

# Iran Pharmaceutical Sector: opportunities and challenges

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# Iran Health Sector: general overview (2017)

• <b>Total population</b>	<b>81 million</b>
• <b>Urban population</b>	<b>70%</b>
• <b>Life expectancy at birth</b>	<b>78 years</b>
• <b>Population Growth Rate</b>	<b>1.2%</b>
• <b>Infant Mortality Rate (per 1000)</b>	<b>15</b>
• <b>Under five mortality rate (per 1000)</b>	<b>19</b>
• <b>Total expenditure on health as % of GDP</b>	<b>8.9%</b>
• <b>% of government expenditure on health</b>	<b>19.5%</b>
• <b>Per capita Gross Domestic Product (PPP USD)</b>	<b>11,500</b>

# National Drug Policy & Medicines Regulatory Framework

- **Promotion of Generic Medicines**
- **Supporting the Local Pharmaceutical Industry**
- **Price control and Market regulation**
- **Access to Essential Medicines for all**
- **Improved Quality of Medicines**
  - PIC/s, QC (IFDA Central Labs, Vigilance)
  - Quality of pharmacists' Services
  - Supply management control (Integration, Monitoring and Regulation (TTAC))
- **Promotion of Rational use of Medicines**
- **Promotion of Herbal and Traditional Medicines**
- **Promotion of Pharmaceutical Export**

# Overview of current Pharmaceutical situation

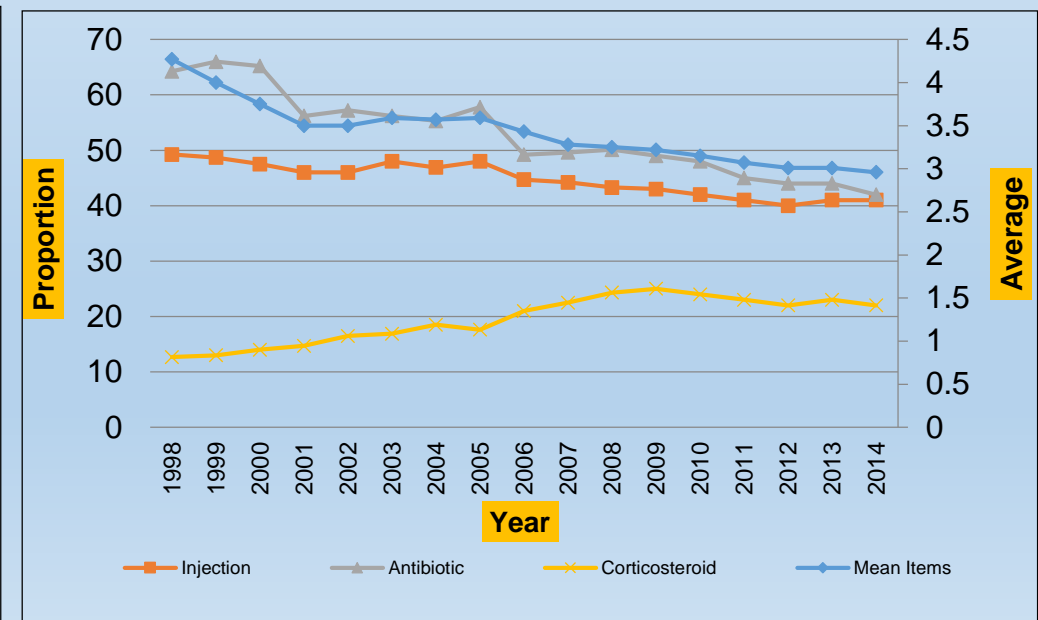
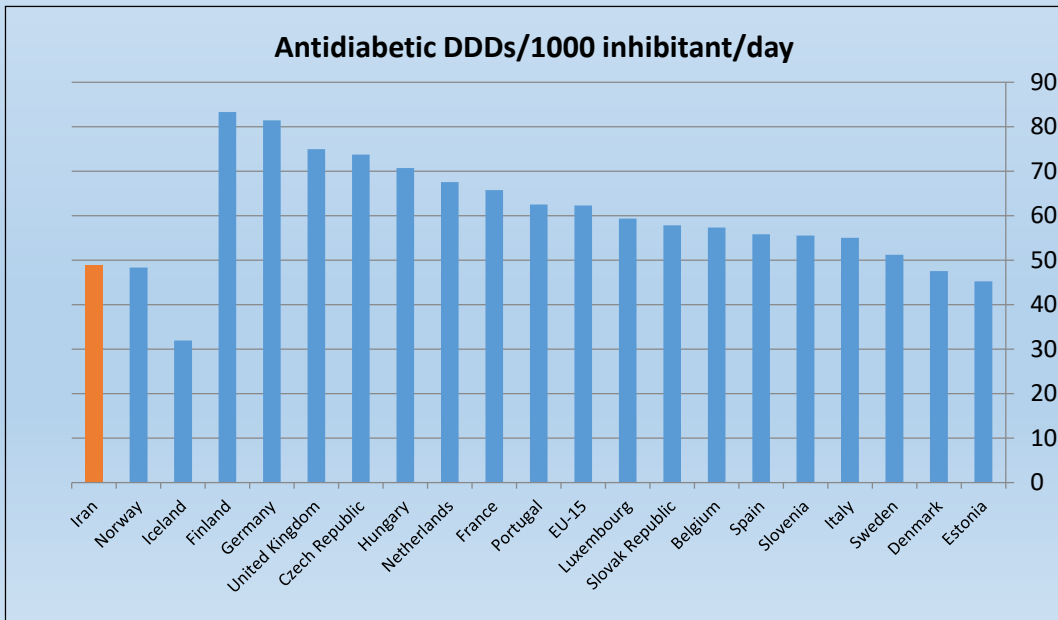
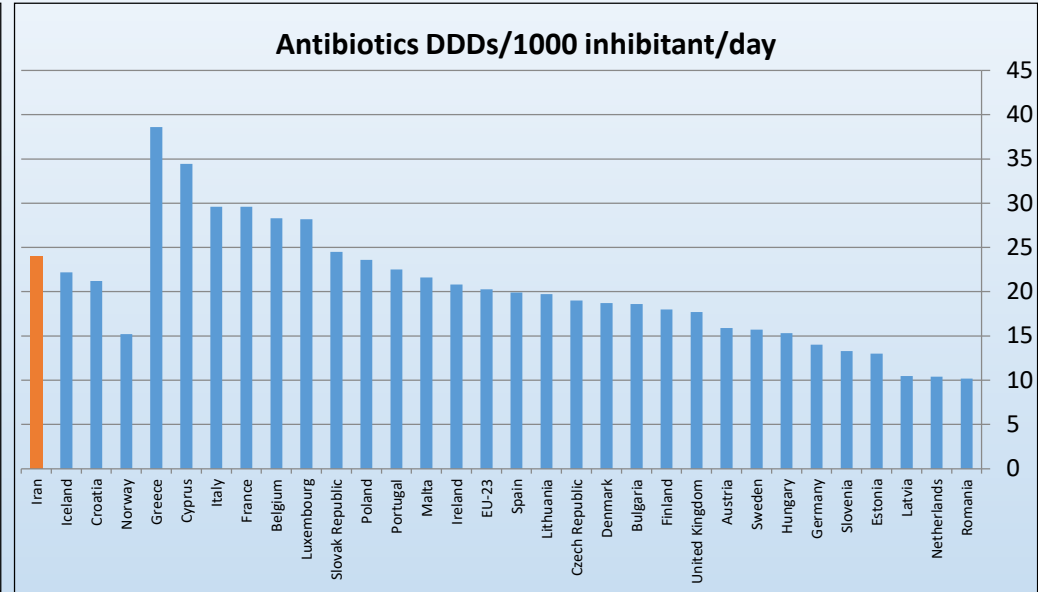
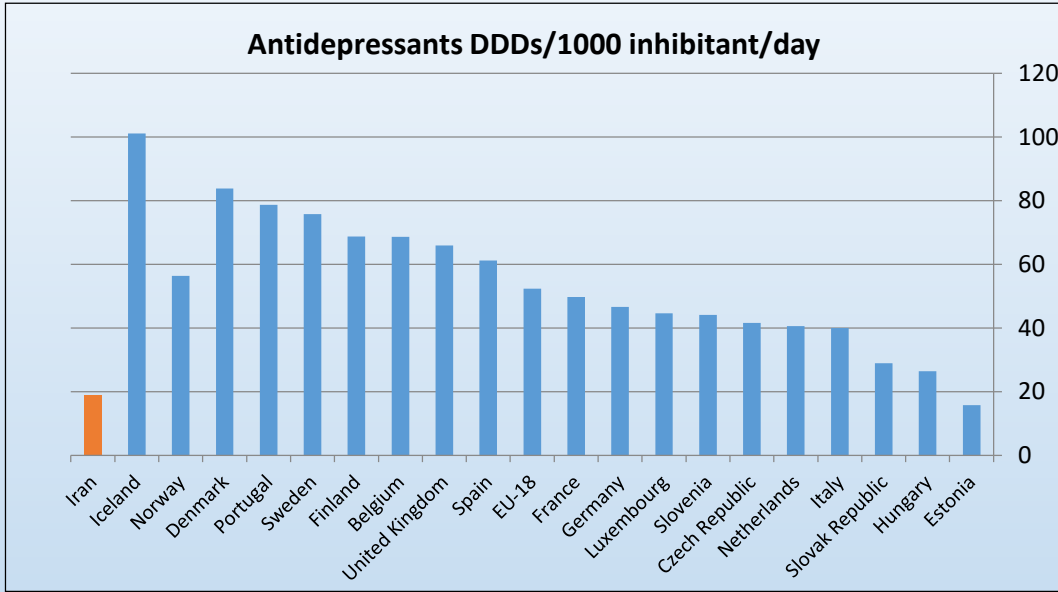
- **Largely a generic market**
- **Domestic industry supplies at low prices**
- **Legal frameworks to support knowledge based companies: flourishing local knowledge based companies (biotechnology and nanotechnology)**
  - **Recombinant proteins, monoclonal antibodies, ADCs, Nanomedicines, liposomes, .....**
- **Trade barriers (both technical and custom tariffs) against imports (Tariffs of up to 32%)**
- **Local industry not practically privatized yet: public entities have bigger share of the local manufacturing market though private sector has been steadily growing**
- **Regulatory framework is being improved over time. Iran officially joined PIC/S in Sept. 2017**
- **Huge public subsidies (USD 800 million) for more expensive medicines**
- **Risk of counterfeit/substandard drugs entering the market (TTAC implemented)**
- **Shortages of medicines due to sanctions**

# 40 years of pharmaceutical market in Iran at a glance

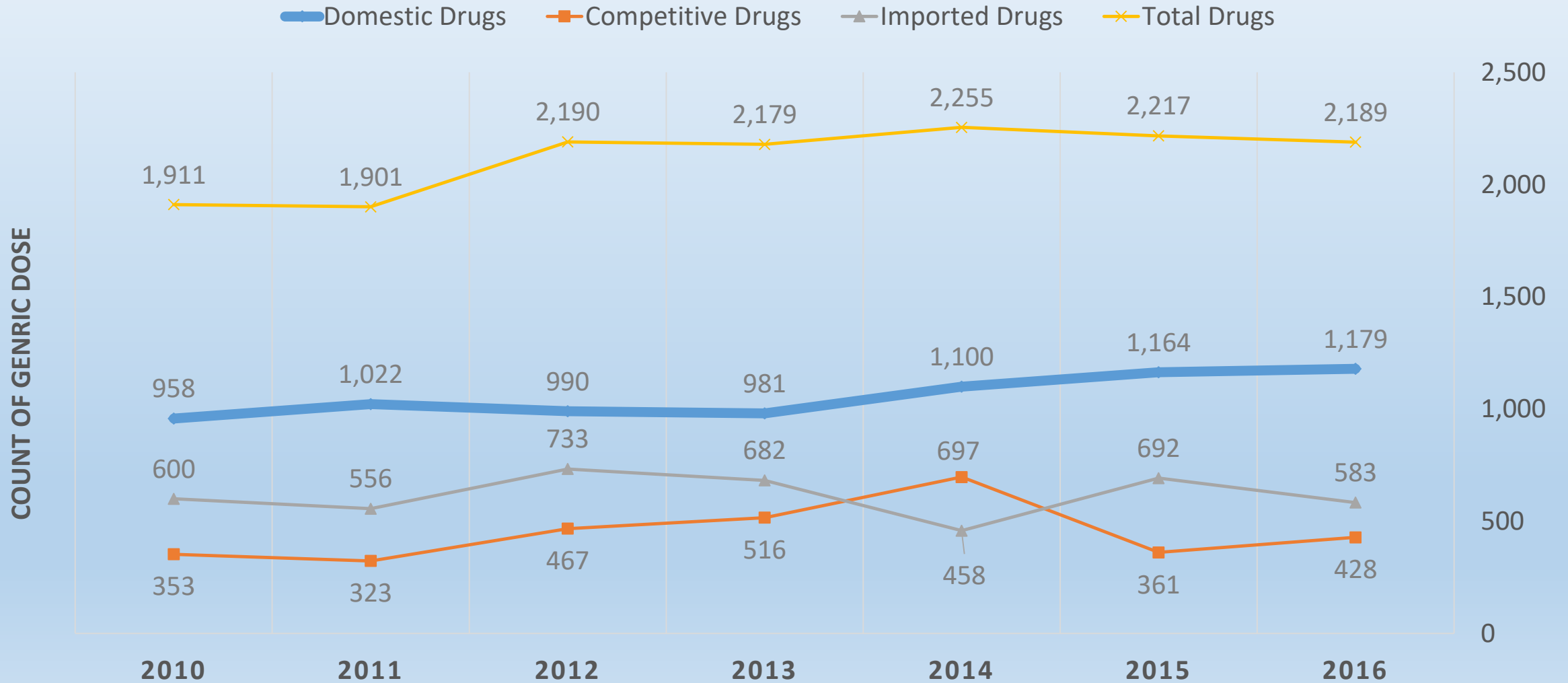
<b>Year</b>	<b>1978</b>	<b>1981</b>	<b>1989</b>	<b>1997</b>	<b>2005</b>	<b>2013</b>	<b>2018</b>
<b>Population (million)</b>	35	40	53	62	69	76	82
<b>Pharmaceutical market size (Million USD)</b>	1050	660*	720*	950*	1550*	4060	4625
<b>Local manufacturing share</b>	25%	44%	89%	84%	72%	63%	70%
<b>Market size (billion items)</b>	6.8	5.9	11.3	15.8	26.5	34.2	42.7
<b>Local manufacturing share</b>	31%	48%	95%	96%	96%	95%	96%
<b>Per capita pharmaceutical expenditure (USD)</b>	30	16.5	13.6	15.3	22.5	52.7	56.4
<b>Per capita pharmaceutical consumption (volume)</b>	194	148	213	266	384	444	520

\* Excluding 300-800 million USD

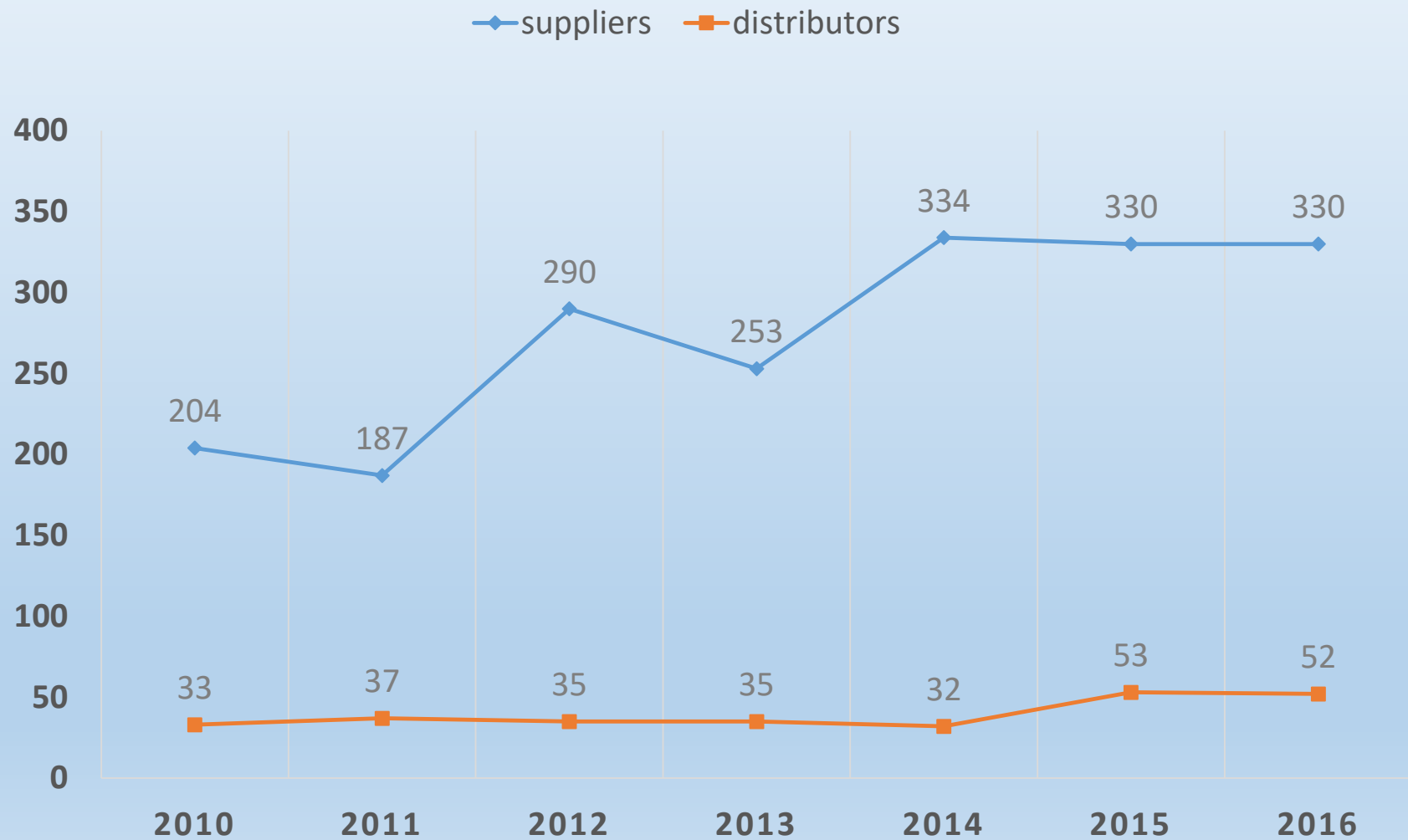
# Pharmaceutical consumption in Iran compared with other countries (2014)



# IRAN Pharmaceutical market: number of items (inn)



# IRAN pharmaceutical market: Number of suppliers & distributors companies



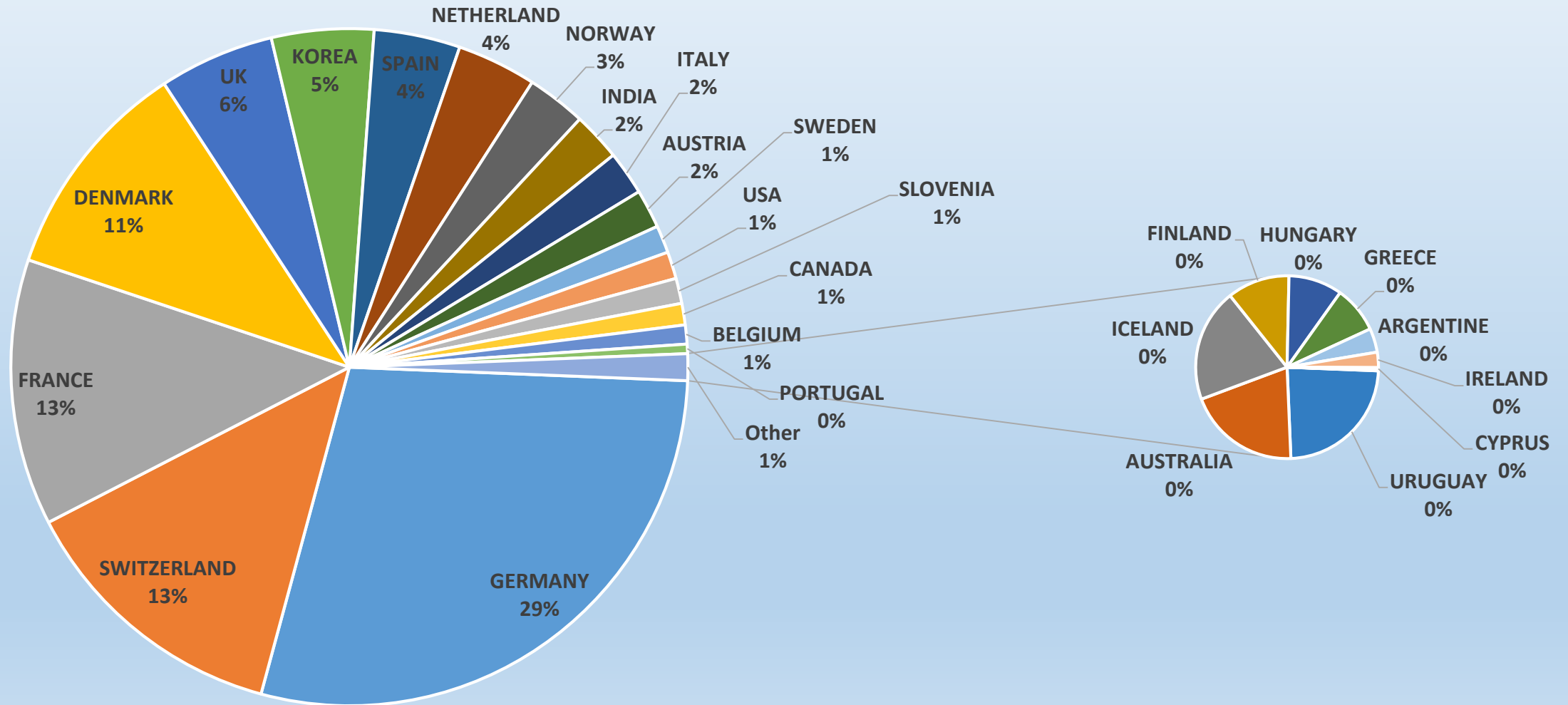


# IRAN PHARMA MARKET (VALUE, MILLION USD)

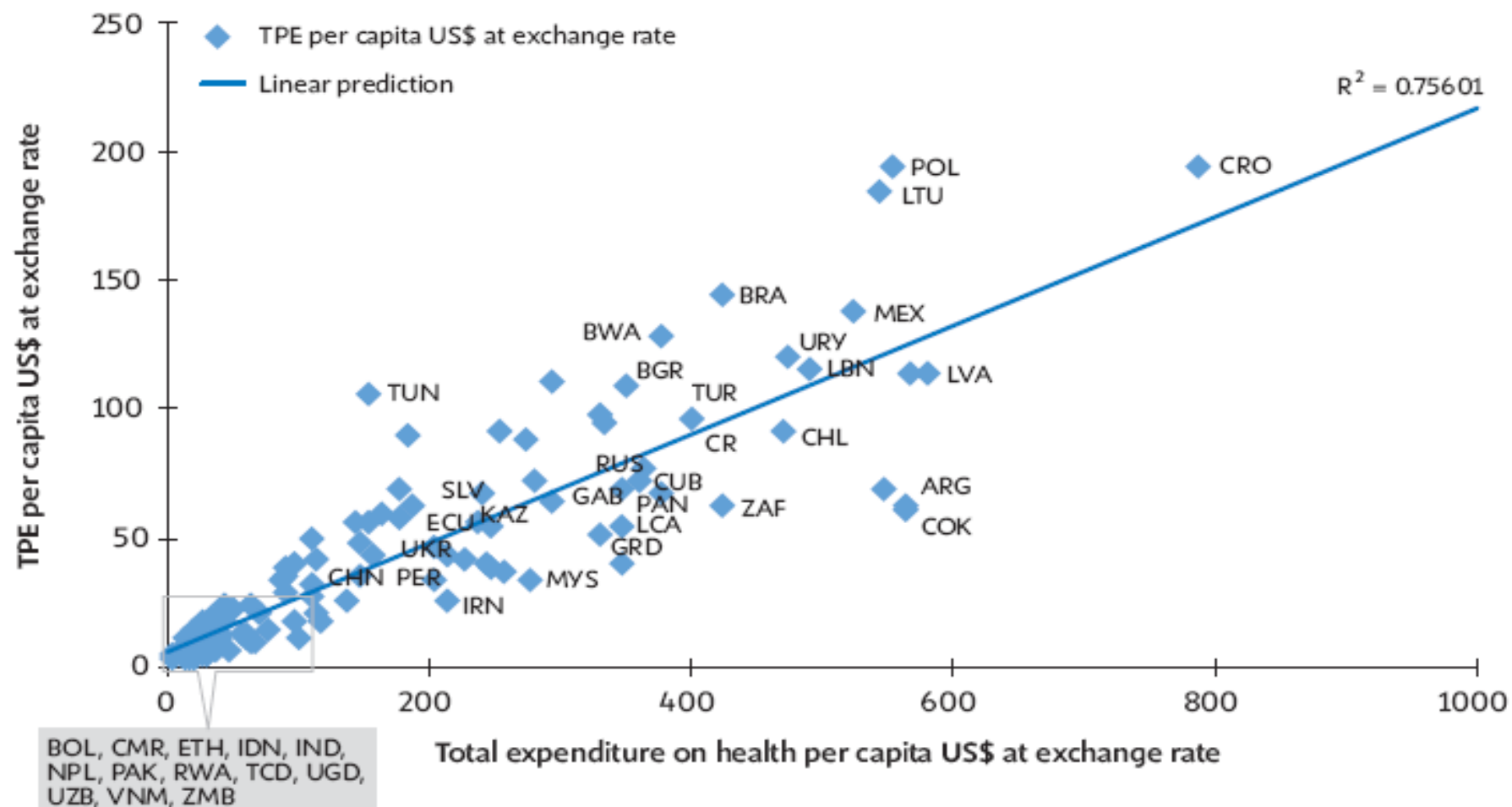
Domestic Drugs Competitive Drugs Imported Drugs Total Drugs



# 2016 IMPORTED PHARMACEUTICALS (COUNTRY OF ORIGIN)



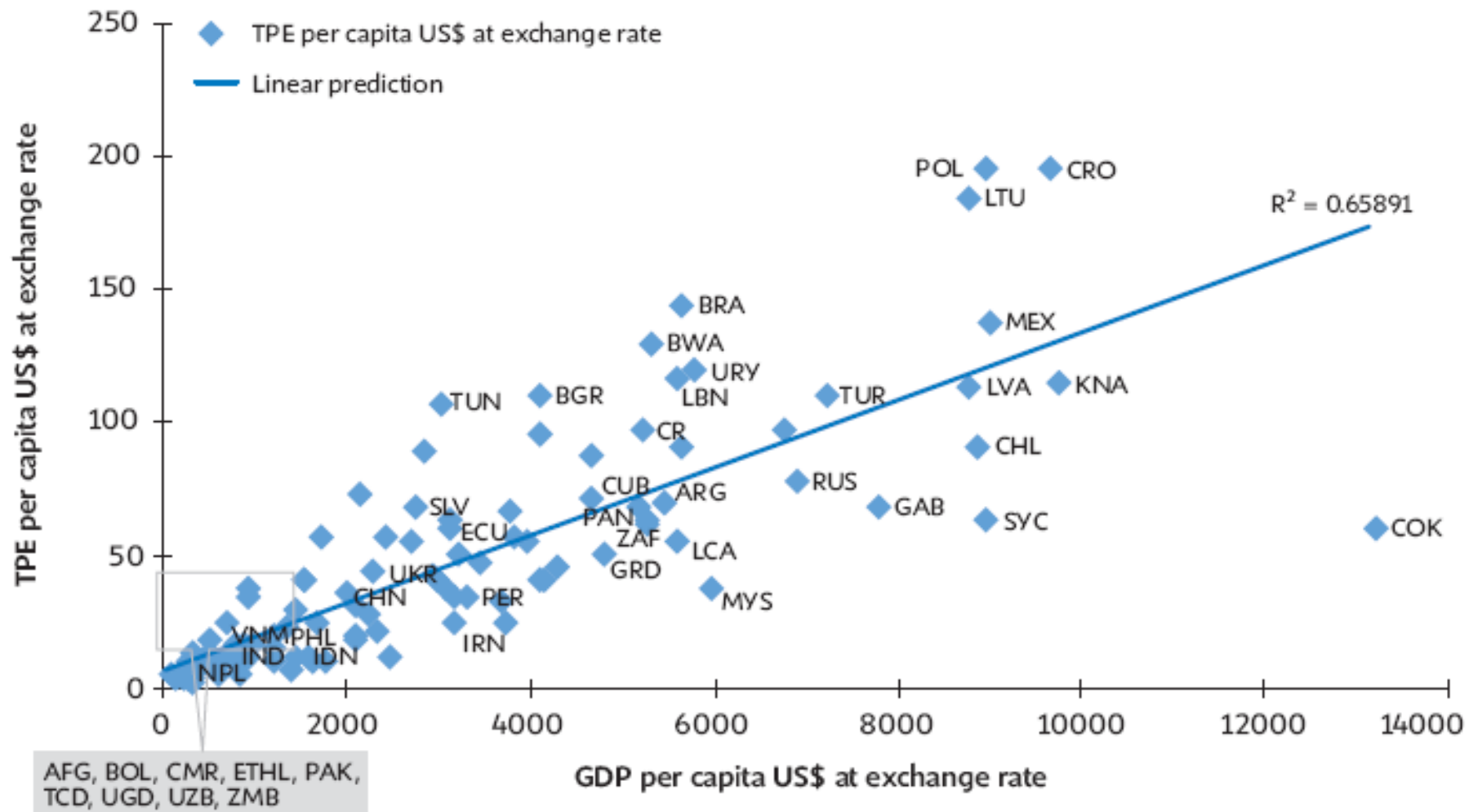
## Relationship between per capita total health expenditure (THE) and total pharmaceutical expenditure (TPE) per capita in low- and middle-income countries, 2006 (in US\$<sup>a</sup>)



<sup>a</sup> National currency units converted to US\$ at 2006 exchange rates.

Source: WHO NHA database

## Correlation between per capita total pharmaceutical expenditures (TPE) and per capita GDP in selected low- and middle-income countries, 2006 (in US\$ at exchange rates values)



# NCD medicines in Iran at a glance (2016)

	Lipid modifying	Diabetes	CVD	Anti-coagulants	COPD	Systemic hormones	CNS	CKD	Cancer	Total
People at risk (1000)	15600	7800	10,400	9360	6,240	4640	15,600	61	416	
Available medicines (items)	19	26	94	25	65	17	117	24	111	
Total doses distributed (Million)	1197	2913	6012	1403	440	651	2353	153	63	
Patients receiving medicines (1000)	2187	3193	6588	3846	1206	1758	2150	60	173	
Percentage Covered	14%	41%	63%	41%	19%	37%	13%	98%	41%	
Market value (Million USD)	61	118	152	385	177	52	173	154	422	1724
Locally manufactured (%)	100%	70%	76%	99%	72%	35%	47%	72%	28%	
Cost per patient (USD)	27	37	23	100	146	29.5	80	2566	2439	
Cost to cover 70% of all patients	305	201	168	657	652	98	931	110	720	3842

# Cancer situation (2014)

- Tobacco consumption and excessive alcohol consumption cause about 40% of the total cancer burden. The precise figures vary from country to country.
- If the consequences of inappropriate diet, obesity and insufficient physical activity are added, the percentage of cancers due to an unhealthy lifestyle rises to 60%.

	<b>Iran</b>	<b>USA</b>	<b>EU-28</b>
<b>Population (million)</b>	77	320	504
<b>Number new cancer cases</b>	97,000	1,665,000	3,200,000
<b>Cancer incidence per 100,000</b>	126	520	635
<b>Total oncology drug market (M \$)</b>	340	37,000	22,000
<b>Per capita oncology drug cost (\$)</b>	4.4	115.6	43.6
<b>Per new patient oncology drug cost (\$)</b>	3,505	22,222	6,875

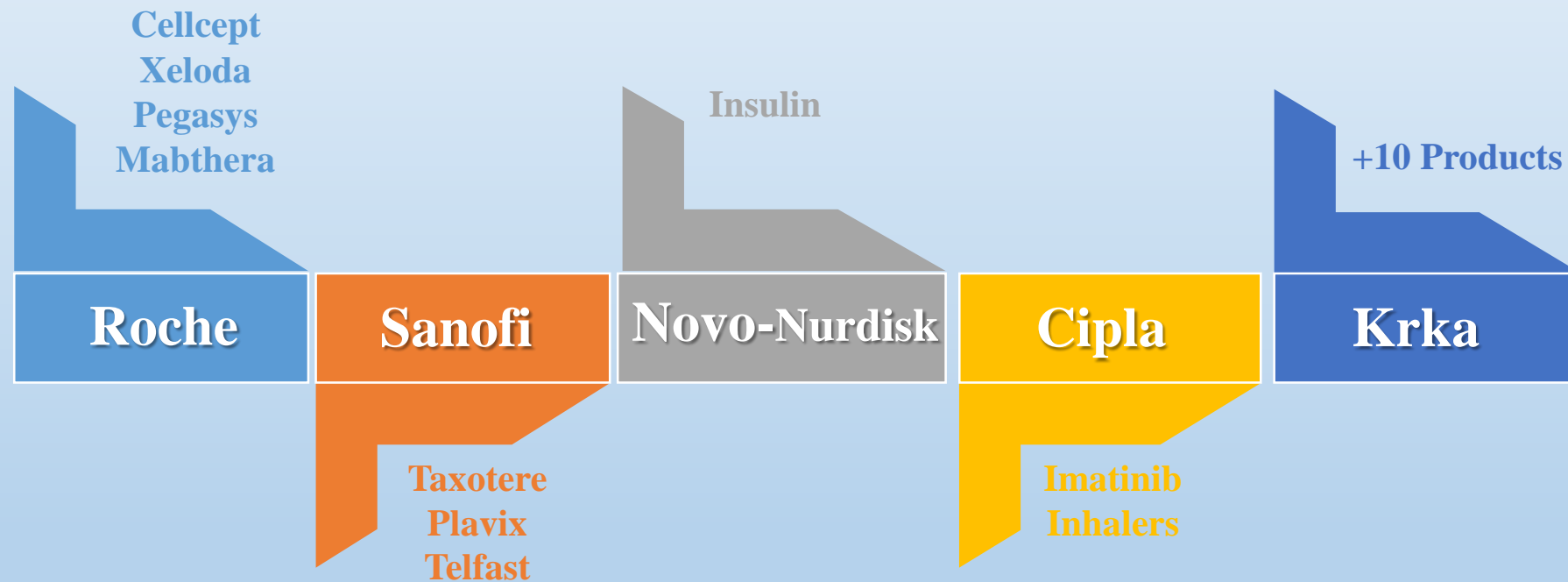
## **To be noted:**

- No Patent protection yet
- Low cost energy
- Less regulated marketing environment
- Sanctions and Years of isolation of financial institutes: difficulties in money flow (mainly from India, China, Turkey)
- Government Guarantees and legal infrastructure For Foreign Investment
- MOH and IFDA Support (Rules & Regulations) for foreign Investment in local industry

Many thanks for your attention



# Examples of licensing out to local manufacturers



# Other projects

	Company	Country	Field	Type of investment	Investment
1	Novo Nordisk	Denmark	Injectable	Sole investment/ green field	Euro 70 M
2	IPSEN	France	Diphereline	Joint venture/ green field	Euro 12 M
3	Chemo	Spain	Hormons	Purchase of established facility	Euro 25 M
4	Biotest	Germany	Plasma collection/ Fractionation	Joint venture	?

# Health Transformation Plan

**Health Transformation Plan** underway since 2014, focused on OOP reduction

	2013 (before HTP)	2017 (after HTP)
□ <b>Population covered by health insurance policy</b>	85%	97%
□ <b>Out of packet health expenditure</b>	58%	36%
□ <b>Availability of medicine and medical devices at hospitals</b>	62%	97%