

FINANCE

THEME 2 - 15/2001

BALANCE OF PAYMENTS

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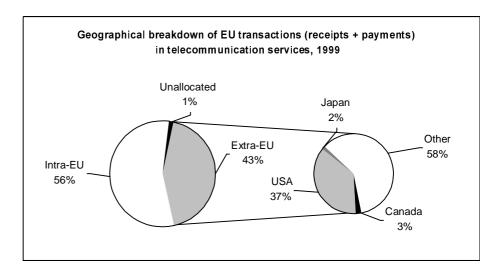


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The EU's external transactions in telecommunication services: a mirror of the dawning information society

Nikolaos Chryssanthou

During the last decade, telecommunication services experienced considerable upheavals. They are now mostly supplied in a competitive environment and embrace commonly fixed voice and facsimile transmissions, mobile telephony and Internet services. The EU market still consists mainly of fixed telephony, but mobile services and the Internet have already gained a tremendous importance. The EU's transactions in telecommunication services with the rest of the world (excluding intra-EU flows) have doubled from 1994 to 1999 despite considerable decreases in prices. In 1999, they accounted for 21% of the global international market and registered a EUR -1.0 bn deficit. Decreases in prices and Internet communications have started to reshape transactions with the USA (37% of the EU's external transactions). The main contributors to the EU's external transactions in telecommunication services were the UK and Germany (52% of the total).



In 1999, the EU's transactions in telecommunication services with the rest of the world (excluding intra-EU flows) made up 43% of total Member States' international transactions. They accounted for 21% of the global international market for telecommunication services, valued at EUR 42 bn¹ by the ITU (International Telecommunications Union). Receipts and payments amounted to EUR 4.0 and 5.0 bn respectively, both registering a 9% increase on 1998.

¹ Data corrected by subtracting intra-EU flows (source Eurostat)

This seems low when contrasted with the rise of intra-EU international transactions, which surpassed 30% the same year.

The EU's external balance was a EUR -1.0 bn deficit, a stable amount compared to 1998. A negative balance, such as that of the EU and the USA, seems to indicate a relative advance in terms of availability and use of telecommunication equipment rather than a low competitiveness. Indeed, residents in countries

where telecommunications are highly accessible tend to use them more often - and be charged for them than their partners in less developed countries.

The USA was a sizeable partner of the EU, accounting for 37% of its external transactions, whereas the share of Canada stood at 3% followed by Japan at 2%. Interestingly, the USA's international transactions in *telecommunication services* decreased for the first time since 1992.

International exchanges of telecommunication services								
	·					(1998 in Mi	o ECU, 1999 i	n Mio EUR)
		Receipts			Payments		Balaı	nce
	1998	1999	growth	1998	1999	growth	1998	1999
EU with extra-EU	3 708	4 029	9%	4 580	5 012	9%	-871	-984
with USA	1 236	1 684	36%	1 292	1 617	25%	-56	66
with Canada	106	119	13%	78	110	42%	28	9
with Japan	70	72	3%	88	71	-20%	-19	1
EU with World (incl. intra-EU)	8 027	10 022	25%	9 131	11 139	22%	-1 104	-1 116
EU with intra-EU	4 257	5 827	37%	4 503	6 014	34%	-246	-187
USA with World	4 940	4 185	-15%	6 857	6 348	-7%	-1 917	-2 164

To understand these figures better, it is necessary to consider the substantial changes experienced by the telecommunications sector since the late eighties.

The 1990s: a decade of upheavals for telecommunication services

Twenty years ago, *telecommunication services* mostly consisted of voice transmission. The sector was in the hands of one public monopoly operator whose major concern was to supply a universal service, i.e. bring voice telephony to every home. However, fundamental changes began in the late eighties, accompanying, and effectively fuelling the globalisation of trade.

The sector first saw the widespread expansion of facsimile services, making it possible to transmit text rapidly, through the existing fixed telephone circuits, and at prices beating traditional postal services.

World telecommunication services market revenues in 1999				
	(EUR bn)			
Total telecommunication services	743			
Services telephone (fixed telephony)	450			
Mobile	180			
Other (including leased lines and data communications)	113			
International (retail revenue)				
including intra-EU transactions	54			
excl. intra-EU transactions	42			
Note: data converted from USD at current prices and exchange rates. Source: ITU, 2000.				



Then came the success of **mobile telephony**, which continues to experience tremendous growths in revenues and penetration rates. Used as a complement to fixed mainlines in developed countries, it often substitutes them in emerging economies, when for instance the fixed network does not cover the whole territory. Though relatively recent, mobile telephony has already known considerable technological changes, and the imminent release of third generation mobile phones comes as no surprise.

Finally, the **Internet**, a network of networks, has extended well beyond the United States, starting to become widely used in the other developed countries. Facilitating worldwide communication, it provides immediate access to a tremendous range of information, at very competitive prices.

Another feature of the telecommunications industry is that **technologies are converging**, so that the distinction between fixed telephony, mobile telephony, the Internet and broadcasting segments is losing relevance. Indeed, images, sound and data can and are being conveyed indifferently through channels, such as broadcasting, telephone wires, and satellite, which were once dedicated to specific media.

On the regulatory side, the bulk of the telecommunications market is now liberalised. The transition from a monopoly to a competitive environment has been gradual, with a significant step taken in 1998. On 1 January, almost all the EU Member States opened their markets to full competition. One month later, the commitments made in the GATS (the WTO General Agreement on Trade in Services) negotiations basic telecommunications came into force, resulting in the liberalisation of more than 80% of the world market in revenue terms.

These advances shaping tomorrow's are information society, in which telecommunications are expected to bring more and more economic - but also social and cultural - benefits to the world. Indeed, today's globalised - and globalising economy has made information an increasingly precious resource, and telecommunications (its principal means of conveyance) an essential tool for world's development. An illustration telecommunications' major role was the concern about the possible paralysis of telecommunications and its economic consequences connected with the changeover of computers to 2000.

The Internet, a new way of charging international telecommunications

Traditionally, international transactions related to telecommunications consist of the amounts paid between resident and non-resident telecommunication operators for circulating messages on their networks. They depend on the number of connections and their duration, and typically reflect the route taken by the message.

As regards the Internet, there are no per-minute termination charges. The amounts paid are those for the right to connect and use the Internet networks (Internet backbones).

International transactions reflect the fees paid internationally from Internet Services Providers (ISPs) to backbone operators. They also reflect, when no "peering agreement" (i.e. of free connection between two Internet backbones) is in place, payments between foreign Internet backbone operators for interconnection. These fees are generally periodical and neither reflect the volume of information conveyed, nor the geographical circulation of information (a message can circulate from Ireland to Australia without giving rise to any international transaction).

Did these changes affect the structure of the EU's telecommunications market? Are they reflected in the EU's balance of payments statistics?



Patterns of the EU's telecommunication services market

Some indicators for the EU telecommunication services market					
Revenues (EUR bn)	1998	1999	growth		
Total telecommunication services market	159	177	11%		
Voice telephony	100	104	4%		
Mobile services	36	48	33%		
Leased lines and switched data services	23	25	9%		
Average market share of the incumbent operators ¹ in the fixed voice telephony market (%)	1997	1998	1999		
Local calls	99	98	96		
Long distance calls	97	94	88		
International calls	93	91	81		
EU average prices ²	Evolution 1997-00 (%)				
Monthly rentals		12%			
Local calls 3 min		15%			
Long distance calls 3 min	-39%				
International calls	-32%				
Leased lines 64 Kbit/s towards USA	-33%				
Leased lines 2 Mbit/s towards USA	-32%				

Notes:

Source: European Commission Sixth report on the implementation of the telecommunications regulatory package

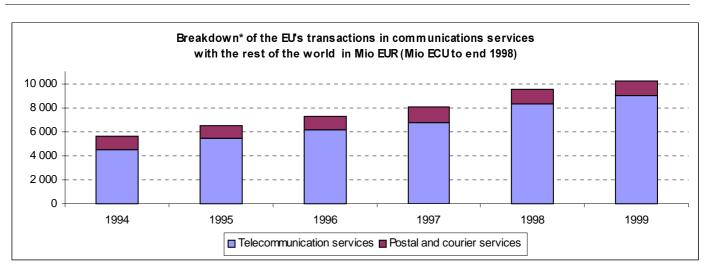
The EU's *telecommunication services* market, whose total revenues in 1999 reached EUR 177 bn, shows typical patterns of a developed area:

- a growth in revenues led by the mobile segment (+33% in 1999) that attracts new customers each year (penetration rate of 22% in 1998, 36% in 1999);
- a fixed voice telephone segment, now close to saturation point - virtually all EU residents have at least one main telephone line at home recording low increases in revenues (+4% in 1999);
- a leased line and switched data segment undergoing consistent increase (+9% in 1999) linked to the developments of competition and access to the Internet;
- a "rebalancing" of tariffs towards cost orientation under the pressure of spreading competition.

The trend to tariffs rebalancing started well before the 1998 liberalisation of markets. Considerable contractions of international prices (for both leased lines and phone calls) could be observed whereas monthly rentals and prices for local calls tended to increase.

How do market forces impact on the EU's international transactions in telecommunication services?

Doubling of the EU's external transactions in telecommunication services between 1994 and 1999



^{*} Eurostat estimates from 1994 to 1997



Former national monopoly operator

² Based on figures from a study carried out for the Commission by Teligen foundation, except for prices of leased lines. Tariffs used are those of the former monopoly company for residential users. Trends for business users are not significantly different. International calls are valued on the basis of an "international call basket".

Despite strong decreases in prices, the EU's external transactions in *telecommunication services* appear to have doubled from 1994 to 1999. Their growth was higher than that of the aggregate other services² (+51% over the same period), reflecting their growing role today's globalising economy. Telecommunication services also seem to have gained importance as a means to communicate with extra-EU countries: their contribution to the aggregate communications services expanded from an estimated 81% in 1994 to 89% in 1999. This occurred at the expense of postal and courier services, suggesting the increased use of facsimile and e-mail as substitutes for traditional postal services.

From 1994 to 1997 the annual average growth of the EU's transactions in *telecommunication services* is estimated at 14%. Germany contributed significantly in the beginning of the period. This coincides with the end of the surge in telecommunication investment to bring the telephone network of the new Länder (former East Germany) up to date.

In 1998, the liberalisation of telecommunications markets apparently boosted the EU's external exchanges in *telecommunication services*, estimated to have soared by around 20%. As regards intra-EU transactions, they appear to have risen to a similar extent in 1998, but their 35% growth in 1999 contrasted with that of 9% for external transactions.

Looking at the 1999 world top 5 cross-border mergers and acquisitions - of which three occurred in the telecommunication industry and concerned EU resident firms - does not help explaining this contrast. Indeed, two of these were intra-EU cross-border investments, but their size did not exceed the merger between Vodafone (UK) and AirTouch communications (USA) at the end of June. This - perhaps too late in the year - was not reflected in the UK's transactions with the extra-EU.

(EUR bn) Home country			Host country	y	
VALUE	ACQUIRING COMPANY	INDUSTRY	ACQUIRED COMPANY	INDUSTRY	
	United Kingdom		USA	Telecom.	
56.6	Vodafone Group PLC	Telecom.	AirTouch Comm.		
	United Kingdom		Sweden		
32.5	Zeneca Group PLC	Drugs	Astra AB	Drugs	
	Germany	Metal &	United Kingdom	Telecom.	
30.6	Mannesmann AG	related	Orange PLC		
	France	Chemical &	Germany	Chamiaal	
20.5	Rhone-Poulenc related		Hoechst AG	Chemical & related	
	Germany		United Kingdom	Telecom.	
12.8	Deutsche Telekom AG	Telecom.	One 2 One		

The 9% growth of the EU's external transactions in telecommunication services in 1999 seems low with respect to the growing importance of international telecommunications. How can it be explained?

M&A deals 87-99

Decreases in prices and Internet communications tend to reduce the EU's external transactions

The 1999 slowdown of the EU's external transactions in *telecommunication services* largely stemmed from high decreases in prices (see table on page 4). In particular, the USA's transactions decreased this year for the same reason, whereas volumes rose.

Another factor is that volumes of Internet cross-border communications are not reflected in the balance of payments. These volumes are rising

considerably, particularly between the EU and the USA where they seem more developed than those within the EU. Indeed, the average Internet usage across the EU is well below that in the USA. Consequently, EU residents using the Internet have proportionally more partners in the USA with whom they can use this communication channel - than within the EU.

² Services excluding transportation and travel



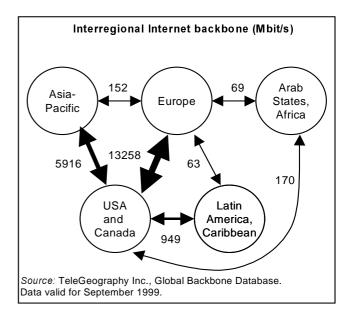
- 15/2001 — Theme 2 — **Statistics in focus**

The growing use of the Internet for US/EU telecommunications is stated in the BT World Communications Report 1998/9: "On the transatlantic corridor [between Europe and America] - the world's busiest international telecommunications route - Internet traffic is doubling every year, and it surpassed voice traffic by volume in September 1997."

Nevertheless, the EU's transactions in telecommunication services with the USA - which reflect more "traditional" telecommunications - rose in 1999. But apparently, Internet communications are partly replacing phone calls and faxes with this partner. This contributes to lowering extra-EU transactions in telecommunication services. It also contributes to the USA's relatively low share in the EU's external exchanges for telecommunication services (37% in 1999) as compared to that for other services (44%).

Nevertheless, worldwide communications via the Internet remain limited. Liaisons between the EU and the USA appear disproportionate when compared to

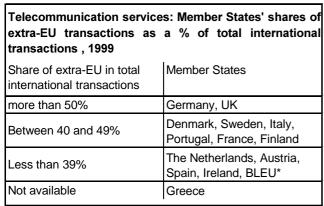
Internet communications between other areas of the world. As an illustration, the aggregated network capacity between Europe and North America (13258 Mbit/s in 1999) largely exceeds the other Internet liaisons in the world.



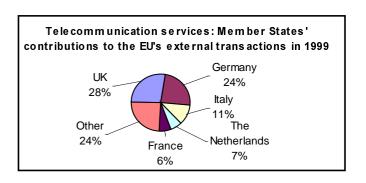
The EU's external telecommunications remain mostly of the "traditional" type, and balance of payments transactions continue to give a good picture of volumes circulation.

EU Member States' contributions to the EU's external transactions: Germany and the United Kingdom represent 52%

In 1999, the UK and Germany were the main contributors to the EU's external transactions in telecommunication services, making up 52% of the total. It is therefore not surprising to find them as actors of the three largest cross-border mergers and acquisitions in the telecommunication industry in 1999. The contributions of France and Italy were 6% and 11% respectively, as a result of Italy's transactions with extra-EU partners doubling in 1999, whereas France's transactions narrowed by 25%.



^{*} Belgo-Luxembourg Economic Union



The UK and Germany also distinguished themselves by the fact that their *telecommunication services* transacted outside the EU exceeded those exchanged with the other Member States. For the other Member States, transactions with extra-EU partners represented less than 45% of total international transactions (including those inside the EU). In the group of countries for which this share was greater than 40%, it is interesting to find Denmark, Sweden and Finland among the four Member States where Internet usage is the highest. Internet usage is still relatively low in France and Italy, but these two major contributors to the EU's external transactions also made more than 40% of their international exchanges outside the EU.



> ESSENTIAL INFORMATION - METHODOLOGICAL NOTES

The data used in this issue of Statistics in Focus are from the Balance of Payments statistics.

The Balance of Payments (BOP) of the European Union is compiled as the sum of the harmonised balance of payments accounts of the fifteen Member States. The balance of payments of the EU Institutions is added to the EU aggregate.

The methodological framework is that of the fifth edition of the *International Monetary Fund (IMF) Balance of Payments manual.*

Telecommunication services is one of the two sub-items of communications services the other being postal and courier services.

Telecommunication services encompasses the transmission of sound, images, or other information by telephone, telex, telegram, radio and television cable and broadcasting, satellite, electronic mail, facsimile services, and so forth, including business network services, teleconferencing, and support services. It does not include the value of the information transported. Also included are cellular telephone services, internet backbone services and on-line access services, including Internet access provision. Installation services for telephone networks equipment, and database services and related computer services to access and manipulate data provided by database servers, are excluded.

As telecommunication services are related to specific equipment, resident customers have to deal primarily with resident companies. International transactions in telecommunication services are the fees paid between the companies operating the local networks or the specific equipment.

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