



Cannabis Market in Europe: A Growing Domestic Market (First Results)



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**Identifying Europe's information needs
for effective drug policy**

Lisbon, EMCCDA

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Main goals

- to get a good overview of where cannabis is coming from in Europe, domestic production, the types of products available, the market shares of different products amongst users, etc.
- To collect and analyse recent and reliable data on different cannabis products potency in order to get an overview of levels and trends in cannabis potency in Europe.

The Team

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- David WEIBERGER (INHES)
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- Nacer LALAM (INHES)

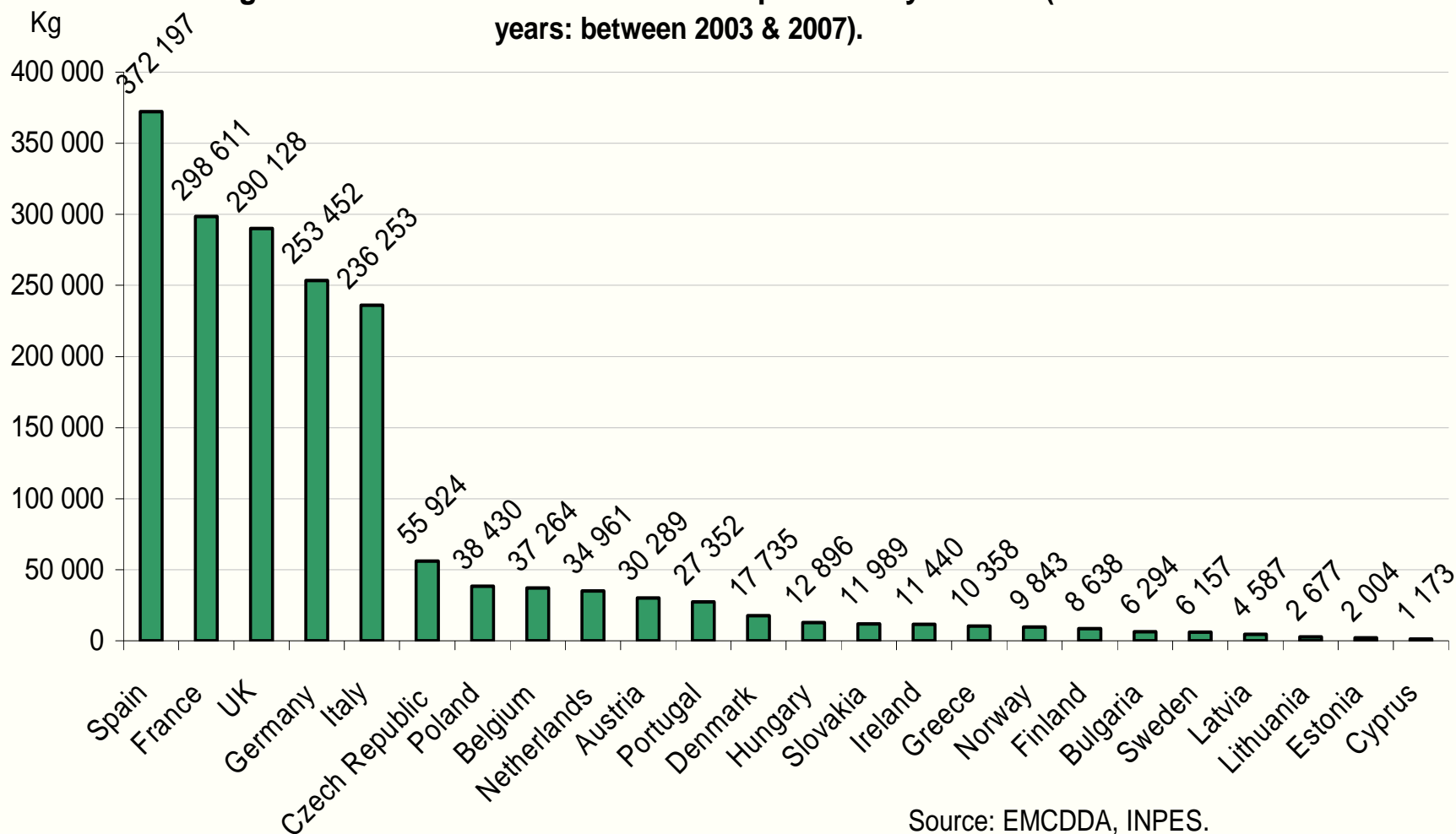
- Consultants: Les King (UK), Toine Spapens (NL)

First results

- Estimated volumes of cannabis used
- Map of the cannabis routes
- European cannabis markets: resin vs. herb
- Price elasticity of the demand for cannabis products

Estimated volume of cannabis used

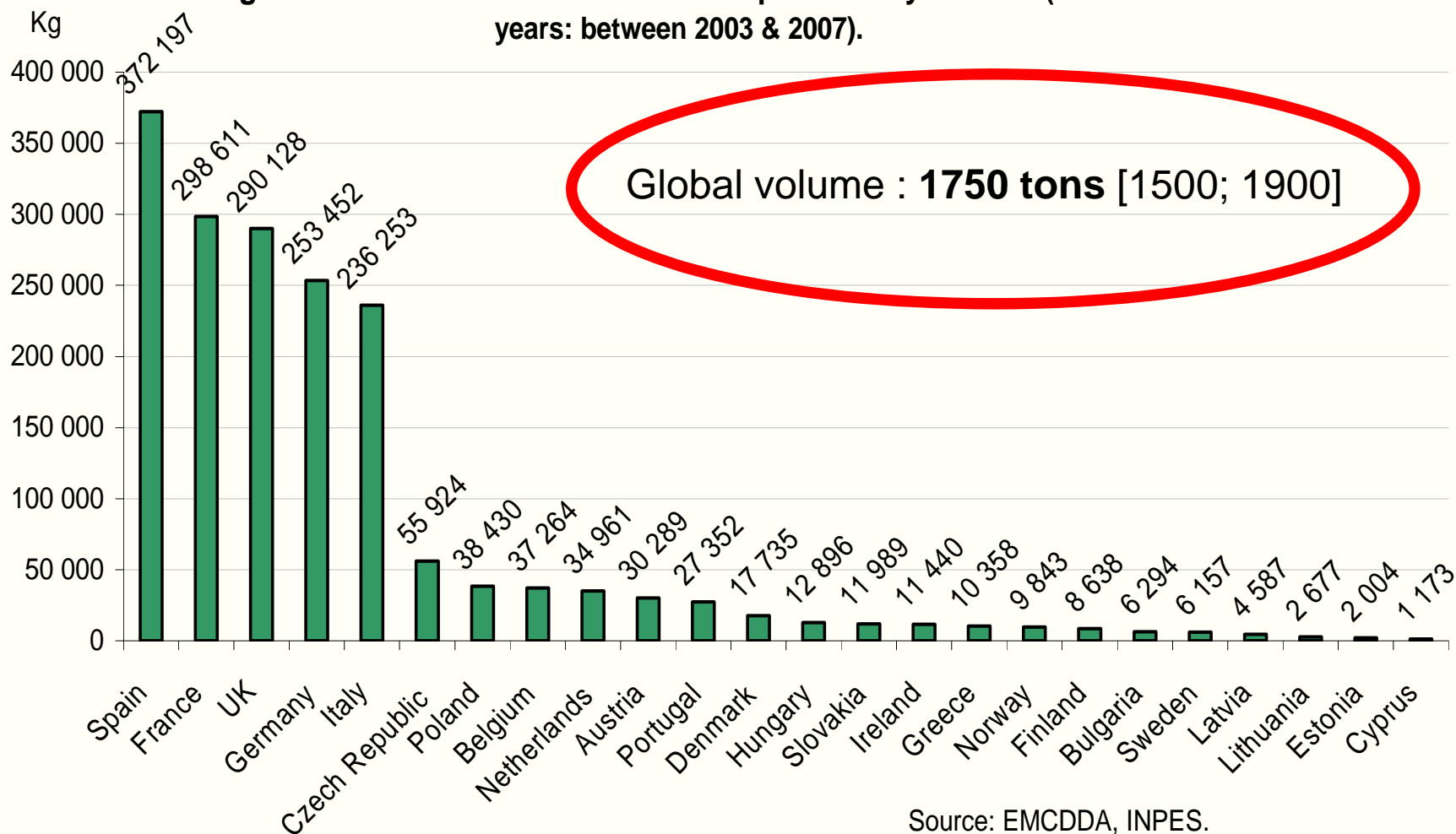
Figure 1. Estimation of cannabis used per country in Kilos (several years: between 2003 & 2007).



Source: EMCDDA, INPES.
 Estimations: OFDT, INHES, IPSL.

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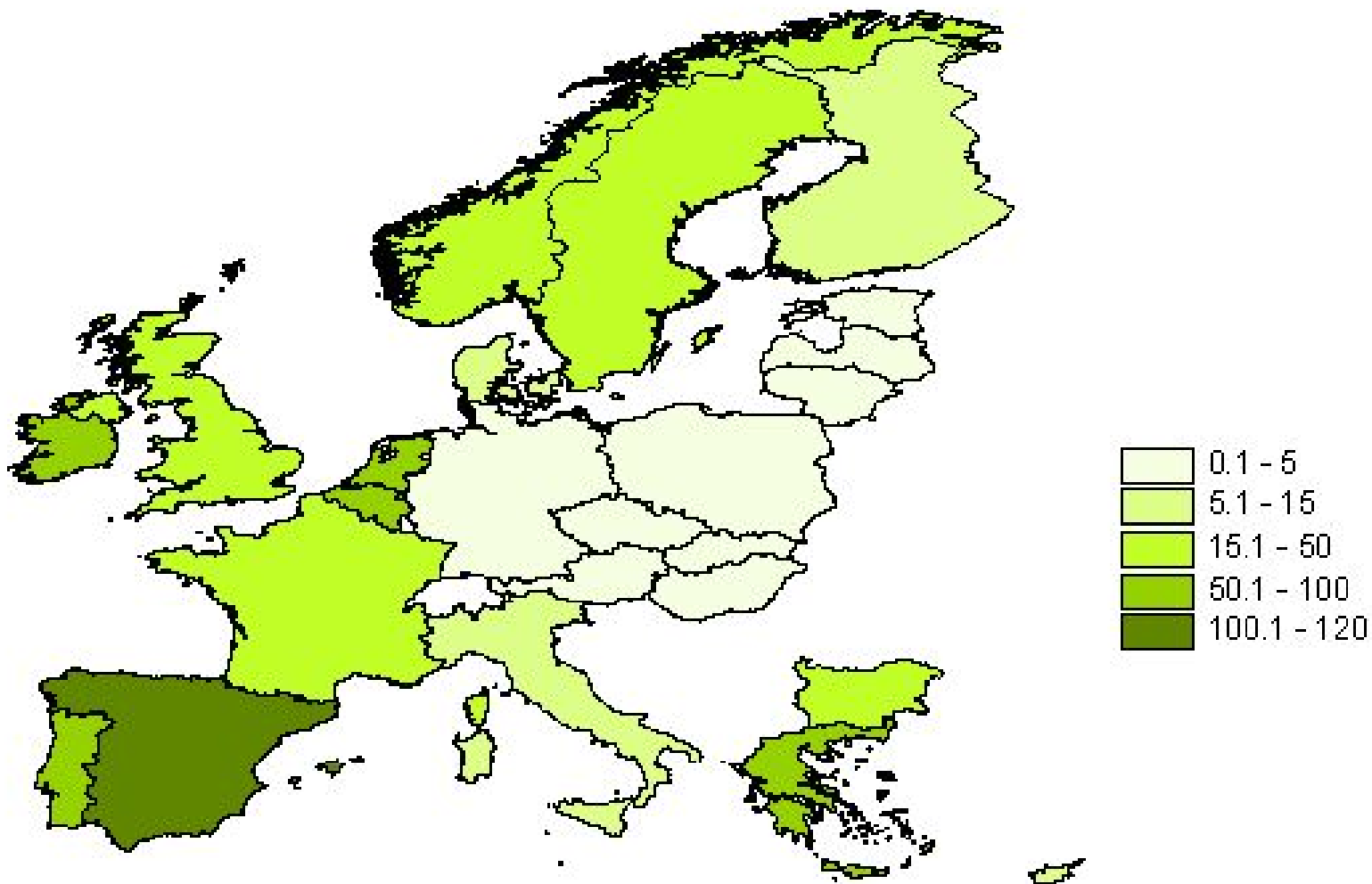
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Estimated volume of cannabis used

- these estimations of volumes lead to a commercial retail value of **9.6** billions of euros [8.5; 10.8].
- For comparison, the European markets for alcohol and tobacco are respectively worth 92 billions of euros and 143 billions of euros (Euromonitor, 2007, 2008).

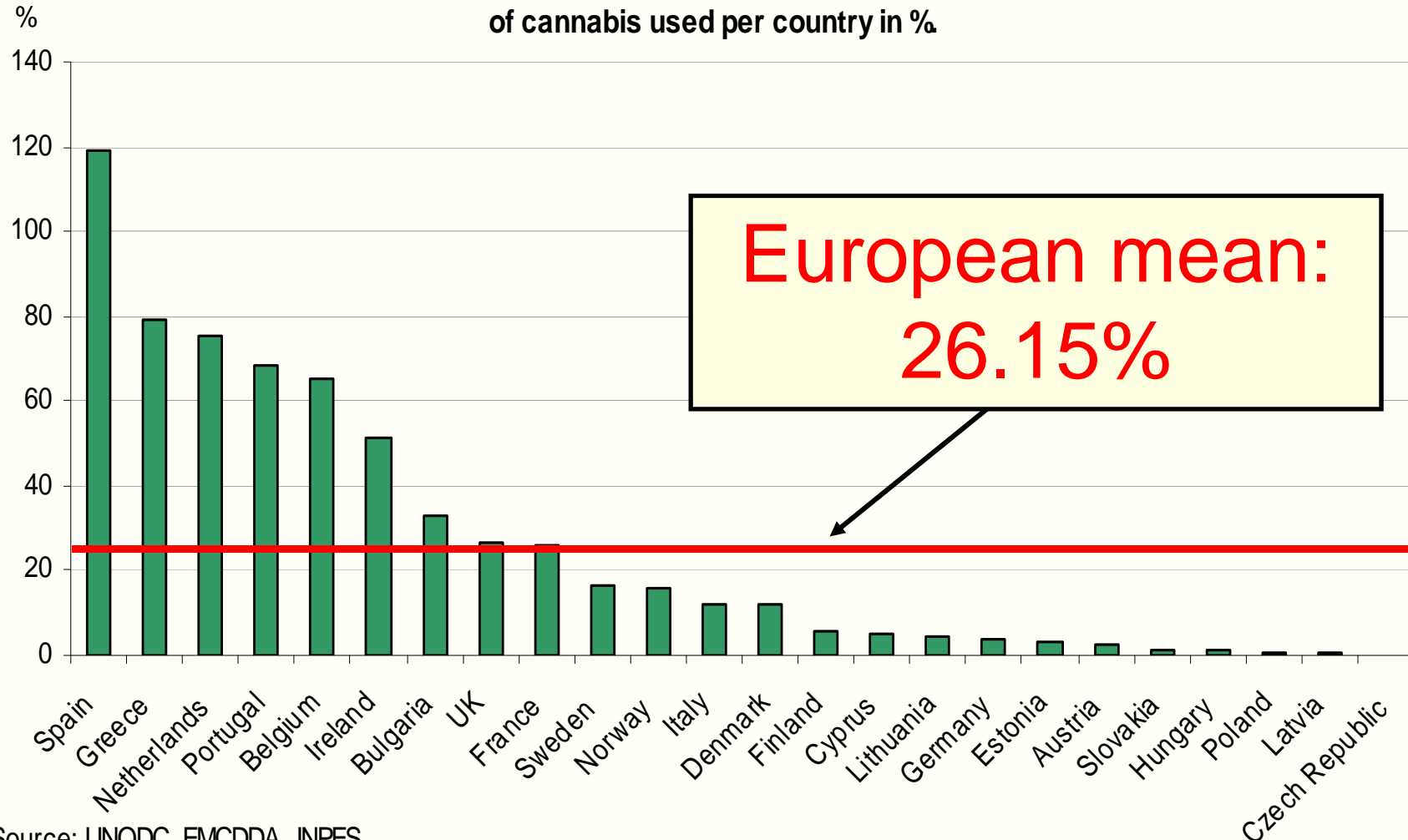
Indirect indicator: transit and final destination

Map 1. Ratio between the annual mean seizures of cannabis (2001-2006) and the estimations of annual volume of cannabis used by country (%).



Indirect indicator: front door, transit and final destination

Graph 2. Ratio between annual mean of cannabis seizures (2001-2006) and estimation of cannabis used per country in %

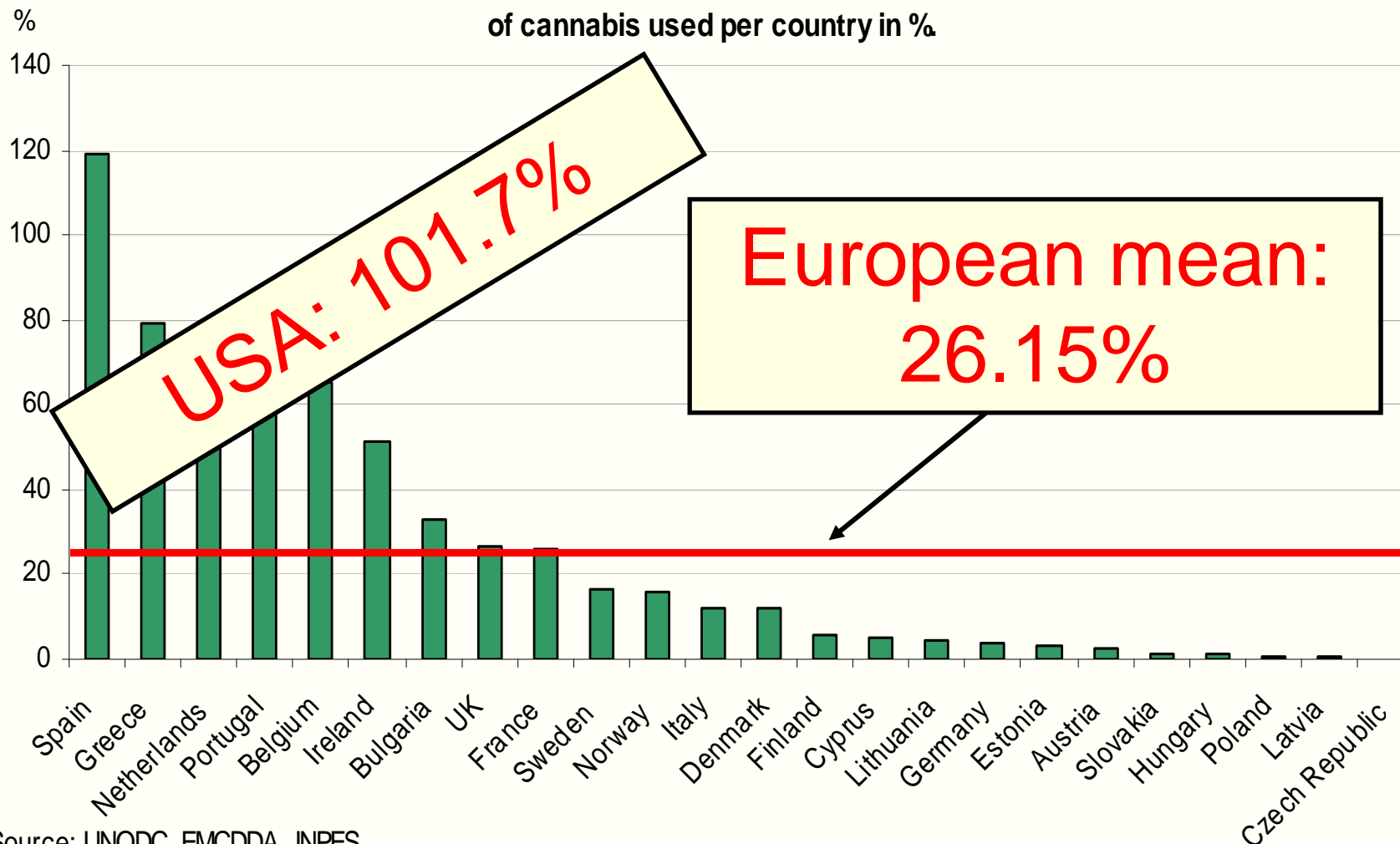


Source: UNODC, EMCDDA, INPES.

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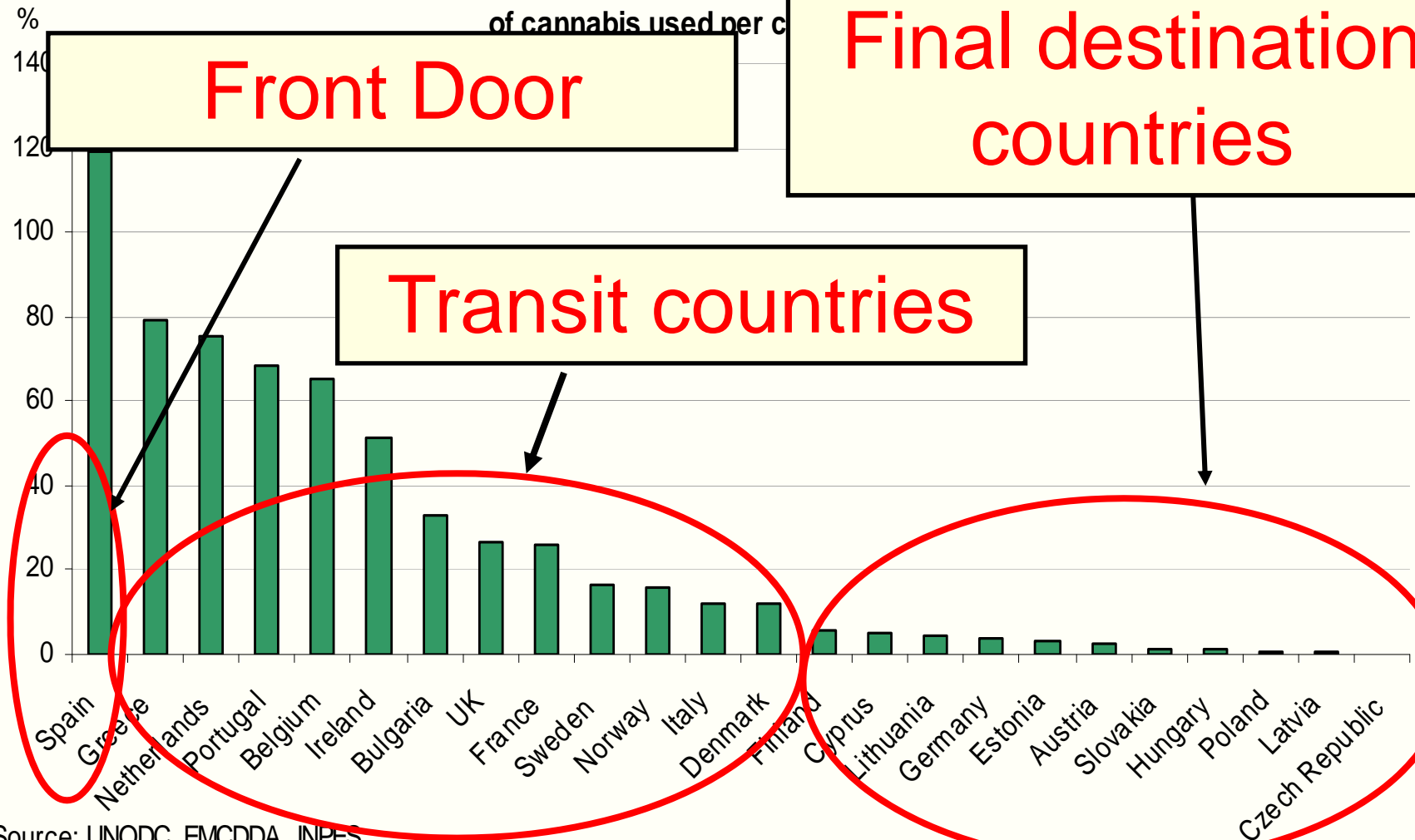
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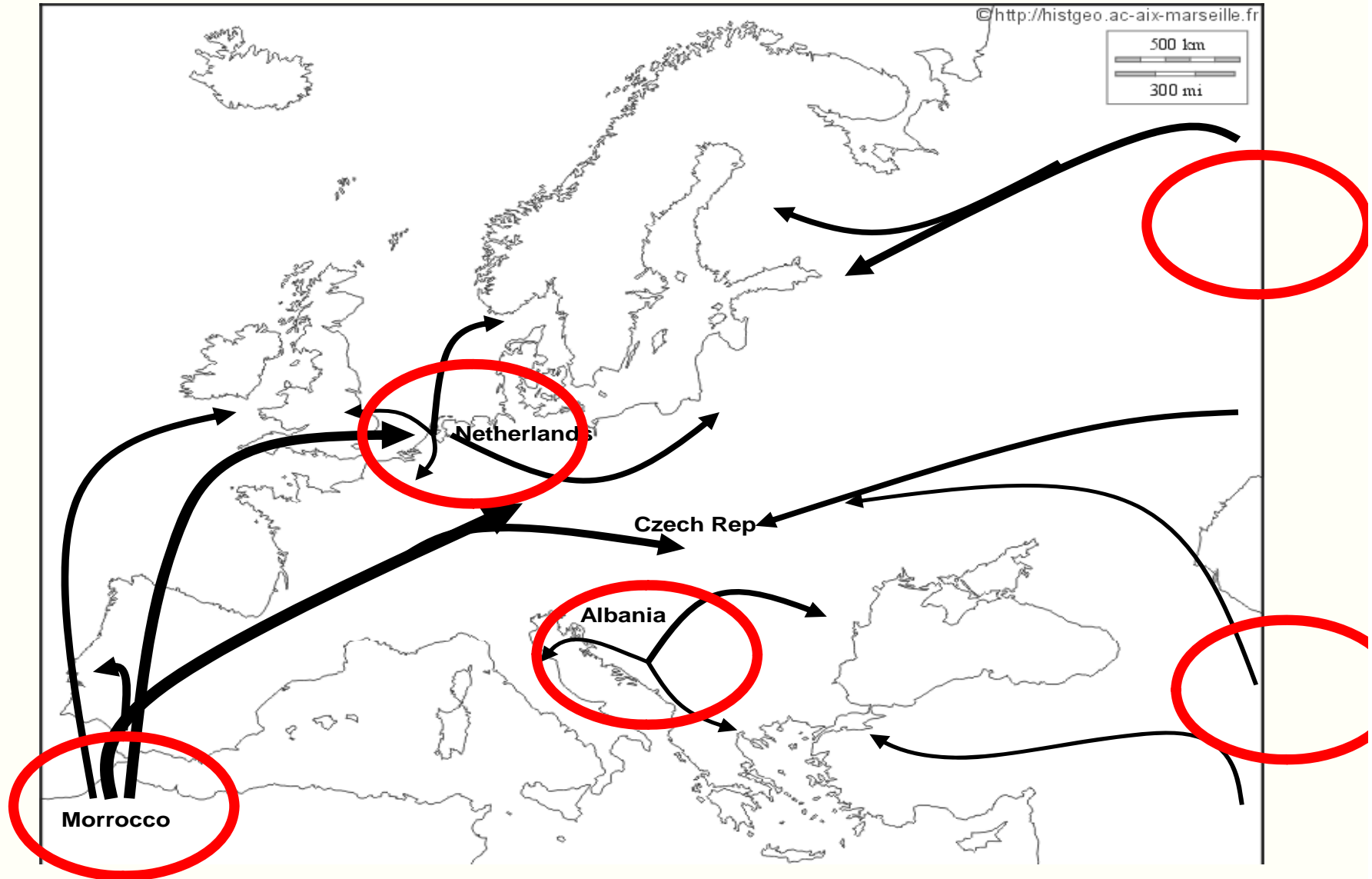
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Graph 2. Ratio between annual mean of cannabis seizures (2001-2006) and estimation of cannabis used per country



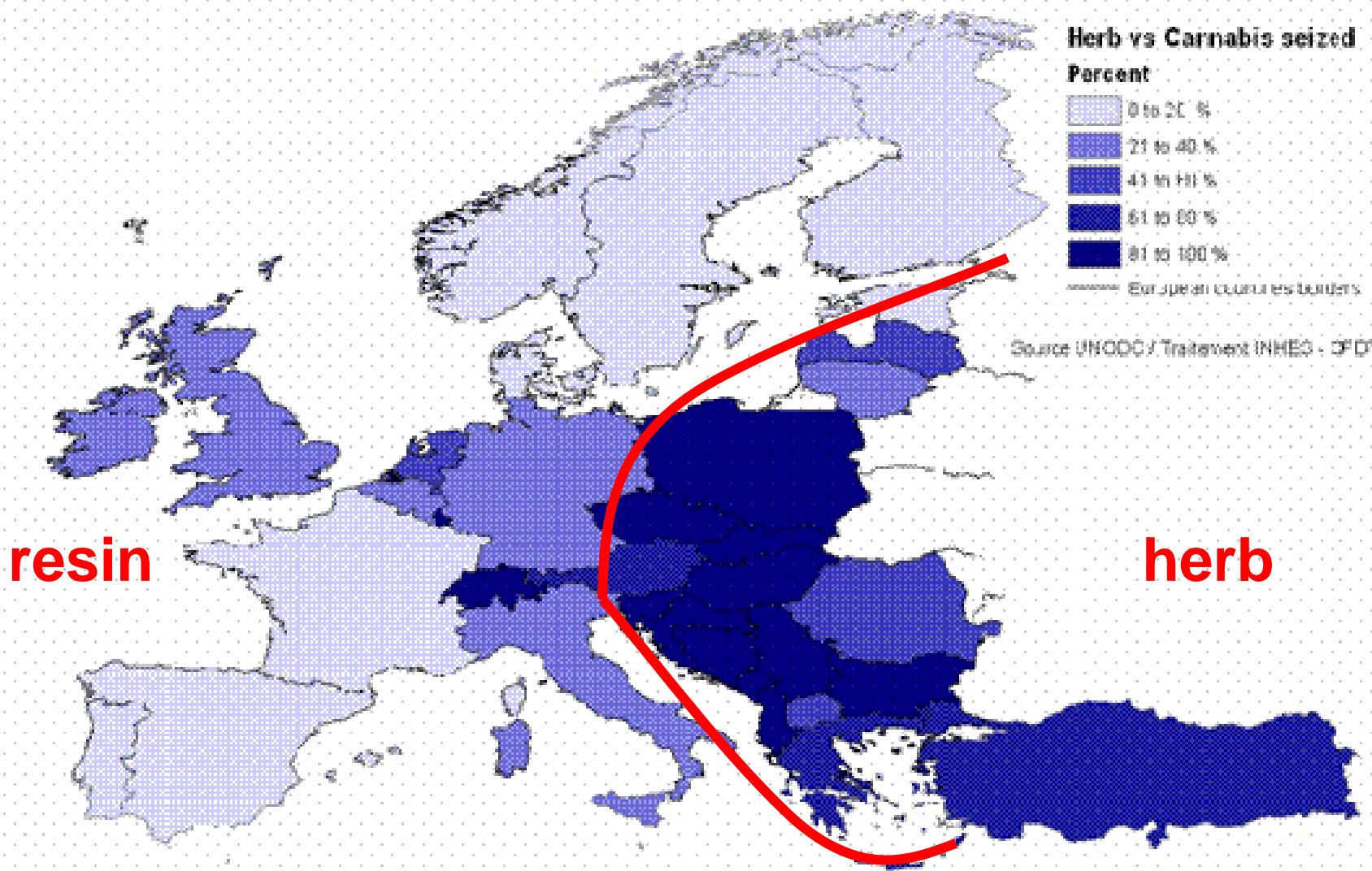
Source: UNODC, EMCDDA, INPES.
Estimations: OFDT, INHES, IPSL.

Extra European Cannabis Routes



Cannabis market : resin vs. herb

Ratio of Seizures of herbal cannabis and cannabis resin between 2001 and 2006.



Cannabis market : prices trend

Table 1. Growth rate of deflated average prices of cannabis products (European sub-regions*)

	Herbal Cannabis	Cannabis Resin
Eastern Europe**	-28,64%	-19,37%
Northern Europe	10,13%	-39,57%
Southern Europe	-7,52%	20,73%
Western Europe	15,22%	11,98%
Average growth rate of the European regions	-2,70%	-6,56%

* Based on the UNO composition of geographical sub-regions

** Czech Republic Excluded

Source: EMCDDA

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Source: EMCDDA

Price elasticity of cannabis demand

- Resin vs Herb
- Price Parity Purchase Power (European standard)
- Cross-sectional analysis (European countries)
- Age and Sex of users (monthly users)

Price elasticity of demand for Resin

Table X. Price elasticity of demand for non-resin resin according sex and age in Europe

	<i>Elasticity</i>	<i>95% Conf. Interval</i>	<i>N</i>	<i>F^a</i>	<i>Normality^a</i>
<u>General Population</u>					
15-24 y/o	-0,22	[-0,54; 0,10]	23	0,05	0,28
25-34 y/o	-0,52 ^{***}	[-1,18; -0,07]	23	0,28	0,45
35-44 y/o	-0,52 ^{***}	[-0,88; -0,17]	20	0,15	0,18
45-54 y/o	-0,41 ^{**}	[-0,71; -0,10]	18	0,15	0,03
55-64 y/o	-0,58	[-0,18; 1,30]	13	0,20	0,10
All	-0,37 ^{**}	[-0,86; -0,08]	23	15,00	0,88
<u>Male</u>					
15-24 y/o	-0,18	[-0,53; 0,17]	20	0,03	0,28
25-34 y/o	-0,71 ^{***}	[-1,18; -0,22]	20	0,38	0,84
35-44 y/o	-0,44 ^{**}	[-0,79; -0,09]	17	0,10	0,50
45-54 y/o	-0,20	[-0,58; 0,18]	13	0,04	0,13
55-64 y/o	0,81	[-0,14; 1,77]	10	0,31	0,88
All	-0,38 ^{**}	[-0,89; -0,10]	20	0,18	0,81
<u>Female</u>					
15-24 y/o	-0,38	[-0,88; 0,17]	18	0,08	0,22
25-34 y/o	-0,43	[-0,95; 0,08]	18	0,07	0,10
35-44 y/o	-0,12	[-0,55; 0,32]	14	0,01	0,58
45-54 y/o	0,03	[-0,88; 0,88]	10	0,00	0,28
55-64 y/o	2,18	[-5,21; 9,53]	3	0,87	-
All	-0,48	[-0,84; -0,02]	20	0,12	0,38

^a *Skewness/Kurtosis tests for Normality of residuals. Prob > Chi2*

^{***} significant to 1%

^{**} to 5%

Price elasticity of demand for Herb

Table X. Price elasticity of demand for herbal cannabis according sex and age in Europe

	<i>Elasticity</i>	<i>95% Conf. Interval</i>	<i>N</i>	<i>R²</i>	<i>Normality^a</i>
<u>General Population</u>					
15-24 y/o	-0,16	[-0,49; 0,16]	21	0,03	0,60
25-34 y/o	-0,31	[-0,91; 0,28]	20	0,08	0,41
35-44 y/o	-0,82 ^{***}	[-1,00; -0,23]	18	0,25	0,46
45-54 y/o	-0,43 ^{**}	[-0,78; -0,08]	14	0,17	0,10
55-64 y/o	0,39	[-0,48; 1,28]	11	0,10	0,14
All	-0,26	[-0,59; 0,07]	21	0,08	0,61
<u>Male</u>					
15-24 y/o	-0,13	[-0,54; 0,28]	19	0,02	0,60
25-34 y/o	-0,41	[-1,00; 0,19]	19	0,14	0,44
35-44 y/o	-0,74 ^{***}	[-1,27; -0,20]	16	0,28	0,53
45-54 y/o	-0,38 ^{**}	[-0,88; -0,08]	11	0,12	0,16
55-64 y/o	0,58	[-0,44; 1,59]	8	0,17	0,13
All	-0,28	[-0,69; 0,13]	19	0,10	0,64
<u>Female</u>					
15-24 y/o	-0,48	[-1,25; 0,27]	17	0,12	0,25
25-34 y/o	-0,75 ^{***}	[-1,48; -0,02]	15	0,19	0,04
35-44 y/o	-0,03	[-0,66; 0,60]	12	0,00	0,68
45-54 y/o	-0,11	[-1,33; 1,10]	8	0,00	0,19
55-64 y/o	-0,22	[-13,16; 12,72]	3	0,02	-
All	-0,70	[-1,43; 0,04]	18	0,22	0,12

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No sensitivity

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Conclusion

- On-going issues:
 - European Domestic Production issue.
 - Typology of growers
 - And Potency of cannabis products.

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