



Business services, growth and modes of service internationalisation

by Luis Rubalcaba and Stefano Visintin

What is it about

Business services

- Growth
- Globalisation

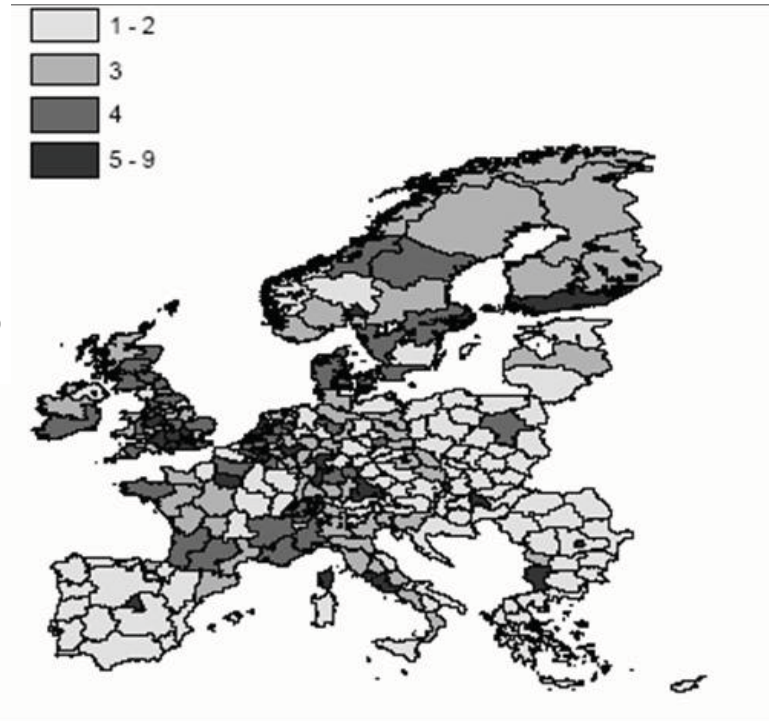
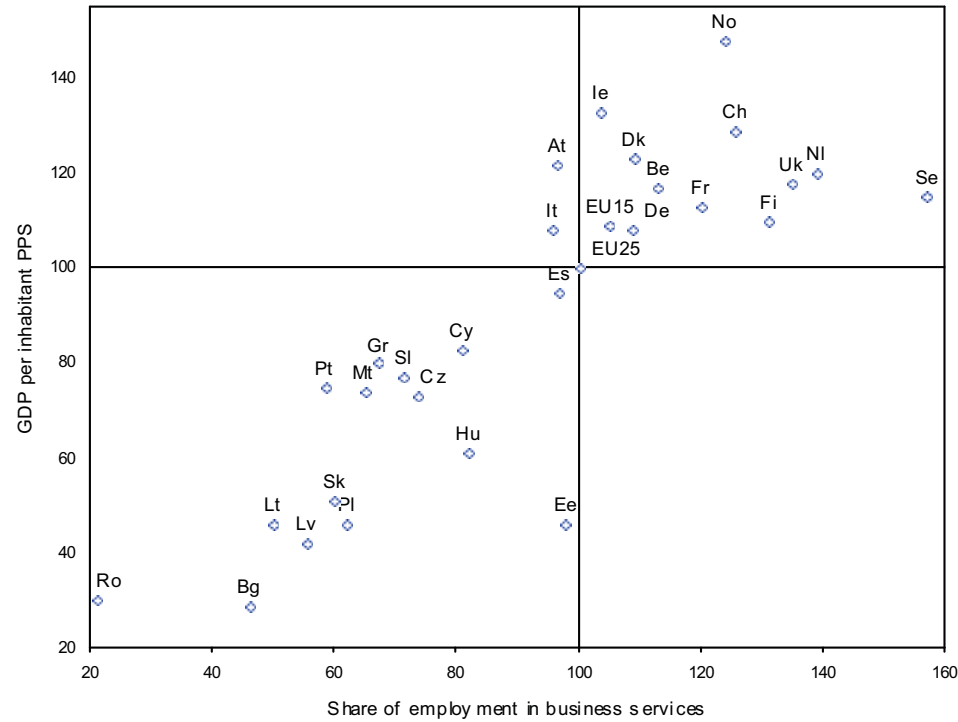
Services internationalisation

- Modes and Characteristics
- Main research theme: interaction between modes of internationalisation

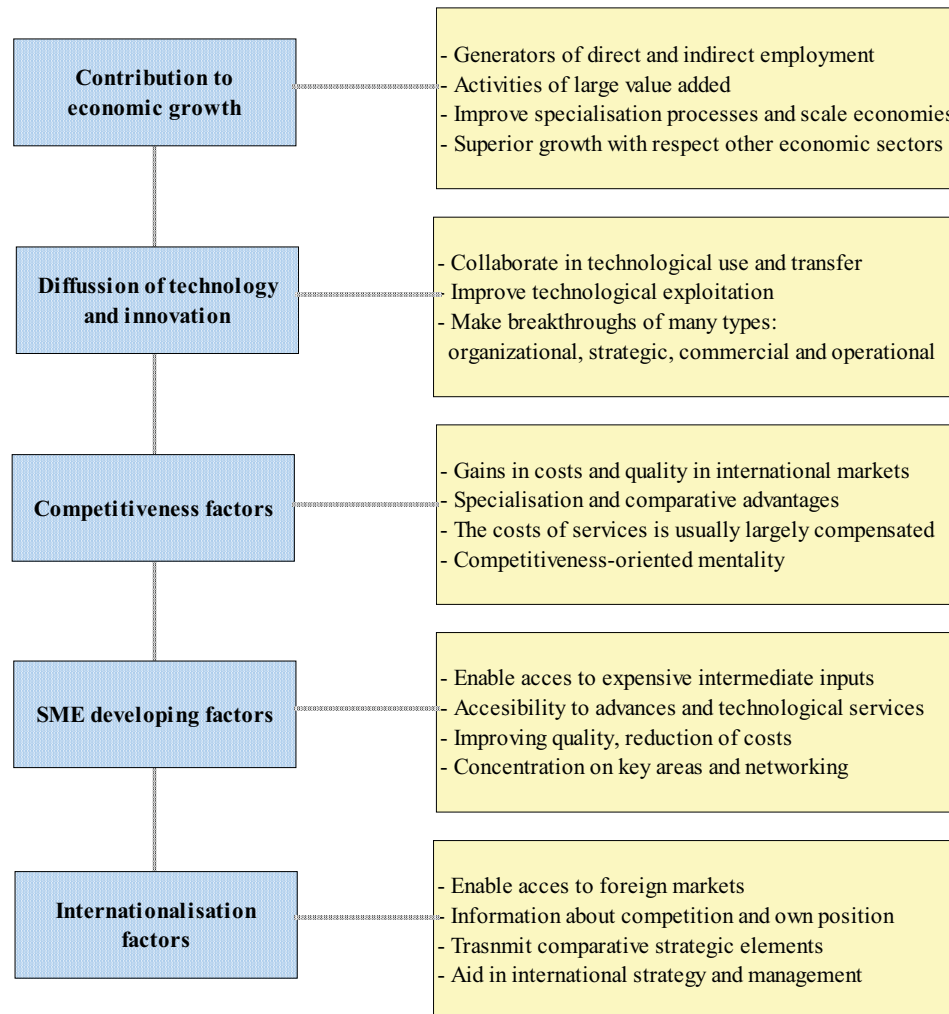
Defining business services as part of producer services

Producer services			
Business related services			
Business services			
		Knowledge intensive business services (KIBS)	Operational business services
Consumer services partly used by enterprises (business travel, company health services, social insurance services)	Banking, insurance, stock exchange Telecommunication Energy services Distribution and trade services Transport and logistics	Strategy and management consulting Software and computer services Accountancy, tax and legal advice Marketing services Personnel services, headhunting	Security services Administration, bookkeeping Temporary labour recruitment Security services Other operational services

Business services and growth



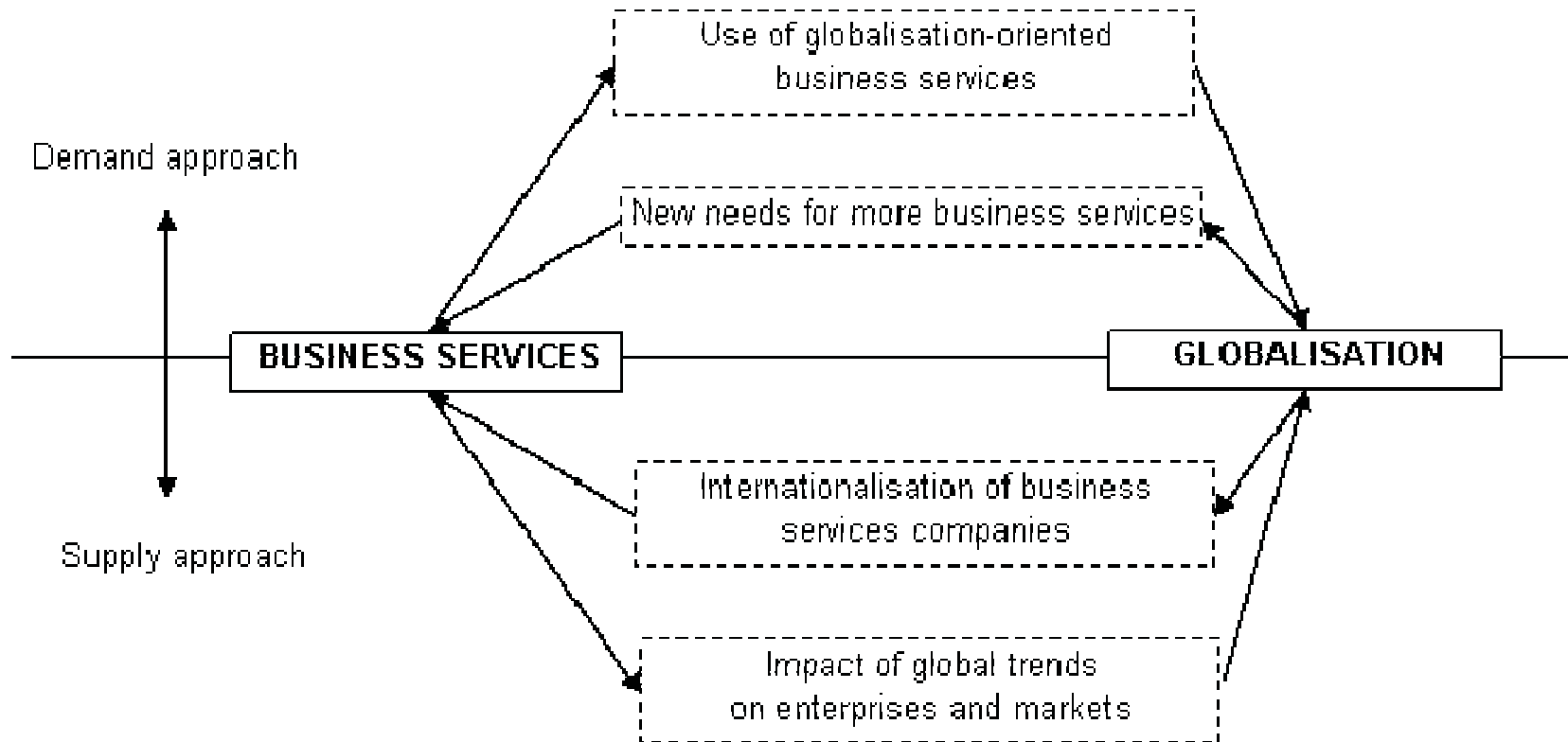
Functions of business services in economic and industrial development



Survey of empirical studies with regard to the impact of Business services inputs on aggregate productivity change and growth

Study and main approach	Country, coverage	Productivity or spillover indicator	Main findings
<u>Ecorys-NEI (2004)</u> Cross-section production function, compares estimated coefficient for the TBSS contribution to aggregate output with the actual BSS cost share in intermediate inputs	7 EU countries + Australia, Canada, Japan, Norway, 1994-1998	Difference between actual cost share and estimated production contribution	(a) For France, Germany, Canada, for the EU total, and for the pooled regression: estimated contribution is 1.5 to 2.5 the actual cost share. (b) coefficient for TBSS is not significant in regressions for other individual countries.
<u>Antonelli (1999)</u> Calculate production elasticities for TBSS use in production functions for a large range of industries (cross- section and time series)	4 EU countries (IT, FRA, GERM, UK), 1988-1990	Value added impact of TBSS use	Effect of TBSS use on value added of client industries: a 1% increase in BSS inputs caused value added to increase by on average 2.6 to 4.2%
<u>Greenhalgh & Gregory (2000)</u> Growth decomposition in input-output framework: tracing key sectors that generate cost savings and product improvements	UK, 1979-1990	Labour productivity growth, R&D spillovers	TBSS industry key sector for productivity growth during 1980s, causing large labour saving in other industries. TBSS also important player in the forward transmission of rising product quality
<u>Katsoulacos & Tsounis (2000)</u> Correlation between TFP residuals of industry production functions and BSS use, 75 industries	Greece, 1980-1988	TFP, TFP growth	Strong correlation between TBSS use and TFP levels and TFP growth of industries
<u>Camacho and Rodriguez (2007)</u> Production function with KIS and KIBS as inputs. Separately: innovation diffusion by KIS/ KIBS through product-embodied R&D.	DK, GERM, SP, NL, UK, 1995-1998	Production, productivity and product embodied R&D diffused by KIS	Positive and significant impacts of KIS on production and productivity. In this second case, no clear results for the UK and Spain. Concerning diffusion on innovation, uneven results by country and sector were identified, but positive impacts dominate.
<u>Pilat & Lee (2001)</u> Decomposition aggregate labour productivity growth by industry contributions	5 EU countries (DK, NL, FIN, IT, GERM), 1989-99	Aggregate labour productivity growth	Inputs of non-IT Business Services inputs contributed negatively except in Denmark (period 1995-1999) ^{a)}

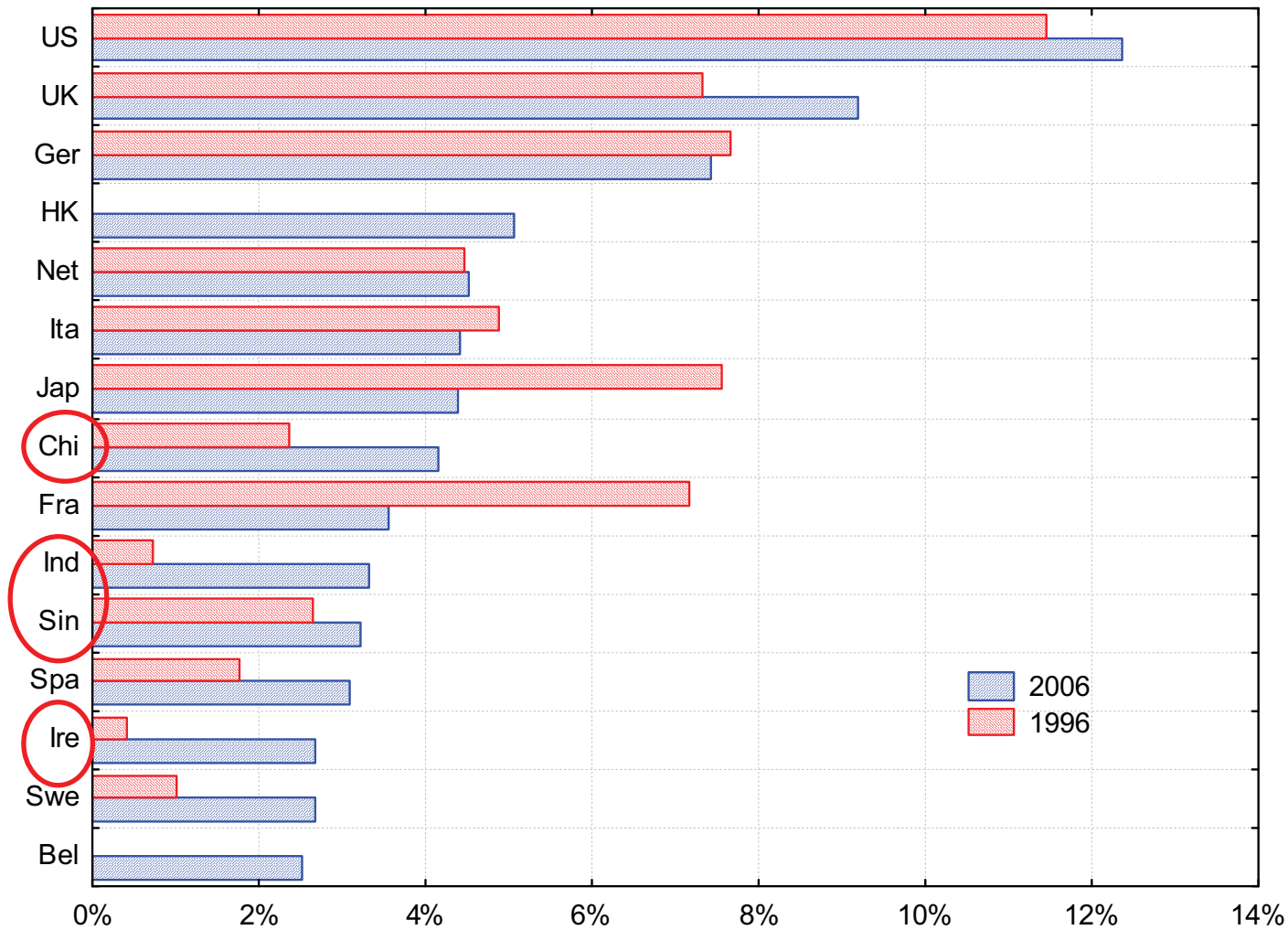
Relationships between business services and globalisation



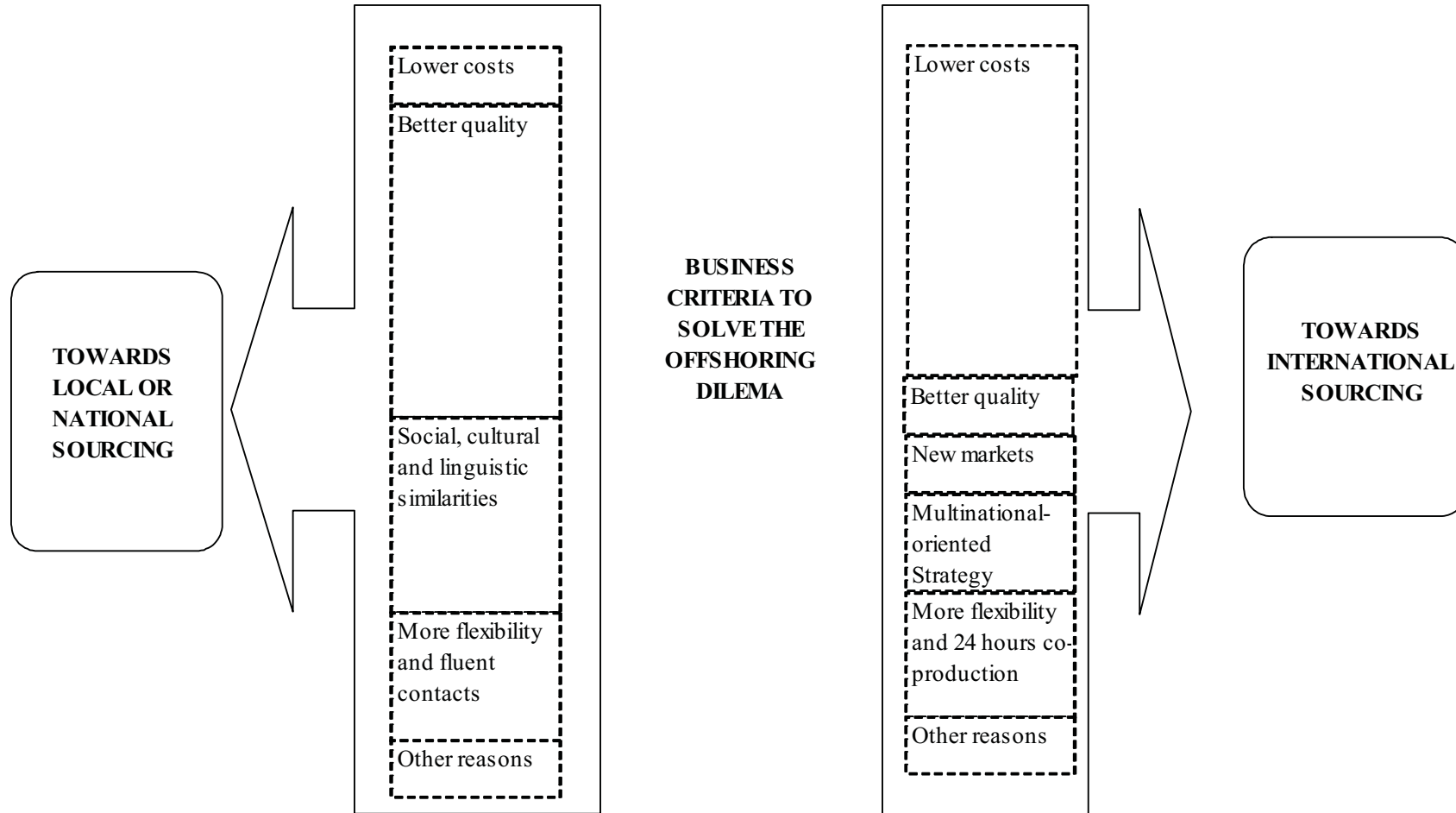
The role of business services satisfying global needs: a demand approach

	<i>Needs and opportunities of/for enterprises derived from globalisation</i>	<i>Business services contributing the most to satisfy the related-global needs</i>
Inputs	Global access to capital and production of globally competitive technical innovation	-Financial auxiliary services -Engineering and technical services -Tests and quality control -Research and development -Design
	Global access to labour and use of new global skills in local markets	-Selection and provision of personnel -Head hunting -Professional training - Outplacement -Temporary work
	Access to and management of global knowledge	-Computer and other ICT services -Internet and intranet services -Consultancy on information technologies and knowledge management
Markets	Access to new markets	-Management consultancy -Market research -Export aid -Fairs and exhibitions -Legal services
	Adaptation of global products into local needs & creation of new needs	-Advertising and direct marketing -Public relations and press offices -Market research and management -Distributive trades -Services related to Internet: B2B, B2C, web pages
	Global reputation	-Brands and mark services -Communication services -Environmental services and CSR
Locations	Outsourcing to low-costs countries	-High-skilled ICT services (e.g., accountancy and reporting) -Low-skilled operational services (e.g., call centres)
	Transport and communication between different locations	-Logistics and transport services -Communication services

Business services main 15 world exporters, 1996/2006

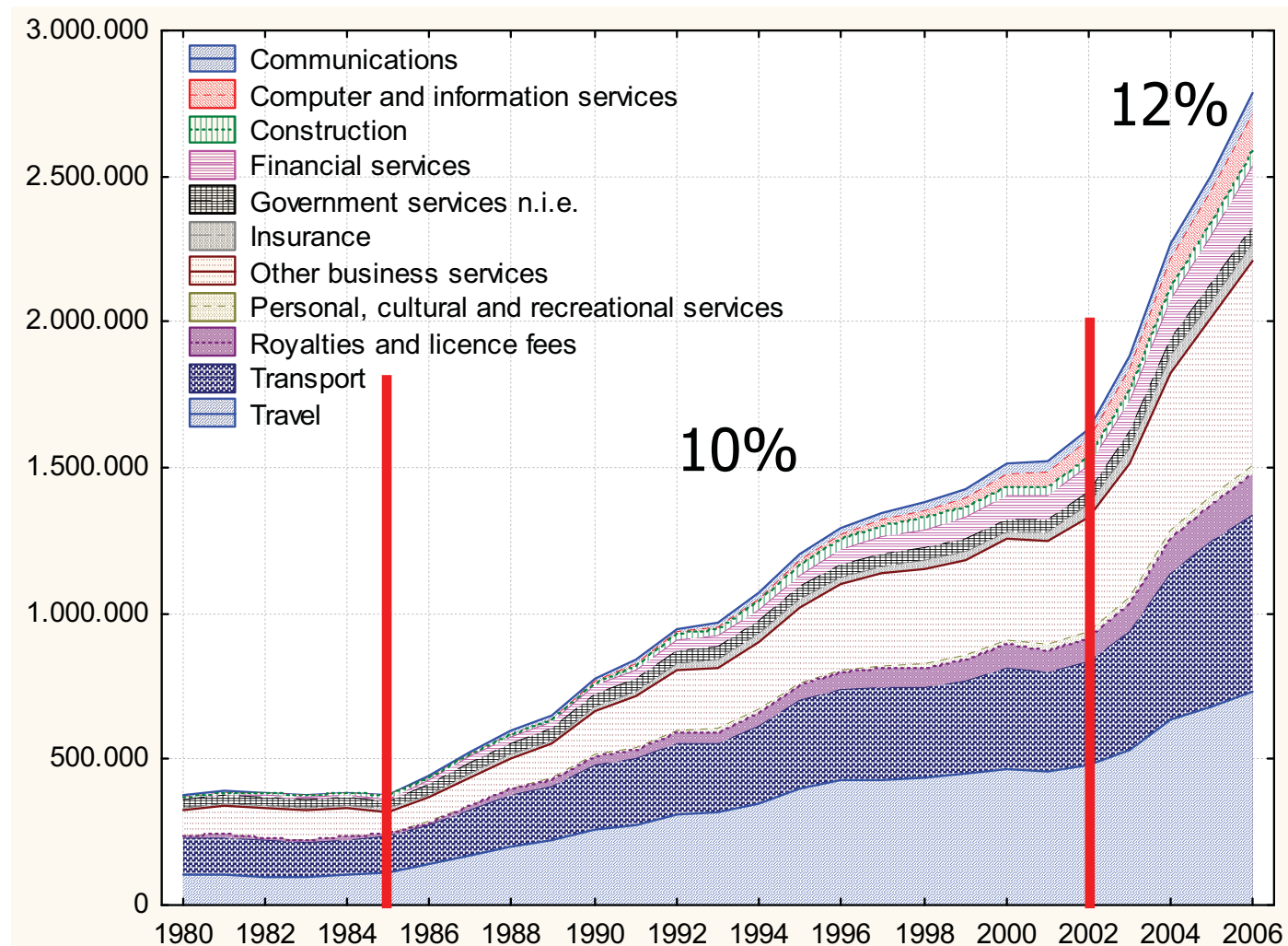


Services global sourcing and offshoring: a major challenge



Source: Rubalcaba (2007)

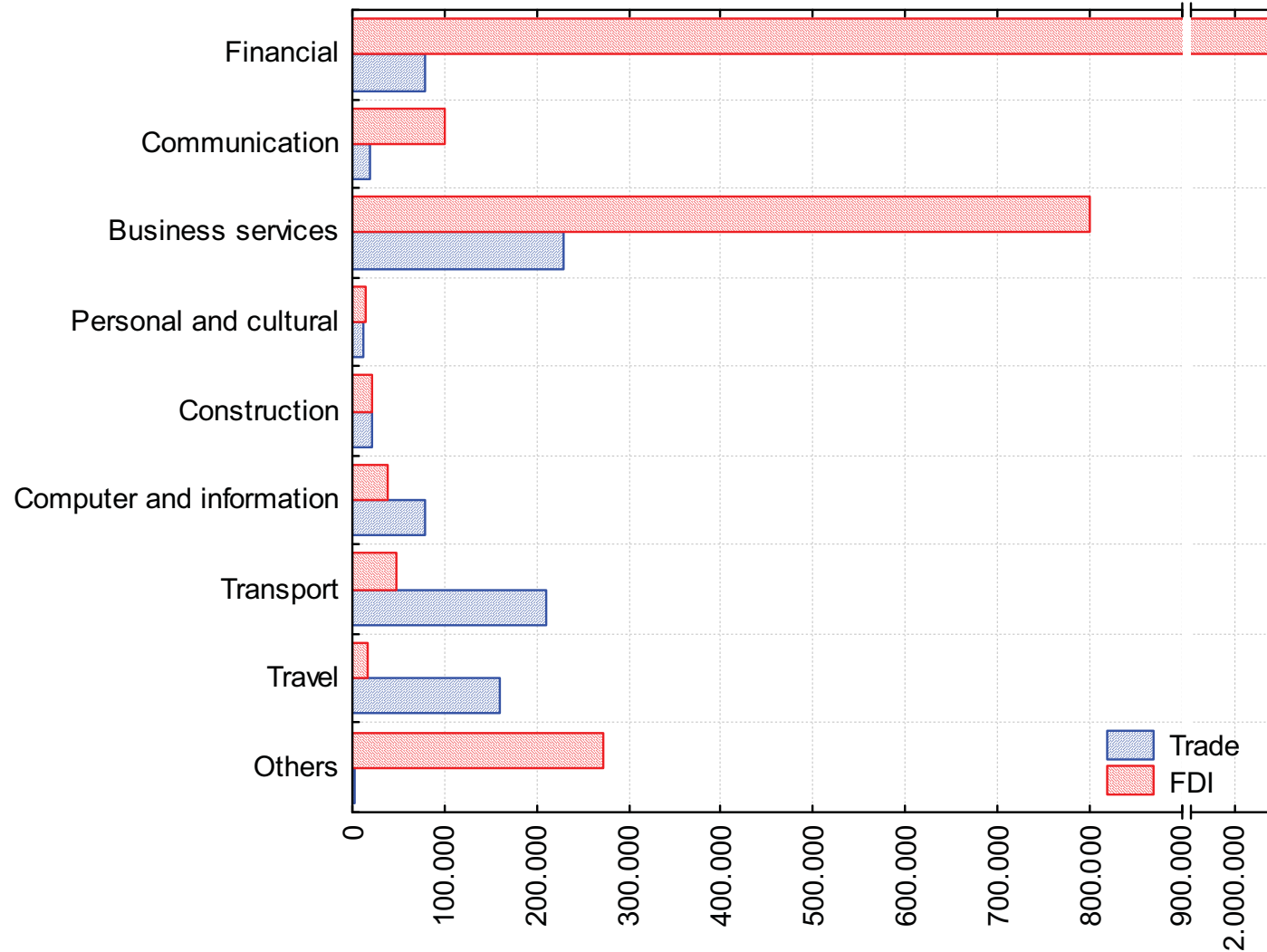
The evolution of services world trade – millions of dollars, source: UNCTAD



The evolution of services foreign direct investments – Outward FDI stock in 2006, source: Eurostat

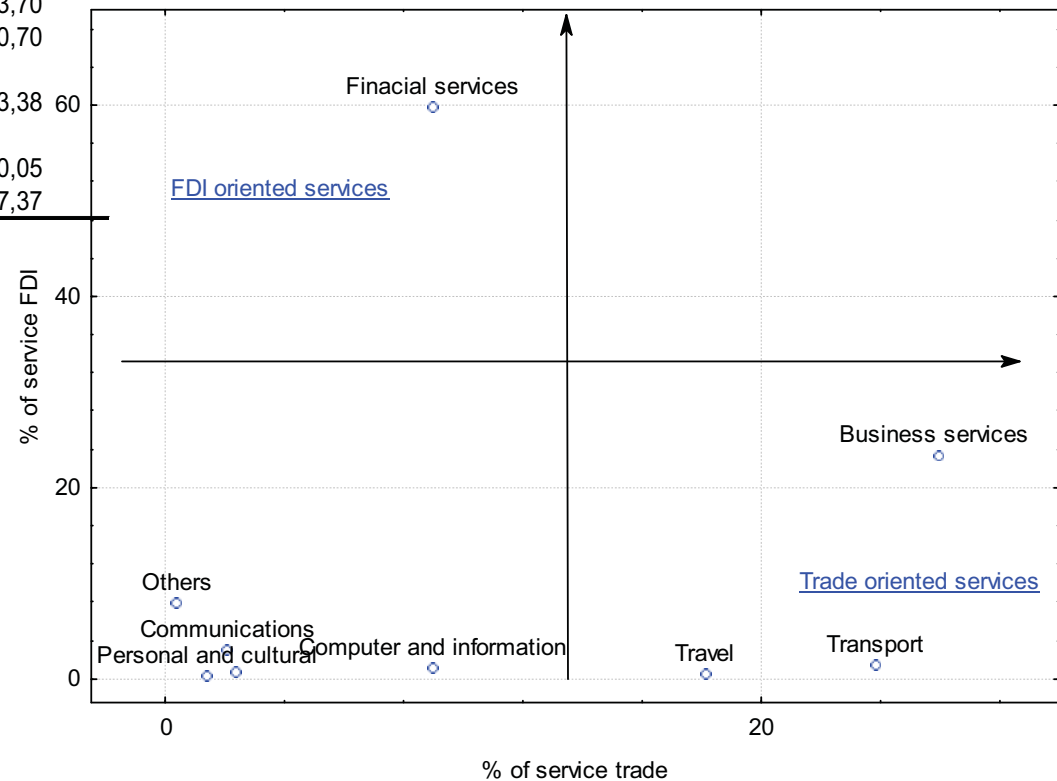
<i>country</i>	<i>service FDI</i>	<i>% of total FDI</i>	<i>% of GDP</i>	<i>agr 02-06</i>
United States	1.841.080	75	14	12
Japan	158.682	35	4	
Germany	767.052	80 ←	26	11
United Kingdom	697.142	48	29	4
France	890.859	78	40	17
Italy	225.609	60	12	20*
Spain	352.344	85 ←	29	
Korea	20.512	38	2	
Netherlands	427.502	56	65	17
Turkey	4.164	47	1	7
Sweden	179.822	68	47	
Switzerland	341.127	61	90	14
Poland	2.822	20	1	29*
Austria	74.890	71	23	18*
Greece	19.302	86 ←	6	21*
Denmark	62.894	42	23	
Finland	20.071	21	10	7
Portugal	47.930	89 ←	25	24

International trade and stock of FDI in services

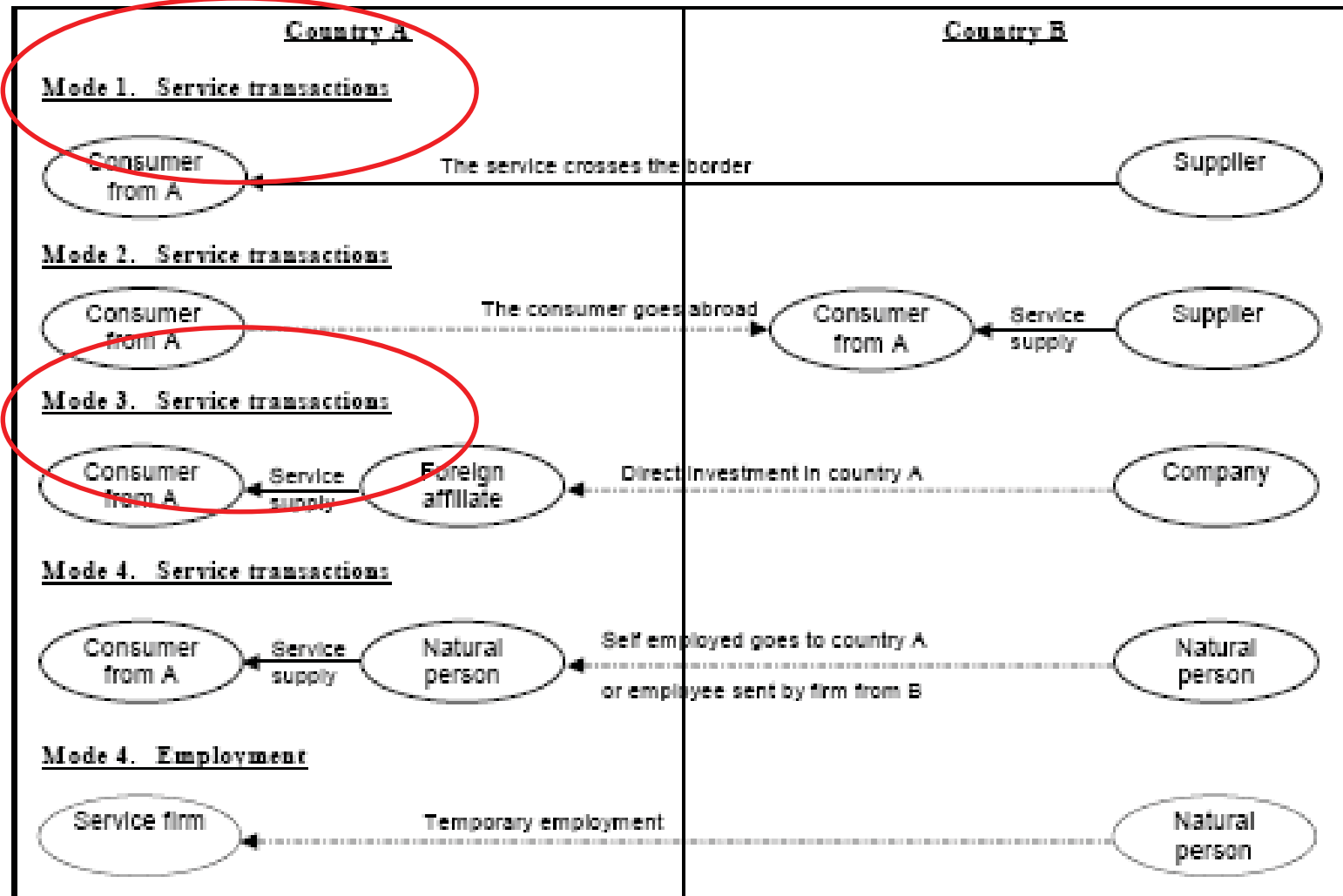


Relative figures on international trade and FDI EU27

	trade (%)	fdi (%)	coefficient trade / fdi
Services	100	100	1
Business services (not listec)	26	23	1,11
Transport	24	1	16,97
Travel	18	1	35,17
Finacial	9	60	0,15
Royalties and licenses	6	..	
Computer and information	9	1	8,05
Construction	2	1	3,70
Communications	2	3	0,70
Government services	2	..	
Personal and cultural	1	0	3,38
Real estate	..	2	
others	0	8	0,05
Goods	284	39	7,37



The evolution of services internationalisation – modes of international supply



Data and modes of supply

Available data on
service international
supply

IT

International bilateral trade

FDI

Foreign direct investments
(stocks and flows)

INC

Income produced in foreign
countries

Modes of international
supply

Mode 1

Service crossing boarder

Mode 2

Consumer crossing boarder

Mode 3

Int. supply through branches
or divisions

Mode 4

Physical presence of the
suppliers

A survey of studies on the relations between different ways of internationalisation

	Helpman (1984) Markusen (1984) Helpman and Krugman (1985)	Internationalisation is not only trade, justify the presence of FDI (vertical)
Theoretical works	Markusen (1992) Brainard (1993) Markusen and Venables (1998)	FDI (horizontal) trade and FDI are substitutes
	Markusen et al. (1996) Markusen and Maskus (1999) Carr et al. (2001)	<i>Knowledge capital</i> models. International headquarters.
	Lipsey and Weiss (1981) Grubert and Mutti (1991) Clausing (2000)	Macro approach
Empirical works Trade vs. FDI	Lipsey and Weiss (1984) Head and Ries (2001) Bloningen (2001)	Micro approach
	Grunfeld and Moxnes (2003) Nicoletti et al. (2003) Pain and van Welsum (2004) Lennon (2008)	Services internationalisation relations

The empirical research

Objective:

Create an empirical approach capable to study the relations between Mode 1 and Mode 3 of international provision of services; Do they influence each others? How?

Level of the analysis:

Macro level (2 main reasons: mutual influence can be considered at macro level, recent availability of data)

Instrument:

Simultaneous equations approach in a gravity framework

Data and modes of supply

Available data on
service international
supply

IT
International bilateral trade

FDI
Foreign direct investments
(stocks and flows)

INC
Income produced in foreign
countries

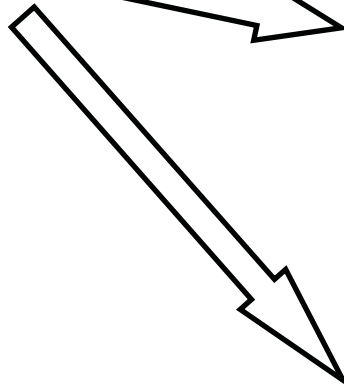
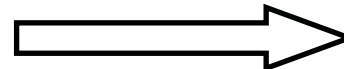
Modes of international
supply

Mode 1
Service crossing boarder

Mode 2
Consumer crossing boarder

Mode 3
Int. supply through branches
or divisions

Mode 4
Physical presence of the
suppliers



Data and modes of supply

Available data on
service international
supply

IT

International bilateral trade


FDI

Foreign direct investments
(stocks and flows)

INC

Income produced in foreign
countries

CAUSAL DIMENSION



CONSEQUENCE DIMENSION



Modes of international
supply

Mode 1

Service crossing boarder

Mode 2

Consumer crossing boarder

Mode 3

Int. supply through branches
or divisions

Mode 4

Physical presence of the
suppliers

The model

$$\left\{ \begin{array}{l} \ln IT_{ijt} = \alpha_1 + \beta_1 \ln GRAV_{ijt} + \gamma_1 \ln Z_{ijt}^{IT} + \delta_1 \ln FDI_{ijt} + \nu_{ijt} \\ \ln INC_{ijt} = \alpha_3 + \varphi \ln IT_{ijt} + \lambda \ln FDI_{ijt} + \varepsilon_{ijt} \\ \ln FDI_{ijt} = \alpha_2 + \beta_2 \ln GRAV_{ijt} + \gamma_2 \ln Z_{ijt}^{FDI} + \delta_2 \ln IT_{ijt} + \nu_{ijt} \end{array} \right.$$

$$GRAV_{ij} = \begin{pmatrix} GDP_i \\ GDP_j \\ dist_{ij} \\ lang_{ij} \\ adj_{ij} \\ eu_{ij} \\ prod_i \\ prod_j \end{pmatrix} \quad Z_{ij}^{IT} = \begin{pmatrix} corr_j \\ RER_{ij}^{ULC} \\ RERHET_{ij}^{ULC} \\ prodHET_{ij} \end{pmatrix} \quad Z_{ij}^{FDI} = \begin{pmatrix} reg1_j \\ reg2_j \\ \dots \\ reg8_j \end{pmatrix}$$

Estimations techniques

Two stages least squares 2SLS

Most popular technique

Does not take into account the relations deriving from the panel structure of the data

Not consistent in case of heteroskedasticity

Limited information maximum Likelihood LIML

Deals with clusters, takes into consideration individual effects

Same asymptotic properties of 2SLS

Heteroscedastic two-stages least square H2SLS

A General methods of moments estimator in two stages

Consistent in presence of clusters and heteroskedasticity

Results of the estimations: the effect of Mode 3 on Mode1

dep:IT	2SLS	LIML	H2SLS
<i>FDI</i>	.169***	.176***	.152***
<i>gdp i</i>	.488***	.480***	.501***
<i>gdp j</i>	.689***	.684***	.705***
<i>dist</i>	-.609***	-.603***	-.650***
<i>lang</i>	.760***	.746**	.739**
<i>adj</i>	.218*	.215	.154
<i>eu</i>	-.213*	-.215	-.271
<i>prod i</i>	-.017	-.032	-.009
<i>prod j</i>	.218*	.226	.214
<i>rer</i>	.003	.003	.014
<i>corr</i>	.493***	.483**	.501**
<i>prodhet</i>	-.016	-.014	-.025
<i>rerhet</i>	-.001	-.001	-.011
<i>underidentification (p-value)</i>	.000	.001	.001
<i>weak identification (F stat)</i>	8.066	5.380	5.380
<i>overidentification (p-value)</i>	.089	.339	.337
<i>number of observations</i>	412	412	412

Results of the estimations: the effect of Mode 1 on Mode3

dep: <i>INC</i>	<i>FE</i>	<i>RE</i>
<i>IT</i>	.323***	.355***
<i>FDI</i>	.539***	.583***
hausman test	chi2(2)= 2.10 ; prob .350	
<i>number of observations</i>	882	882

Conclusions on the modes of internationalisation research

- Different modes of international provision of services interact
- Once the effect of other variables is controlled, the presence of national companies installed in a country promotes international trade
- The commercial relations fosters the volume of business maintained by national companies in a foreign country

Policy implication

- The of policies encouraging, for example, the development of commercial relationships do not run out in international trade, but extends its outcomes to the investments

Limitations

- Aggregate approach
- Simple model representing the behaviour of INC

Thank you for your attention

This research was produced with the contribution of

