

International flows of intellectual property

Highlighting the asymmetries among countries and regions

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THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■

Research aims

Broad aim

Understand the international relations asymmetries

Specific aim

Identify the countries and regions that benefit the most from and those that are most harmed by the new international legal arrangements concerning Intellectual Property Rights (IPR)

Main points

Values traded between countries based on Intellectual Property Rights (IPRs) are **no longer insignificant**

The majority of developing countries **don't play this game**, and the few ones that are playing, are paying a lot of money to have access to knowledge

The values of these flows are created by and derived from **political arrangements**

Literature

Developed and or High Income countries **benefits** from the recent IP legal regime (TRIPs onwards):

Developing countries do and do **not benefit** from IP regime:

IP could benefit developing countries by:

- increasing the transfer or the access to new technologies
- increasing inward flows of Foreign Direct Investment
- increasing inventive activities directed to the markets of the developing world

IP regime actually imposes substantial costs on developing countries by:

- increasing their royalty payments to developed countries
- increasing the relative power of transnational corporations (TNCs)

A question of international development



Values (and prices)



Economic arena
(competition)

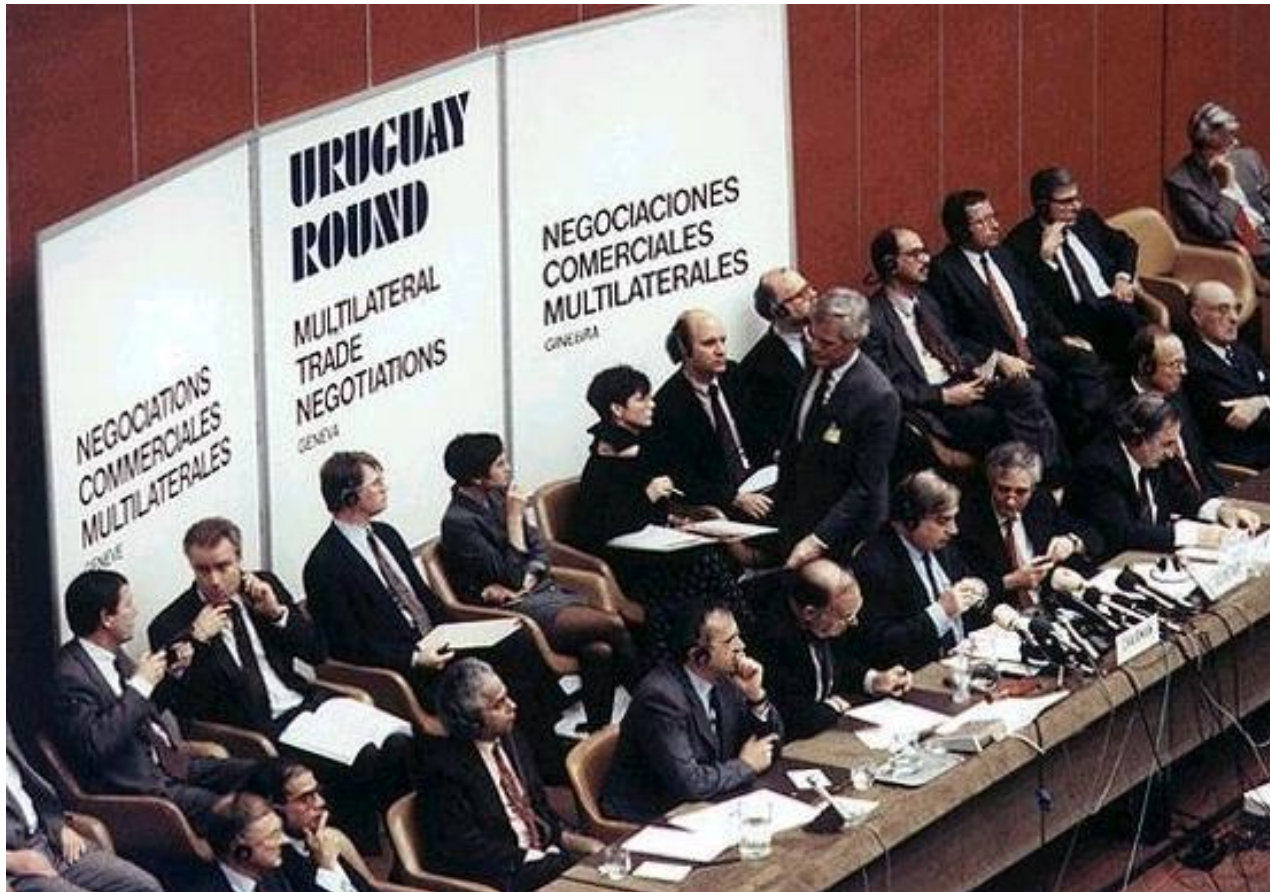


Political arena

(Political power of big companies
supported by powerful States)

A question of international development

The intellectual property diplomacy

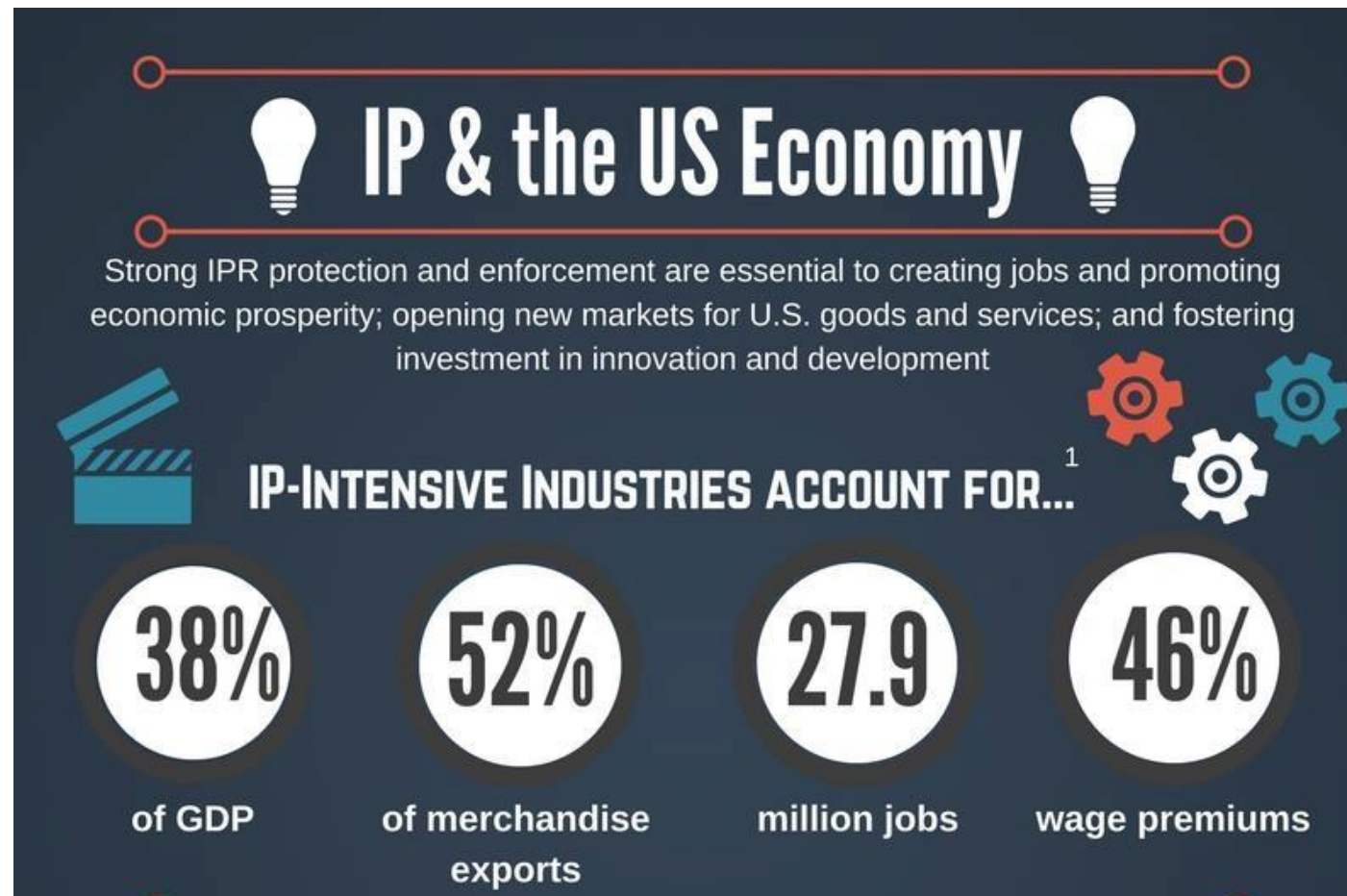


MONSANTO



A question of international development

Extremely powerful companies in a **national** level



A question of international development

Extremely powerful companies in an **international** level

Forbes World's Biggest Public Companies List

Our Classification	Companies	Type (according to Forbes)	← Ranking evolution (backward)			
			2017	2016	2015	2014
IP-intensive	Microsoft	Software	19	23	25	32
	Comcast	Media, ent, comm	31	35	46	57
	Johnson & Johnson	Health care	32	32	34	41
	IBM	Information tech	43	41	44	35
	Pfizer	Biopharmaceutical	47	46	48	45
	Novartis	Healthcare products	61	47	52	54
	Oracle	Software	70	82	88	94
	Roche Holding	Research healthcare	79	80	81	90
	Bayer	Health care, nutrition	89	97	108	120
	Merck	Health solutions	100	93	80	372
Energy	Royal Dutch Shell	Energy	20	50	13	11
Manufacture	Ford Motor	Manufacture	64	40	69	47

A question of international development

Extremely powerful companies in an **international** level

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	Comcast	Media, ent, comm	31	35	46	57
	Johnson & Johnson	Health care	32	32	34	41
	IBM	Information tech	43	41	44	35
	Pfizer	Biopharmaceutical	47	46	48	45
	Novartis	Healthcare products	61	47	52	54
	Oracle	Software	70	82	88	94
	Roche Holding	Research healthcare	79	80	81	90
	Bayer	Health care, nutrition	89	97	108	120
	Merck	Health solutions	100	93	80	372
Energy	Royal Dutch Shell	Energy	20	50	13	11
Manufacture	Ford Motor	Manufacture	64	40	69	47

Indication of Methods

Balance of payments account

Credits (+) (Receipts)

Debits(-) (Payments)

1. Current account

- (a) Goods
- (b) Services
- (c) Primary income
- (d) Secondary income

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- (b) Services
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- (d) Secondary income

2. Capital account

- (a) Capital transfers

- (a) Capital transfers

3. Financial account

- (a) Direct investment
- (b) Portfolio investment
- (c) Financial derivatives
- (d) Other investment

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- (b) Portfolio investment
- (c) Financial derivatives
- (d) Other investment

4. Reserve assets

5. Net errors and omissions

Indication of Methods

Overview of the Goods and Services Account

	Contains IPR 'values'?	IMF*	Sources ITC** Other***	
International trade in goods				
12...Oil seeds and oleaginous fruits; (14 items)	Yes	N/A	2001-2016	1989-2016
30...Pharmaceutical products (6 items)	Yes	N/A	2001-2016	1989-2016
85...Electrical machinery and equipment (26 items)	Yes	N/A	2001-2016	1996-2016
International trade in services				
8...Charges for the use of intellectual property n.i.e.	Yes	1969-2017	2005-2016	
8.1...Franchises and trademarks licensing fees	Yes	N/A	few data	
8.2...Licences for the use of outcomes of R&D	Yes	N/A	few data	
8.3...Licences to reproduce and/or distribute comp. software	Yes	N/A	few data	
8.4...Licences to reproduce and/or distribute audio-visual	Yes	N/A	few data	
9...Telecomm., computer, and information svcs.	Yes	1969-2017	2005-2016	
9.1...Telecommunications services	No	N/A	2005-2016	
9.2...Computer services	Yes	N/A	2005-2016	
9.2.1...Computer services, Software	Yes	N/A	few data	
9.2.2...Computer services, Other (other than software)	No	N/A	few data	
9.3...Information services	Yes	N/A	2005-2016	
10...Other business services	Yes	1969-2017	2005-2016	
10.1...Research and development (R&D)	Yes	N/A	2005-2016	
10.2...Professional and management consulting services	No	N/A	2005-2016	
10.3...Technical, trade-related, and other business services	No	N/A	2005-2016	
11...Personal, cultural, and recreational services	Yes	1969-2017	2005-2016	
11.1...Audiovisual and related services	Yes	N/A	2005-2016	
11.2...Other personal, cultural, and recreational services	No	N/A	2005-2016	

* IMF's Balance of Payments and Investment Position

** International Trade Centre

*** Comtrade, World Bank, OCDE, etc

Indication of Methods

Balance of Goods

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Indication of Methods

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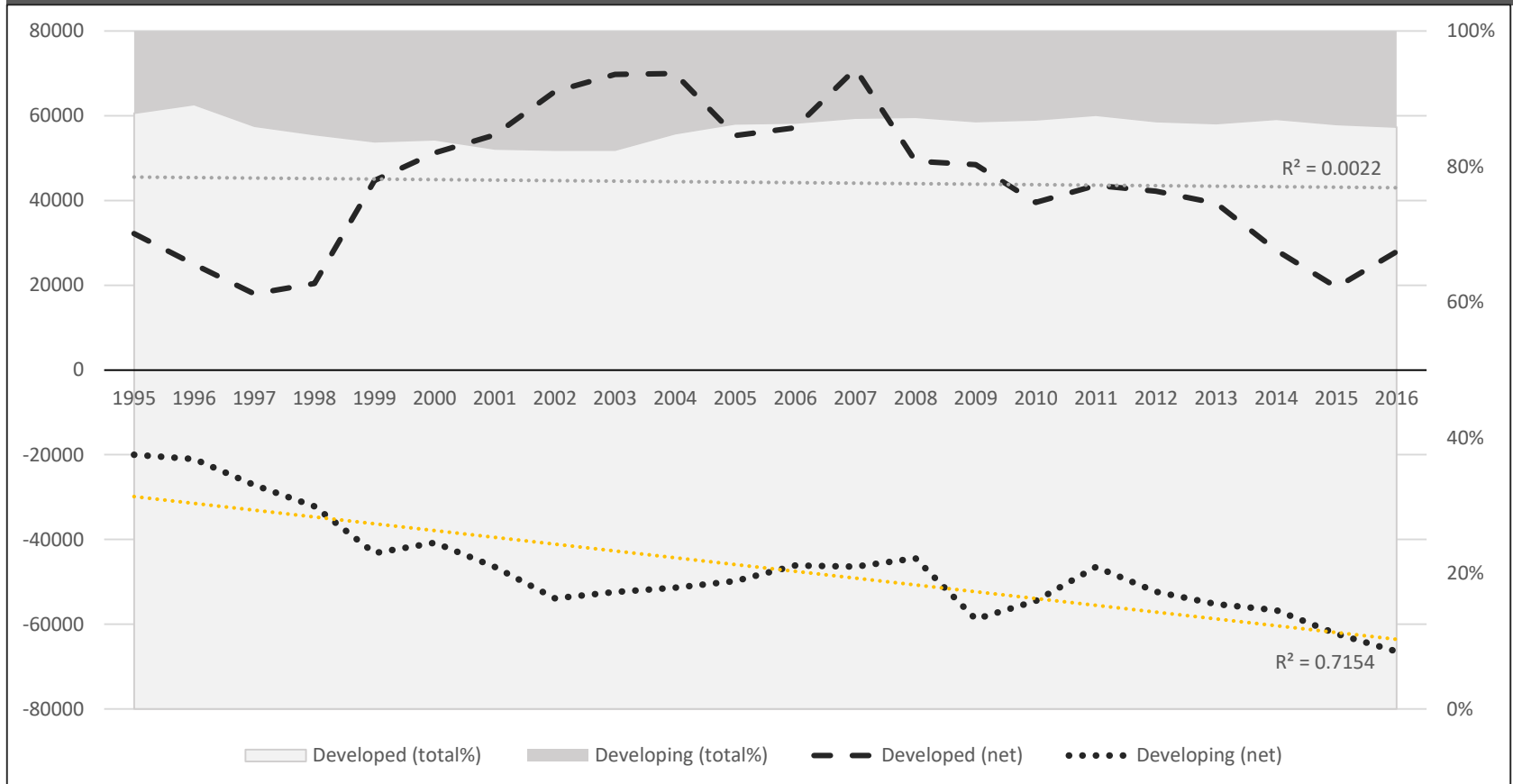
Indication of Methods

- Collected all the data available (from 1969 on) for more than 200 countries
- Built a panel with all the countries in the rows and the data in the columns (credits and debits for both "IP services" and "pharmaceutical products" accounts)
- Categorized the countries by their development level, income level, geographical region and sub region
- Produced a considerable number of graphics and tables to compare and analyse the data

Results

Development level

"Charges for the use of IP n.i.e." flows sorted according to UN development level – net flows (right axis – lines) and share in total flows (left axis - areas) (1995-2016 measured in millions of dollars of 2016)



Sources: IMF, UN, UNCTAD. Own elaboration

Results

Development level

“Charges for the use of IP n.i.e.” flows per year sorted according to UN development level (average over three years from 2014 to 2016)

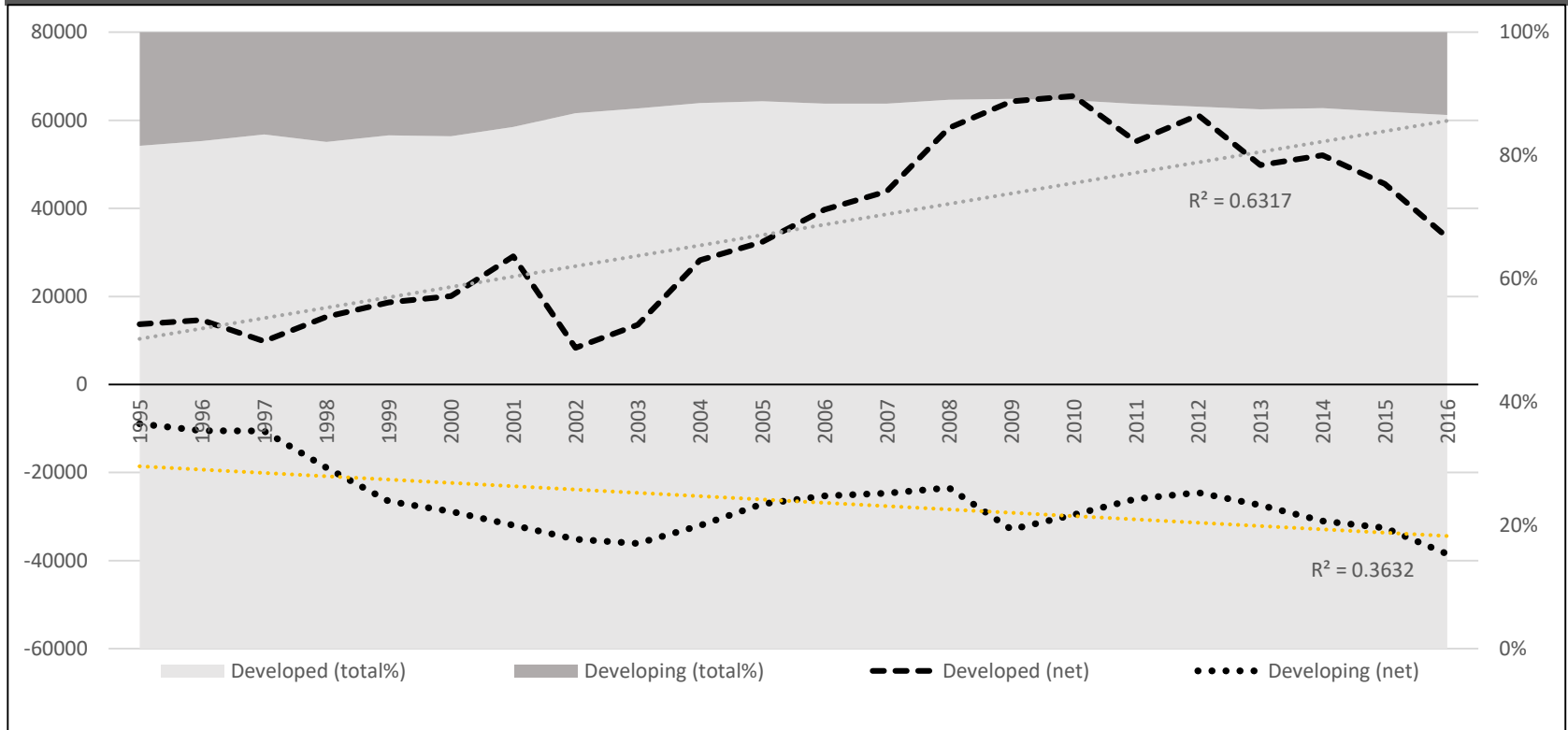
Rank (by flow)	Level of Development	Total Flow (Credit + Debit)	Net Flow (Credit - Debit)	World Share	World flow of other services share
1	Developed	603,462	27,475	85.7%	67.3%
2	Developing	99,459	-66,472	14.1%	29.7%
Total flow (without double counting)		351,461			

Sources: IMF, UN, UNCTAD. Own elaboration

Results

Development level

“Pharmaceutical products” flows sorted according to UN development level – net flows (right axis – lines) and share in total flows (left axis – areas) (1995-2016 measured in millions of dollars of 2016)



Sources: UN Comtrade, UN, UNCTAD. Own elaboration

Results

Development level

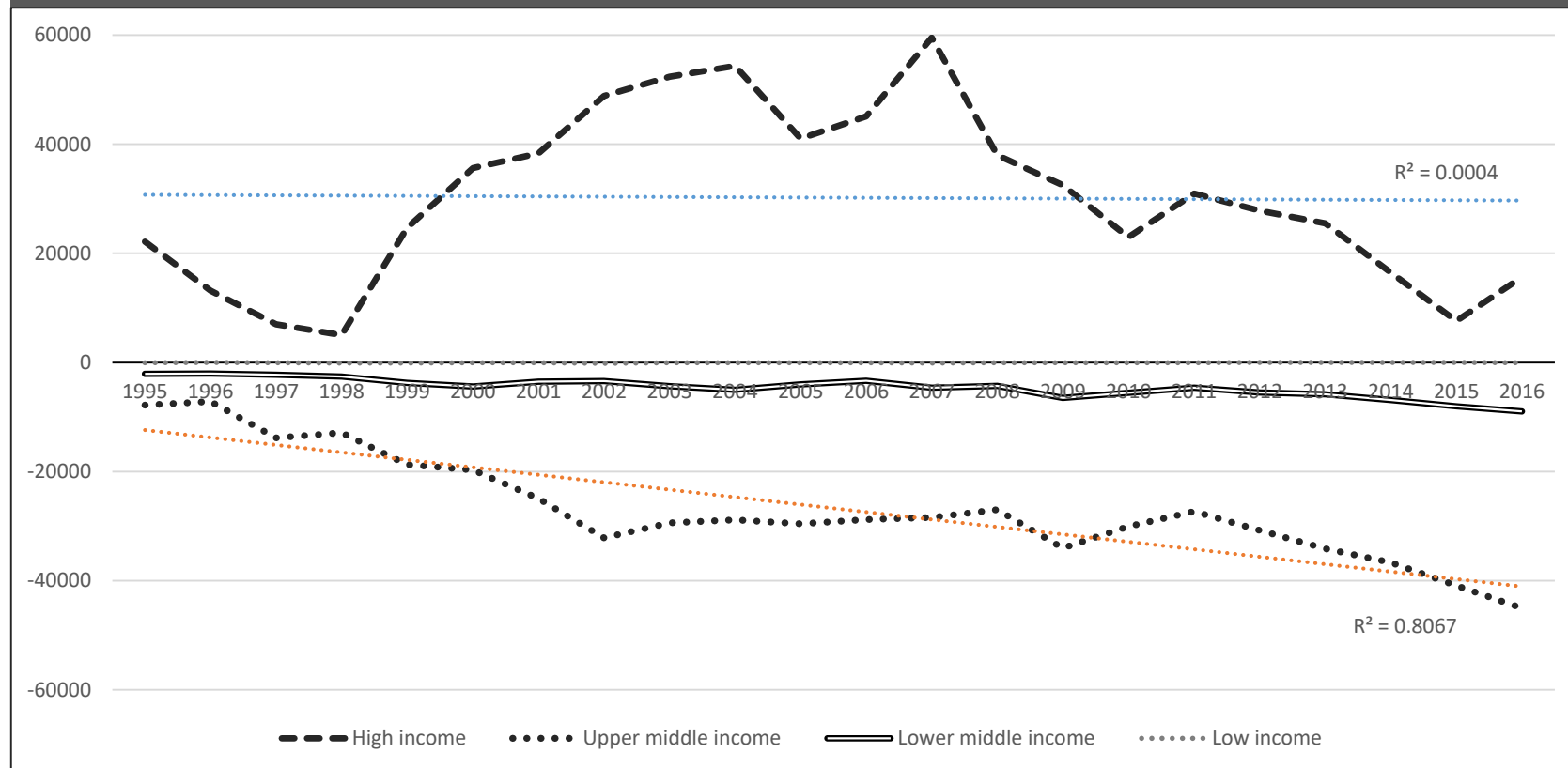
“Pharmaceutical Products” trade flows per year sorted according to UN development level (average over three years from 2014 to 2016)

Rank (by flow)	Level of Development	Total Flow (Credit + Debit)	Net Flow (Credit - Debit)	World share	World flow of other goods share
1	Developed	849,103	33,389	86.4%	59.1%
2	Developing	133,887	-40,144	13.6%	36.8%
Total flow (without double counting)		491,495			

Sources: UN Comtrade, UN, UNCTAD. Own elaboration

Results Income level

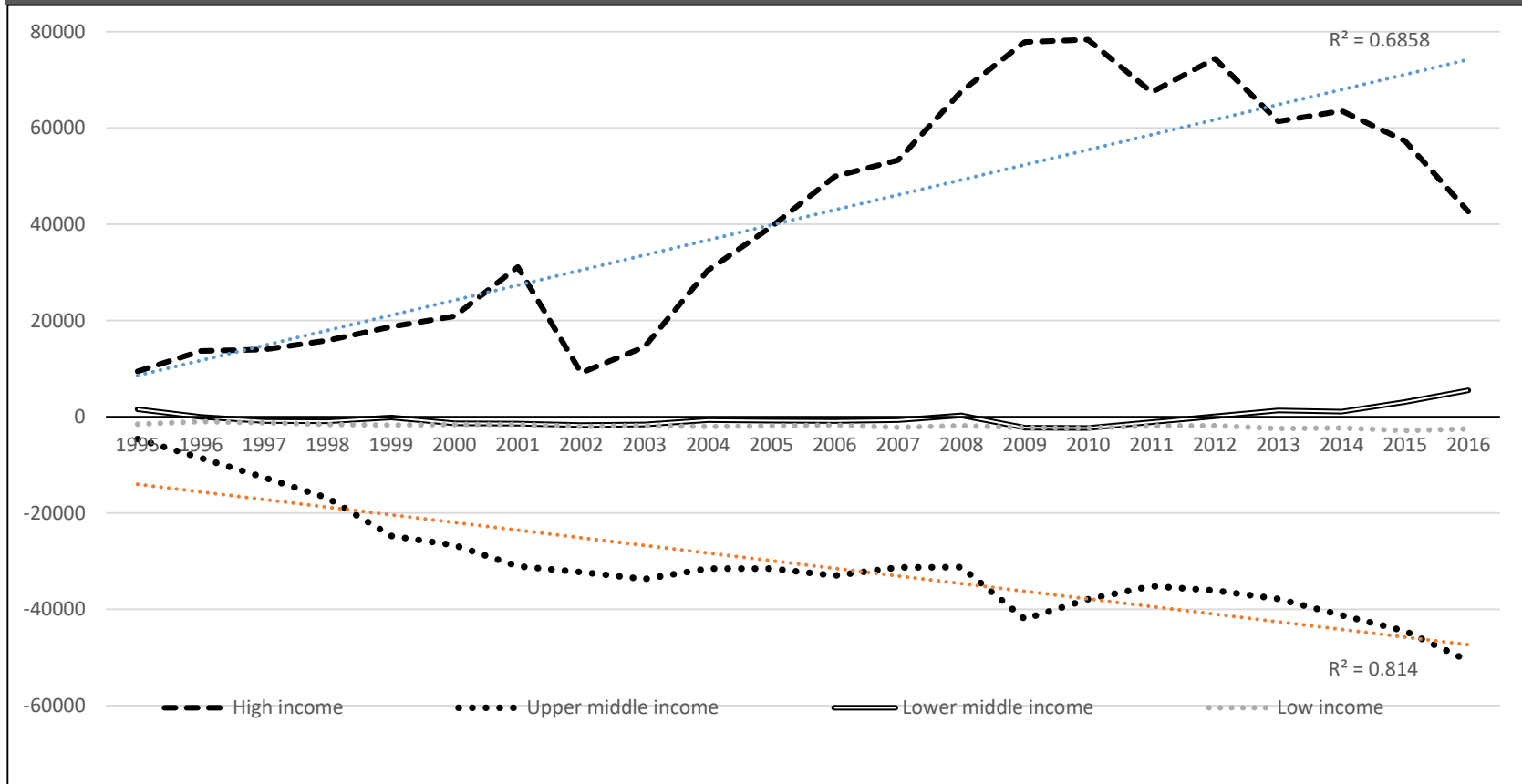
“Charges for the use of IP n.i.e.” flows sorted according to World Bank income level – net flows (1995-2016 measured in millions of dollars of 2016)



Sources: IMF, World Bank, UNCTAD. Own elaboration

Results Income level

“Pharmaceutical products” flows sorted according to World Bank income level – net flows (1995-2016 measured in millions of dollars of 2016)

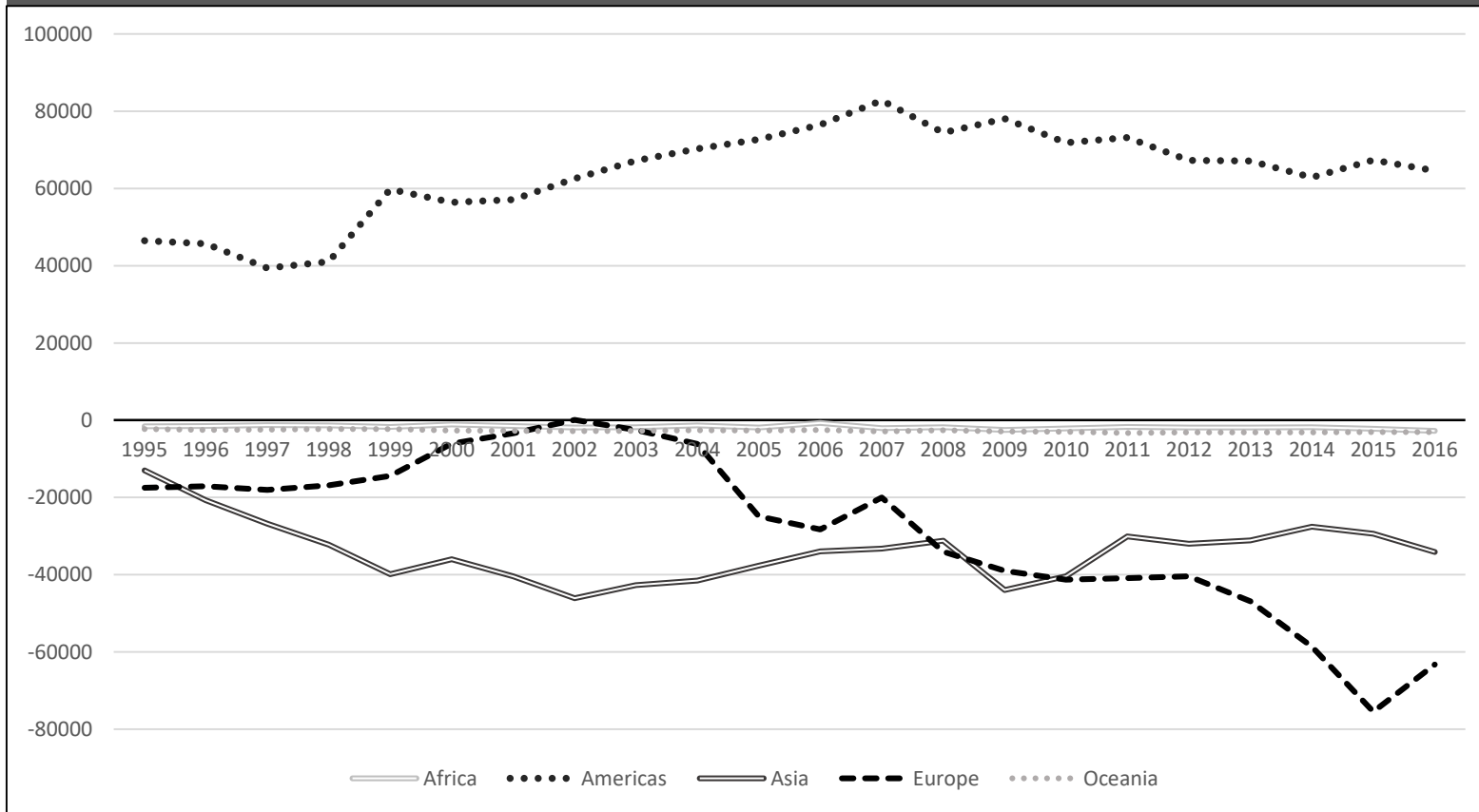


Sources: UN Comtrade, World Bank, UNCTAD. Own elaboration

Results

Geographical region

“Charges for the use of IP n.i.e.” flows per year sorted according to UN geographical region - net flows (1995-2016 measured in millions of dollars of 2016)



Source: IMF, UN. Own elaboration

Results Geographical region

“Pharmaceutical products” flows per year sorted according to UN geographical region (average over three years from 2014 to 2016) – millions of dollars, current values

Rank (by flow)	Region	Total Flow (Credit + Debit)	Net Flow (Credit - Debit)	World Share	World flow of other services share
1	Europe	649,958	108,350	66.1%	38.3%
2	Americas	188,205	-63,598	19.1%	20.9%
3	Asia	121,566	-35,708	12.4%	32.8%
4	Africa	11,839	-9,729	1.2%	2.2%
5	Oceania	11,422	-6,070	1.2%	1.6%
Total flow (without double counting)		491,495			

Source: UN, UN Comtrade. Own elaboration

Results National economies level

“Charges for the use of IP” trade by country in 2016 – millions of dollars, current vs

Rank (by flow)	Country	Total Flow (Credit + Debit)	Net Flow (Credit - Debit)	% of Goods and Services	Total flow as % of balance of services	Total flow as % of GDP	Total flow world share	World flows of other services share	World GDP share
1	United States	168,846	80,062	3.4%	13.4%	0.9%	24.0%	13.5%	25.6%
2	Netherlands	87,021	-9,144	7.3%	29.2%	11.3%	12.4%	3.2%	1.1%
3	Ireland	84,380	-67,735	13.3%	24.9%	28.7%	12.0%	3.6%	0.4%
4	Japan	58,685	19,341	3.7%	16.4%	1.2%	8.3%	3.9%	6.8%
5	Switzerland	33,143	8,947	4.1%	15.2%	5.0%	4.7%	2.4%	0.9%
6	France	28,639	2,305	1.9%	6.1%	1.2%	4.1%	5.1%	3.4%
7	Germany	28,085	7,107	1.0%	4.8%	0.8%	4.0%	6.3%	4.8%
8	United Kingdom	28,058	4,578	1.8%	5.3%	1.1%	4.0%	5.8%	3.6%
9	China	25,141	-22,818	0.6%	3.8%	0.2%	3.6%	7.1%	15.5%
10	Singapore	24,616	-13,936	2.6%	8.1%	8.3%	3.5%	3.3%	0.4%
Sum							80.5%	54.2%	62.5%

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	Sum						80.5%	54.2%	62.5%

Results National economies level

“Charges for the use of IP” trade by country (2016) selected countries (“the rest”) – millions of dollars, current values

Rank (by flow)	Country	Total Flow (Credit + Debit)	Net Flow (Credit - Debit)	% of Goods and Services	Total flow as % of balance of services	Total flow as % of GDP	Total flow world share	World flows of other services share	World GDP share
1	China	25,141	-22,818	0.6%	3.8%	0.2%	3.6%	7.1%	15.5%
2	Korea	15,914	-2,669	1.4%	7.8%	1.1%	2.3%	2.2%	1.9%
3	India	5,991	-4,941	0.7%	2.3%	0.3%	0.9%	2.8%	3.1%
4	Brazil	5,792	-4,490	1.4%	6.0%	0.3%	0.8%	1.0%	2.5%
5	Malaysia	1,454	-1,232	0.4%	1.9%	0.5%	0.2%	0.8%	0.4%
6	Thailand	4,049	-3,910	0.8%	3.6%	1.0%	0.6%	1.2%	0.6%
7	Argentina	2,194	-1,933	1.5%	6.4%	0.4%	0.3%	0.4%	0.8%
8	Indonesia	1,779	-1,686	0.5%	3.3%	0.2%	0.3%	0.6%	1.3%
9	South Africa	2,121	-1,903	1.2%	7.2%	0.7%	0.3%	0.3%	0.4%
10	Chile	1,619	-1,532	1.2%	7.3%	0.7%	0.2%	0.2%	0.3%
11	Turkey	764	-764	0.2%	1.3%	0.1%	0.1%	0.6%	1.2%
12	Mexico	284	-270	0.0%	0.5%	0.0%	0.0%	0.6%	1.4%
Sum							9.5%	17.9%	29.4%

Results National economies level

“Pharmaceutical products” trade by country (2016) – millions of dollars, current val

Rank (by flow)	Country	Total Flow (Credit + Debit)	Net Flow (Credit - Debit)	Total flow as % of balance of services	Total flow as % of GDP	Total flow world share	World flows of other services share	World GDP share
1	United States	139,485	-45,559	3.8%	0.8%	14.2%	12.3%	25.6%
2	Germany	126,194	28,002	5.4%	3.6%	12.8%	7.9%	4.8%
3	Switzerland	92,129	42,781	15.8%	14.0%	9.4%	2.0%	0.9%
4	Belgium	76,867	7,084	14.0%	16.5%	7.8%	1.8%	0.6%
5	United Kingdom	65,334	-174	6.5%	2.5%	6.6%	3.4%	3.6%
6	France	52,194	8,059	5.0%	2.1%	5.3%	3.5%	3.4%
7	Italy	42,504	-73	5.1%	2.3%	4.3%	2.8%	2.6%
8	Ireland	37,810	25,782	12.7%	12.9%	3.8%	1.0%	0.4%
9	Netherlands	29,972	3,353	3.3%	3.9%	3.0%	3.0%	1.1%
10	Japan	28,452	-20,324	2.3%	0.6%	2.9%	4.1%	6.8%
	Sum					70.3%	41.9%	49.8%

Results

National economies level

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	Sum					70.3%	41.9%	49.8%

Results National economies level

“Pharmaceutical products” trade by country (2016) selected countries – millions of dollars, current values

Rank (by flow)	Country	Region	Level of Development	Income Level	Total Flow (Credit + Debit)	Net Flow (Credit - Debit)	Total flow as % of balance of goods	Total flow as % of GDP	Total flow world share	World flows of other goods share	World GDP share
1	China	Asia	Developing	Upper middle income	27,783	-13,760	0.8%	0.2%	2.8%	11.7%	15.5%
2	Korea	Asia	Developing	High income	7,936	-3,126	0.9%	0.6%	0.8%	3.0%	1.9%
3	India	Asia	Developing	Lower middle income	14,741	11,345	2.3%	0.7%	1.5%	2.2%	3.1%
4	Brazil	Americas	Developing	Upper middle income	7,591	-5,188	2.3%	0.4%	0.8%	1.1%	2.5%
5	Malaysia	Asia	Developing	Upper middle income	1,502	-1,100	0.5%	0.5%	0.2%	1.0%	0.4%
6	Thailand	Asia	Developing	Upper middle income	2,591	-1,668	0.7%	0.6%	0.3%	1.3%	0.6%
7	Argentina	Americas	Developing	Upper middle income	3,064	-1,251	2.8%	0.6%	0.3%	0.4%	0.8%
8	Indonesia	Asia	Developing	Lower middle income	1,368	-236	0.5%	0.1%	0.1%	0.9%	1.3%
9	South Africa	Africa	Developing	Upper middle income	2,307	-1,469	1.5%	0.8%	0.2%	0.5%	0.4%
10	Chile	Americas	Developing	High income	1,356	-1,023	1.2%	0.5%	0.1%	0.4%	0.3%
11	Turkey	Asia	Developing	Upper middle income	5,044	-3,390	1.5%	0.6%	0.5%	1.1%	1.2%
12	Mexico	Americas	Developing	Upper middle income	5,730	-2,556	0.8%	0.5%	0.6%	2.6%	1.4%
	SUM								8.2%	26.3%	29.4%

Conclusions

- The **international strategy** worked out so far
- IP regime is still imposing substantial costs on countries classified as developing
- Larger shares in the economic trade **don't mean more access to the values** produced worldwide if you don't own the IPRs
- On the other hand, the fact that developing countries are paying for access knowledge and information can be **good for their development**. The question is whether the knowledge and information acquired in this way can be **transformative**.

Thank you very much!

Questions & Comments

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