professor Paul Collier, Director, Centre for the Study of African Economies, University of Oxford,

Professor Carl Davidson, Michigan State University and GEP External Research Fellow

Professor David Greenaway, Director of GEP,

Dr Sébastien Jean, OECD and GEP Policy Associate,

Professor Ravi Kanbur, Cornell University,

Professor Peter Neary, University College Dublin,

Professor Hans-Werner Sinn, CESifo, University of Munich,

Professor Tony Venables, Chief Economic Adviser, Department for International Development.

Conference Report: Foreign Direct Investment and Taxation

In October 2005 GEP hosted a one day workshop on the theme “Foreign Direct Investment and Taxation” bringing together researchers from Universities in the US, the UK and Europe. In this conference report Mauro Pisu outlines what were the main themes and findings of the papers presented. Mauro is a GEP Internal Research Fellow at the University of Nottingham.

In recent years, in Europe in particular, a heated debate has come to the fore in the popular press, policy circles and academia about the effect of footloose multinationals on taxation. The common wisdom, and what many political commentators suggest, is that jurisdiction trying to attract FDI will start a “race to the bottom” with respect to taxation and the provision of public goods. This in turn will undermine the welfare state of developed economies. The standard strategic competition tax models, based on perfect competition in the product and factor markets and its extension considering asymmetric countries and a monopolistic firm, predict these results

However, the actual behavior over time of effective average corporate tax rates (EACTR) sits awkwardly with these conclusions. Empirical studies report that EACTR declined in the mid to late-1980s, whereas it remained stable during the 1990s that is the period during which FDI flows grew most rapidly.

The October 2005 GEP workshop was intended to provide a forum for scholars and policy makers alike to discuss and analyse rigorously these unresolved issues from theoretical and empirical standpoints. Given the policy relevance of this topic the workshop was attended by many representatives of the policy making community. The six papers presented turned out to be closely complementary, adding additional insight into each other findings.

As seen before, the standard strategic competition tax model and its extensions predict a “race to the bottom”. Saileshsingh Gunessee in “How Robust is Strategic Tax Model” (jointly with Holger Gorg and Steven Humphrey) tested, using experimental economics, the main predictions of these models. Their experimental data suggest that tax competition will lead, as theories predict, to inefficiently low tax rates and under-provision of public goods. However, there are additional features of the data unexplained by the theory. More specifically, individual heterogeneity

with respect to tastes for the public good appears to be important. Jurisdictions, with high preference, taxed above their equilibrium tax rate as opposed to their low taste counterparts.

Ben Ferrett in “Competing for a Duopoly: International Trade and Tax Competition” (jointly with Ian Wooton) presented a sensible theoretical extension of the basic models of strategic tax competition tested by Saileshsingh and co-authors. They considered the case of two firms competing for subsidies offered by jurisdictions. Their results are startling. Unlike in the perfect competition case and in the monopoly case, their results suggest that both firms will be taxed. Thus, there is not a “race to the bottom”. The authors argue that their predictions, unlike those of previous models, are corroborated by empirical evidence showing a remarkable stability of EACTR over time.

In the literature there is uncertainty about which tax measures to consider. This is because the statutory tax rate, the EACTR and effective marginal corporate tax rates (EMCTR) may all be important, but they may have different roles in FDI decisions. Also their relative importance and how their effects differ in developed and developing economies are not clear. This is what the next three papers help to clarify. Michael Devereux (in “Taxes and the Size of Foreign-Owned Capital Stock” jointly with Ben Lockwood) reported empirical evidence on the impact of the EACTR and EMCTR on the size of capital stock owned by US MNEs abroad. Their results indicate a large significant role for the EACTR, but not for the EMCTR. This suggests that the choice of where to invest is more important in determining the size of foreign owned capital stock than the choice how much to invest. This is because, according to theory, the location decision is determined by EACTR, whereas the decision how much to invest (conditional on location) is affected by the EMCTR.

In the same spirit, Christian Bellak and Markus Leibrecht

Conference report, contd...

(“Foreign Direct Investment in Central and East European Countries: A Panel Study”) analysed the effect EACTR on FDI directed towards Central and Eastern European countries and its relative importance. Contrary to similar studies conducted in the past they used EACTR instead of statutory tax rates. The results show that EACTR is an important location advantage and that its effect is almost as important as that of real unit labour costs. The estimate they obtain is in absolute value above those of existing studies because, the authors argue, they use EACTR instead of the statutory tax rates.

John Mutti in “The Changing Nature of US Investment Abroad in Manufacturing” (jointly with Raicho Bojilov) investigated empirically the sensitivity of US outward FDI towards OECD and non OECD countries from 1982 to 1999. They considered the impact of tax policies along with other host countries’ characteristics, such as the level of demand, factor endowments and other determinants of costs. Estimates suggest that MNEs’ activities increased in those countries where GDP per capita grew most and where trade barriers and taxes declined. Also the distinction between OECD and non-OECD seems to be important. MNEs activity in OECD countries seems to depend more on the host country demand and complementarities in terms of technological development. MNC activity in non-OECD countries appears to be determined by competitive cost conditions, such as taxes and technology.

The empirical literature has produced a plethora of, sometimes conflicting, results. The contribution of Ruud de Mooij (“How Does Foreign Direct Investment Respond to Taxes? A Meta Analysis” jointly with Sjef Ederveen) shed light on what factors determine these differences in results across studies. The authors collected 25 studies for a total of 427 semi-elasticities on the impact of tax rates on FDI. One first interesting result of their analysis indicates that discrete choice studies regarding location yield systematically smaller estimates than studies using FDI values. Thus, it seems that the amount of capital invested is more responsive to taxes than the location decisions themselves. With respect to tax data, a robust finding is that studies using the effective tax rates produce larger elasticities than studies using statutory tax rates.

A lot was learnt from the studies presented and the ensuing discussions. Probably, fears of a “race to the bottom” are exaggerated. However, it also appears that tax rates are an important location factor for MNEs, whose effects need be compared with those of more traditional factors, such as labour costs. As usual, an event like this also elicits many new research questions, such as the relative and different effects of the EACTR and EMCTR on FDI flows and the role of country heterogeneity with respect to tastes for the public good. They wait to be more deeply investigated.

GEP Annual Conference

22nd – 24th June 2006

“China and the World Economy”

Speakers include:

Mary Lovely (Syracuse)

Deborah Swenson (UC Davis)

Shujie Yao (Middlesex)

Lina Song (Nottingham)

Holger Görg (GEP, Nottingham)

Sandra Poncet (CEPII, Paris)

Nannan Lundin (OECD)

Xiaolan Fu (Cambridge)

Linda Yueh (London School of Economics)

Tain-jy Chen (China Institute of Economic Research, Taiwan)

For further details see the GEP website www.gep.org or contact sue.berry@nottingham.ac.uk

Taxation and FDI in CEECs

*Location decisions of Multinational Enterprises depend inter alia on location factors of the host country. Despite theoretical models of the location choice of Multinational Enterprises showing that the effective average tax rate is the relevant measure of tax burden, recent empirical papers on Central- and East European Countries use statutory tax rates as determinants of the Foreign Direct Investment decision. In this paper, **Christian Bellak** and **Markus Leibrecht** use bilateral effective average tax rate to derive the (semi-)elasticity of Foreign Direct Investment with respect to corporate income taxes. Christian Bellak and Markus Leibrecht are researchers at the Vienna University of Economics and Business Administration and presented this paper at the GEP Workshop on “FDI and Taxation” on 3th October 2005.*

In recent years many Central- and East European Countries (CEECs) have lowered their corporate tax rates in order to attract Foreign Direct Investment (FDI). Indeed, as tax rates have decreased during the last ten years, FDI inflows increased at high rates. A widely held view is that corporate income taxes are an important location factor influencing the location decisions of Multinational Enterprises. The tax burden is a cost and should therefore be negatively related to the inflow of FDI into a host country.

Another commonly held view is that the tax burden is of less influence. This is based on three arguments: first, taxes are just one location factor among many others. Since few FDI is efficiency-oriented but most FDI is horizontal FDI, where cost considerations play a minor role, other location factors are believed to be important too. These factors can be grouped into market-related factors (e.g. size of host-country market, purchasing power, market potential) and host-country economic policy factors (e.g. trading blocs, public infrastructure, education, regional policies, bilateral investment treaties, special economic zones). Additionally, in the case of the CEECs, location factors specific to the transition process like hyper-inflation, privatisation, recessions, exchange-rate fluctuations etc. may play an important role. Second, some authors argue that MNEs are able to avoid taxes via profit shifting etc. Third, the larger the difference in the mix of location factors in the

host countries, the smaller should be the influence of a single factor like taxation.

It follows that *ceteris paribus* the tax burden should be more important the larger the differences between locations (here: countries) with respect to other location factors. Whether taxes are an important location factor therefore remains mainly an empirical question.

This paper seeks to analyse how responsive FDI are to the lowering of the corporate-income- tax burden in the Central- and East-European Countries during the period 1995-2003. In particular, the aim of the paper is three-

“...a one percentage point reduction of the effective tax rate (evaluated at the mean tax rate) leads to an additional FDI inflow of 4.5 percent.”

fold: first, we examine the role of corporate tax burden as a location factor for FDI in CEECs and compare it to earlier results; second, we assess the impact of different measures of tax burden on the tax elasticity; and third, we analyze the role of taxes compared to other location factors.

The eclectic paradigm developed by John Dunning is used as the theoretical basis of our analysis. Based upon various theories (e.g. trade theory, theory of the firm and theory of industrial organization) the OLI-paradigm avers that a firm uses FDI as the route of foreign market servicing, if it has an Ownership (O) advantage (e.g. a patent); combined with a Location (L) advantage abroad (e.g. low production costs; large market size) and an Internalization (I) advantage (e.g. economies of interdependent activities). We assume that the decision to invest abroad rather than to export or use contractual

Taxation and FDI contd...

agreements has already been made by the MNE, we are entirely concerned with the question “Where to invest?”. Therefore, the location-advantages of each host country are the relevant decision parameters.

Turning to empirical matters, we estimate a panel of 56 bilateral country-relationships of 7 home and 8 host countries. The home countries are the most important foreign direct investors in the CEECs in terms of invested stock and comprise the UK, the US, Germany, France, Italy, the Netherlands and Austria. The host countries are the major recipients of FDI during the last decade and include Bulgaria, the Czech Republic, Croatia, Hungary, Poland, the Slovak Republic, Romania and Slovenia.

The measurement of the tax burden, the variable of our main interest, raises difficult methodological questions (cf. Bellak et al, 2004). The host-country statutory tax rate has various shortcomings, such as it excludes the tax base and relevant tax codes of the home country or the international and supranational tax code. The present paper distinguishes itself from the existing studies by including a theoretically well founded measure of the tax burden contrary to earlier studies using *statutory* tax rates, *bilateral effective average* tax rates (following Devereux and Griffiths 1999) are used as a measure of the corporate tax burden. In line with other results, mainly on OECD countries, we expect a higher semi-elasticity in our study.

Following earlier studies on trade, a gravity-model setting, the triple-indexed specification by Mátyás (1997), is used. FDI flows are used as the dependent variable. The explanatory variables included in our initial specification

comprise market-related factors (GDP of home and host country), cost-related factors (distance, real unit labour costs, distance, tax) and transition-specific factors (privatization revenues, political risk, inflation). Also, we control for home, host and time-specific effects. Pooled OLS with cluster robust standard errors are used. Our preferred specification includes the gravity-variables (distance, GDP home and GDP host), the bilateral effective tax rate, annual privatisation revenues, unit labour costs (including home country and time dummies) after testing for the significance of single or joint variables (e.g. inflation, political risk, host country dummies). All variables carry the expected sign.

The results indicate that taxes are an important location advantage determining the location decisions of foreign MNEs. The semi-elasticity of FDI with respect to taxation is -4.5 (see also DeMooij and Ederveen 2003 on OECD countries). Thus, a one percentage point reduction of the effective tax rate (evaluated at the mean tax rate) leads to an additional FDI inflow of 4.5 percent. This semi-elasticity is well above those of existing studies in absolute terms. This can partly be attributed to the fact that the effective tax rate is used as a measure of tax burden instead of the statutory tax rate. Moreover, taxation is almost equally important to other cost factors like real unit labor costs. This relates more to the second view outlined in the introduction. The main drivers of FDI established in this paper are the GDP of the host and home country as well as distance.

Further readings:

Bellak C., M. Leibrecht and R. Römisch (2004) ‘New evidence on the tax burden of MNC activities in Central- and East-European New Member States’, SFB International Tax Coordination Working Paper No. 2 (Vienna: Vienna University of Economics).

Devereux, M.P. and R. Griffith (1999) ‘The taxation of discrete investment choices’, *IFS Working Paper Series* No. W98/16.

DeMooij, R. A. and S. Ederveen (2003) ‘Taxation and foreign direct investment: a synthesis of empirical research’, *International Tax and Public Finance* 10, pp. 673-693.

Mátyás, L. (1997) ‘Proper Specification of the Gravity Model’, *The World Economy*, 20(3), pp. 363-368.



Call for Papers

5th Annual Postgraduate Conference

21st April 2006, University of Nottingham

The Conference is intended to provide a forum for the dissemination of student research relating to issues of Globalisation and Economic Policy from both theoretical and empirical perspectives. These areas include Foreign Direct Investment, Trade, Productivity, Migration and Labour Market Adjustment.

The objective of the Conference is to bring together a number of Ph.D. students to discuss their own research ideas with established researchers in a relaxed and open atmosphere. Speakers will be selected on the basis of submitted abstracts.

The call for papers is at www.gep.org.uk/conferences/postgrad_conf_2006

Deadline for submissions is 15th February 2006; to be sent to sara.maioli@nottingham.ac.uk

Information on the 2005 Conference can be found on the Leverhulme Centre Website (<http://www.gep.org.uk/conferences>) or contact sue.berry@nottingham.ac.uk

The World Economy

Annual Lecture 2006

Professor Richard Baldwin

*Professor of International Economics, Graduate Institute of
International Studies, Geneva*

on "Asian Regionalism"

Thursday 22nd June 2006, University of Nottingham

For further details contact sue.berry@nottingham.ac.uk

A Brief History of International Trade with Perspectives on Theory and Methods:

Part I: The History

International trade theory has a long tradition in economics. In the first of a series of two articles Daniel Bernhofen gives a brief history of trade theory and highlights the key turning points it went through. In the next issue Daniel will offer his perspective on the relationship between theory and empirical methods. Daniel is Professor of International Economics at the University of Nottingham and the Co-ordinator of the newly established GEP research programme on Theory and Methods.

International trade is the oldest sub-discipline of economics. The formal, or model-based, inquiry of international trade had its genesis in chapter VII of Ricardo's *Principles of Political Economy and Taxation*, which appeared in 1817. Ricardo's discussion of the benefits of trade between England and Portugal, illuminated by his "four magical numbers", set the agenda for analytical inquiries of why countries trade and what the gains from trade are.

The analytical treatment of international trade needs to be embedded in a theory of value, i.e. a theory that relates exchange values to underlying fundamentals. Ricardo's trade theory was embedded in

his labour theory of value, which postulated that relative exchange values are, for the most part, determined by the labour embodied in them. Keeping in mind the types of commodities that were traded at the time of Ricardo's writing, this was a sensible assumption. The emergence of 19th century consumer society brought with it a change in the perception on the fundamentals behind economic value. The 'marginal revolution', associated with the names of Jevons, Menger and Walras, shifted the emphasis from *production cost* to *consumer utility* as the main determinant of value.

During the second part of the 19th century and the first two decades of the 20th century economic thought on international trade took place in an intellectual envi-

ronment where political economists were wrestling with how to reconcile these two different perspectives on value. By the late 1920s, Ricardo's labour theory of value was perceived to be very antiquated. Furthermore, the concept of comparative advantage was believed to depend on Ricardo's labour theory; therefore, comparative advantage was not viewed as a credible concept.

During the early 1930s international trade theory experienced its first path-breaking turning point, the result of

"Haberler settled once and for all the dead-end discussions on value by suggesting [that] the value of a commodity is what needs to be given up to obtain it."

two complementary intellectual achievements, both motivated by the criticism of Ricardian trade theory. In 1930 Gottfried Haberler freed the theory of comparative advantage from its association with Ricardo's labour theory of value and provided us with its

modern opportunity-cost formulation. Haberler settled once and for all the dead-end discussions on value by suggesting a highly flexible and unifying framework for the determination of value: *the value of a commodity is what needs to be given up to obtain it*. The second milestone was Bertil Ohlin's 1933 *Interregional and International Trade*, which built on Heckscher's classic 1919 article on Foreign Trade. Ohlin's work set the agenda for what has become known as the Heckscher-Ohlin-Samuelson model. Haberler's opportunity cost formulation set the foundation of what has become known as general equilibrium trade theory. Ohlin was awarded the Nobel Prize for his contribution. Haberler was overseen by the Committee.

Trade theory history..., contd.

The next 50 years witnessed the construction of the neo-classical trade model: from vague formulations (1930s and 40s) to precise specifications that map assumptions into predictions (1980s). All of this would not have been possible without the formalisation of economics, of which Paul Samuelson was the prime architect.

The legacy from this research period is the competitive general equilibrium trade model and its core predictions about the gains from trade, the pattern of trade and the effects of international trade on factor incomes.

Leontief's 1953 finding that the US trade pattern was at odds with the Heckscher-Ohlin prediction, the so-called 'Leontief paradox', is arguably the genesis of

formal empirical work in international trade. Leontief's finding motivated economists to resolve it and it has been resolved, on theoretical and empirical grounds. However, data analysis which is motivated by trade theory still remained a relatively minor affair in international trade for several decades.

The increased availability of cross-sectional data allowed empirically oriented trade economists- like Belassa, Grubel and Lloyd- to identify two empirical regularities that seemed at odds with the neoclassical trade model. They found that the majority of world trade occurs among economies with similar characteristics, whereas comparative advantage trade theory stresses country differences as the cause of international trade. Second, data analysis revealed that a large amount of trade took place within industries, whereas the Heckscher-Ohlin model stresses inter-industry differences. Similar to half a century earlier, by the late 1970s trade theory appeared to be in a crisis. This time the crisis was due to lack of empirical relevance.

The emergence of the new trade theory age during the late 1970s and early 1980s was the second turning point in the history of the discipline. Although several economists played a pivotal role in the development of the new trade theory literature, Paul Krugman deserves to be singled out. Motivated by the aforementioned empirical regularities and building on the insights of the theoretical industrial organization literature, the new trade theory models were able to rationalise intra-industry trade, explain the *existence* of trade even among identical

“...the new trade theory models were able to rationalise intra-industry trade, explain the existence of trade even among identical economies and predict that the volume of such trade increases in country similarity.”

economies and predict that the volume of such trade increases in country similarity. These models have had two major impacts on international trade theory. First, they formally identify gains from trade that have been lingering

around for some time, but which were not subject to systematic investigation. Whereas in the neoclassical trade model gains from trade stem from a reallocation of fixed resources, the new trade theories models identify (i) consumer gains from increase in variety (ii) global welfare gains from the reduction of firms' market power and (iii) market size gains resulting from an international fragmentation of production. Second, these increasing returns to scale models set the foundations for the endogenous growth literature, the new economic geography literature and other emerging international trade 'sub-literatures'. They have greatly enriched and broadened international trade theory.

During the last decade and a half, international trade has transformed itself slowly from a mainly theoretical field into a discipline with theoretical and empirical emphasis. In the next issue I propose some perspectives on the interrelationship between theory and empirical methods.

Time to Make or Break for the Doha Agenda

*In December 2005 there is a crucial WTO Ministerial Conference in Hong Kong, which is likely to decide the fate of the Doha agenda for trade liberalization. In this article **Sam Laird** describes what are the prospects of striking a deal to further liberalise trade. To achieve this it is necessary to overcome huge obstacles for developed and developing countries alike. Sam is Visiting Professor at the World Trade Institute, Bern and Inter-regional Advisor, Division for International Trade, UNCTAD, Visiting Professor of International Economics at the University of Nottingham and a GEP Policy Associate. (The views expressed are personal and do not necessarily represent those of the organisations with which he is affiliated.)*

In recent weeks, expectations for the Sixth Ministerial Conference in Hong Kong on 13-18 December have been scaled back or "recalibrated" (as Pascal Lamy puts it) and no major breakthrough in the current multilateral negotiations is now expected. Efforts have most publicly foundered over disagreements on agriculture, but other areas also have unresolved problems, notably non-agricultural market access (NAMA), services, rules (anti-dumping), TRIPS and public health. The meeting, which is part of a regular biennial process, is now likely to be a stocktaking exercise on the state of play of the negotiations, with the possibility of breakthroughs in such areas as TRIPS/Public Health or cotton subsidies that affect poor African producers. It is also likely that Ministers will take the opportunity in informal meetings to see where progress can be made.

Does the timing matter? The US Fast Track authority to complete negotiations without Congress unravelling any deal expires in March 2007. Given the time it takes to complete the legal documents to conclude a round of negotiations, this means that the key elements need to be in place in the next few months. Failure to settle on those elements at this time is a setback for the negotiations and will now put intense pressure on ne-

gotiators.

What is at stake? Estimates by UNCTAD and the World Bank suggest that a deal could produce annual global welfare gains in agriculture and non-agricultural products (including fish) of the order of \$70-150 billion each in the longer term, depending on the scenario and various technical assumptions. Liberalising trade in services is potentially even more important, especially if temporary movement of labour (Mode 4) were substantially opened up, but this is highly controversial in developed countries.

"[Estimates] suggest that a deal could produce annual global welfare gains in agriculture and non-agricultural products (including fish) of the order of \$70-150 billion each longer term."

Why is a deal in Hong Kong so important? In the aggregate, the gains amount to less than 0.5 per cent of global incomes, but proportionately it is estimated that much larger gains are to be

had in agriculture, textiles and clothing and the temporary movement of labour – gains which are crucial for many of the poorest developing countries and for the poorest members of their societies. In addition, a WTO deal could help bring about fairer trade rules for developing countries.

What are the blockages? In agriculture and NAMA, serious disagreement remains about "modalities", particularly on how to cut tariffs (and implicitly by how

had in agriculture, textiles and clothing and the temporary movement of labour – gains which are crucial for many of the poorest developing countries and for the poorest members of their societies. In addition, a WTO deal could help bring about fairer trade rules for developing countries.

Doha make or break, contd...

much). Agricultural exporters are pressing the EU in particular for an improved offer, while some EU Member States feel that the current EU internal reforms set a limit on what they are able to offer. (However, a number of other countries are also fearful of ambitious liberalisation in this area, e.g. Japan, Korea, Switzerland.) A key issue is the extent to which sensitive items would be excluded from the EU commitment or subject to lesser reductions. US cotton subsidies are also a concern for West African producers. Export subsidies are to be eliminated but no decision has yet been made on timing. In NAMA the key issue at this stage is the choice of a formula for tariff-cutting, with the focus on variations on a "Swiss" formula (first used in the Tokyo Round) that cut high rates more than proportionately (so-called "harmonizing" approaches). In services, developing countries are resisting pressures to agree to some kind of formula or numerical approach that would commit them to liberalising access to a specific number of sub-sectors.

In both NAMA and services the larger developing countries, such as Brazil and India, are under pressure to open their markets significantly, while they are *demandeurs* on agriculture. This highlights one of the key areas of trade-offs, particularly since the negotiations are covered by a "Single Undertaking", requiring agreement on all areas of negotiation ("nothing is agreed until all is agreed"). Thus, finding a compromise across the range of negotiating issues is a daunting task.

What are some of the developing country issues? Apart from improved access to developed countries' agricultural and labour markets, some developing countries see harmonizing approaches in the market access area as running counter to the Doha requirement of allowing "less than full reciprocity" (lesser commitments) for developing countries. Some such countries feel that they need some flexibility or "policy space" or flexibility to use tariffs for industrial development purposes, to mitigate the impact of liberalisation on output and employment in key sectors and to avoid resorting to alternative WTO measures, such as anti-dumping. While substantial gains may be ex-

pected, these will not be uniform across countries or sectors, with moderate aggregate changes concealing substantial sectoral gains and losses in some countries, causing concerns about structural unemployment. The LDCs and ACP countries are concerned about the negative effects accruing as the tariff preferences they receive become less significant under general (MFN) tariff reductions and are looking for compensation. Other developing countries are concerned about the loss of tariff revenue, which in some cases makes up 25%-to-50% of their government revenues.

What can be done to address these issues? First, developing countries will need time to adjust to the changes and develop new productive activities. They also need time to find replacement taxes for lost revenues. Second, some form of compensation might be offered to help offset

“Most of the technical work has been completed and it is now time to find the political will to carry the negotiations to their final conclusion.”

preference losses, although existing preference schemes could also be expanded and made to work better. Third, substantial support is needed to help the developing countries adjust to the expected changes, including through provision of social safety nets and to help the weaker economies build

the capacity to trade. Research shows that in sub-Saharan Africa the biggest bang for the development buck would be in building trade-related physical infrastructure. While this would take some time to come on stream, construction activity would create jobs and bolster the incomes of the poor. In the longer term, money needs to be spent on building human capital, particularly on developing skills that are in short supply. But such funding is unlikely to come through WTO processes, suggesting a need for substantial "aid for trade" from donors so that ultimately trade can replace aid.

What next? The overhanging threat of expiry of the US Fast Track negotiating authority means that there will be determined efforts in 2006 to find the compromises that are needed to finalise the negotiations. Most of the technical work has been completed and it is now time to find the political will to carry the negotiations to their final conclusion.

Import-Export Intermediaries in International Trade

Trade intermediaries – agents who purchase from manufacturers for resale abroad – are an important institution in reality, but have been mostly ignored in trade theory. In this article, Philipp Schröder, based on ongoing joint research with Harald Trabold, takes a look at the phenomenon of intermediated trade. Philipp is Associate Professor of Economics at the Aarhus School of Business, Denmark.

One of the striking discrepancies between the theory and the reality of international trade concerns trade intermediaries. While much trade theory maintains the fiction that producers sell directly across borders to consumers, trade intermediaries play a major role in real world trade. Well-known examples of trade intermediaries range from the Hanseatic League in medieval Europe to the Sogo Shoshas in today's Japan. Such intermediated exports for example account for approximately 40% of Japanese exports and 30% of German exports and vary according to commodity group and country of destination. In France, for example, trade intermediaries account for 70% of exports to Ethiopia, but only for 3% of exports to Indonesia.

Intermediaries are an important institution of many economic systems and micro economic theory addresses their role (e.g. Spulber, 1998). Intermediaries match buyers and sellers indirectly and feature, for example, intensively in financial markets or real estate markets. A key distinction must be drawn between intermediaries who work on a commission basis for buyers and sellers (brokers) and intermediaries who trade on their own account (traders). While brokers never actually own the goods, traders own the goods at some point in time and thus bear all or part of the risk associated with trading. It is the latter type of trade intermediation that the present research examines.

In contrast to the international economics literature on trade, management science research in the field of inter-

national business has debated firms' decisions concerning export channels intensively, thus providing a detailed separation of export channels ranging from own sales offices to licensed trade and various hybrid forms of export activity. Some of the reoccurring themes in the literature are that trade intermediaries can gain advantages over direct exports in a number of ways, especially by pooling and diversifying risks, reducing transaction costs and lowering costs of matching and searching. Viewed in this way, a production firm's choice of export channel, either own direct exports or intermediated indirect exports, is similar in nature to their decision of accessing a foreign market via exports or via FDI. It is this decision that the present research attempts

to incorporate into a standard intra-industry trade model. Furthermore, we examine why and when trade intermediaries are used as agents for exporting to different markets and we empirically examine the share of intermediated exports to different destinations in a new data-set on French exports.

Our theory focuses on the role that trade intermediaries have by pooling the fixed costs of exporting. The framework builds on a standard intra-industry trade model, but replaces the usual iceberg costs assumption with both variable and fixed export costs. Such set-up allows us to generate a basic wedge between large firms that engage in direct exports and small firms servicing only the home market. Intermediated indirect exports can then be included into the framework by allowing non-

“While much trade theory maintains the fiction that producers sell directly across borders to consumers, trade intermediaries play a major role in real world trade.”

Globalisation and imperfect labour markets contd...

exporting firms to pool part of the fixed export costs via a trade intermediary. From such model, one can establish a welfare gain that stems from trade intermediation and we can derive certain predictions concerning the share of intermediated exports in total exports. For example, our theory predicts that the higher the fixed costs of exporting, the higher the share of intermediated exports in total exports, or the larger an export market, the more likely it is accessed via direct exports.

The empirical part of our research attempts to provide a clearer picture of the patterns of trade intermediation and to test predictions of our model. The lack of systematic empirical analysis of trade intermediation is probably caused by

limits to data availability. In fact, the export information of most countries simply does not distinguish between direct and indirect exports. We overcome this problem by developing a new data set based on enterprise-related French customs data. Until completion of the European Single Market in 1992, French customs records of foreign trade transactions were the primary source for the official trade statistics. They were compiled from the export and import declaration forms, which firms had to provide when merchandise crossed the border. Among other items, these administrative documents contain a unique number identifying the firm owning the merchandise (i.e. exporters or importers) and the firm that is the carrier of

the goods. This information gives us the opportunity to separate firms into actual manufacturers and trade intermediaries.

With this data, we are able to assess some of the key factors that are decisive for answering the question of why the share of intermediated exports differs from destination country to destination country. First results confirm predictions derived from our theory and the trade intermediary literature in general. In particular, we

“...the more difficult and costly the market access to a certain export market is, the more buyers and sellers will rely on trade intermediaries...”

can establish that the more difficult and costly the market access to a certain export market is, the more buyers and sellers will rely on trade intermediaries as a means of tackling these costs. Second, the higher the relevant market size of the destination

country is, the lower is the share of intermediated exports. We also find that intermediated exports to former French colonies are much higher than to otherwise similar countries. This underlines that network effects play an important role in accessing foreign markets and history matters in forming these ties. However, our empirical analysis arrives at no clear results concerning the influence of geographical distance on the share of intermediaries in total exports. Overall, this research is only a first step towards examining intermediated exports; future research will have to address further empirical and theoretical questions that stem from the existence and role of intermediaries in international trade.

Further readings:

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Sue Berry

Leverhulme Centre for Research on Globalisation and Economic Policy

School of Economics

University of Nottingham

University Park

Nottingham NG7 2RD

+44 (0) 115 951 5469

E-mail: sue.berry@nottingham.ac.uk

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