

FACTORS AFFECTING THE SUPPLY OF ENERGY WOOD IN SLOVAKIA

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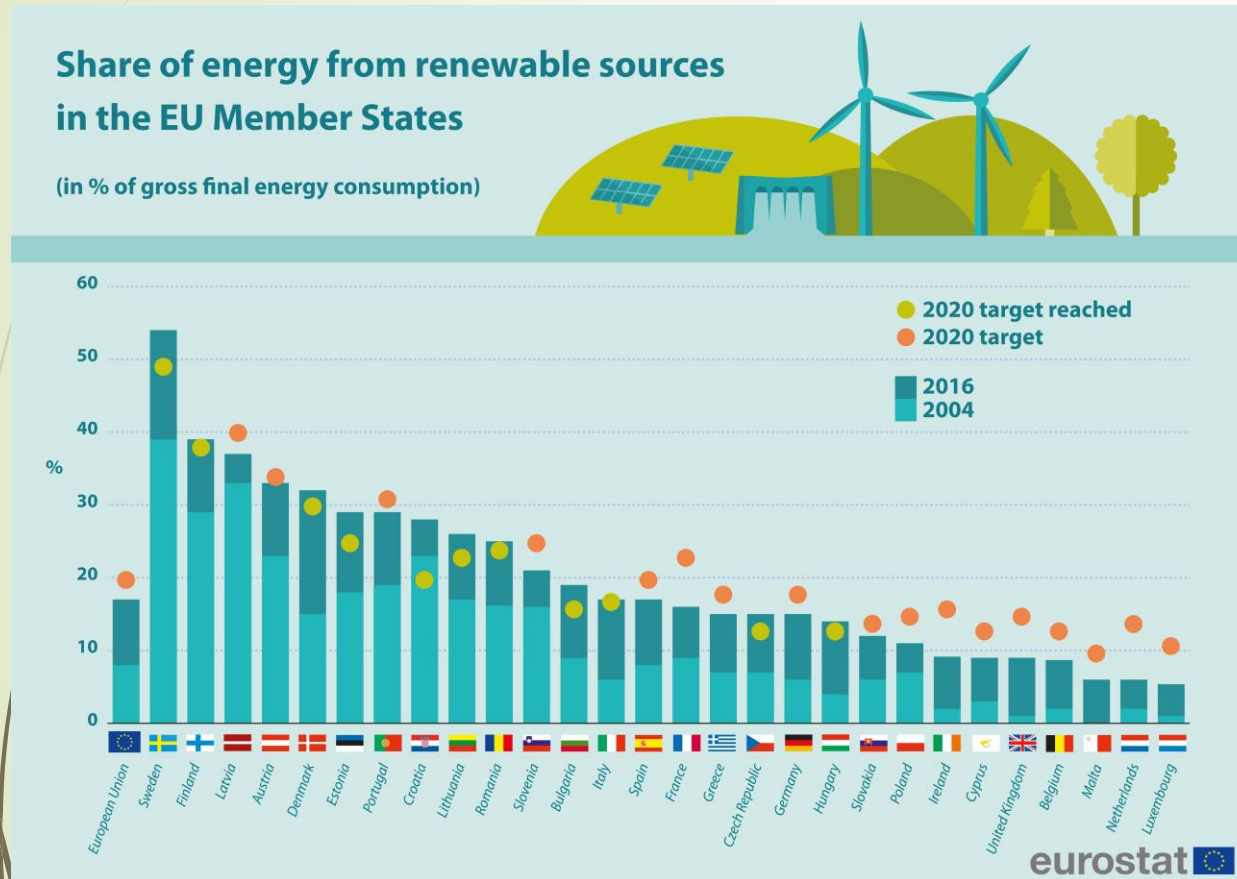
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Bioenergy and the EU



- Increasing the share of renewable energy
- Biomass and renewable waste = most important energy source in the EU
- Slovakia goal - 14 % by 2020
- Production potential of forest and supply of wood material

Bioenergy in Slovakia

- ▶ Wood biomass – most important renewable source
- ▶ 1.45 millions tons of energy wood was supplied
 - ▶ 835 000 t fuelwood
 - ▶ 615 000 t energy chips
- ▶ 1.8% share on consumption of energy
- ▶ Wood chips cover 30% of annual demand



Objectives

- Identification of the key drivers affecting the supply of energy wood in Slovakia
- Development of supply models of energy wood

Methods

➤ Econometric approach

➤ $SEW = f(p_d, IF, AF, FA, RF, TEW_{t-1}, OS, FRC, YSC, CTC, EMC)$

➤ General form of log function

➤ $\ln SEW_t = \beta_0 + \beta \ln X + \gamma \ln SEW_{t-1} + \varepsilon_t$

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Results

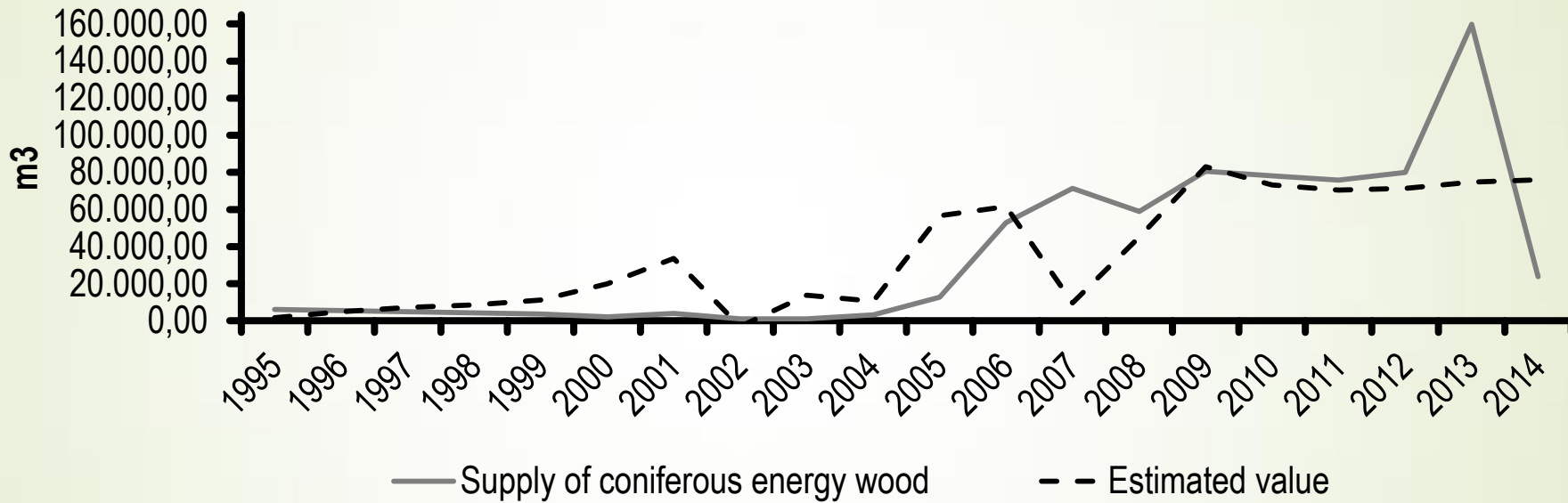
MODEL	Short-term Elasticities					
	Constant	OS	IF	AF	CTC	EC
SEW _C	0.01	2.521***	0.611*			
SEW _{NC}	2791249			7.427***	-2.147*	-5.477*

Table 1 The models of supply of energy wood

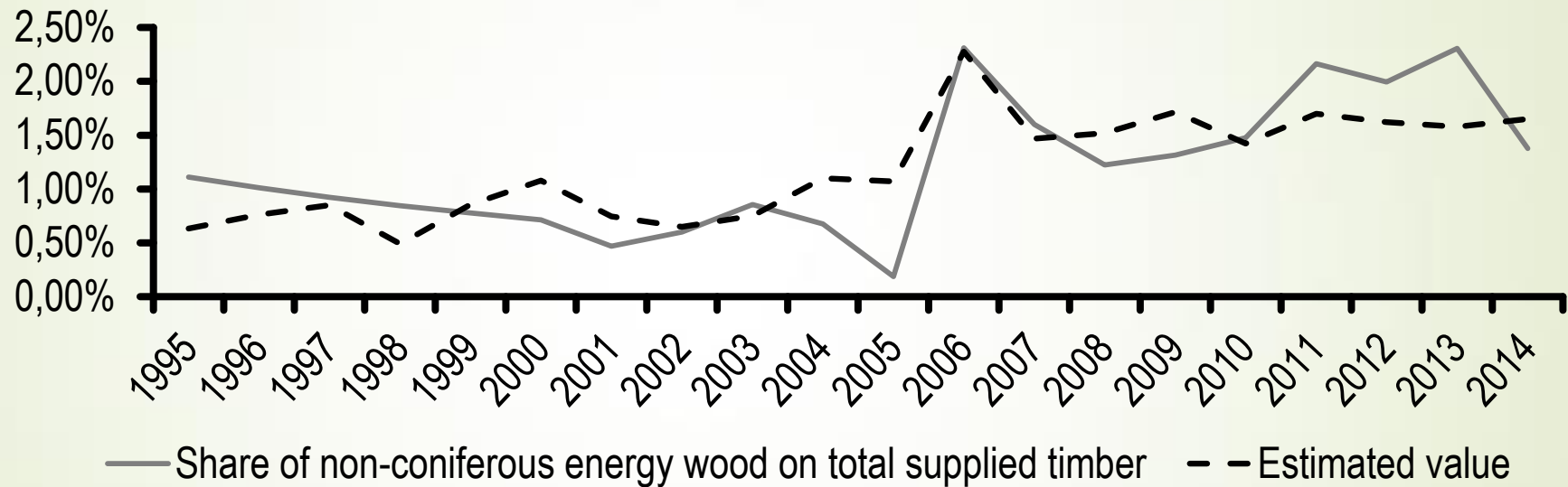
Where:

- OS ratio of overmatured stands
- IF volume of incidental felling
- AF volume of actual felling
- CTC costs of clening and thinning
- EC employment costs

Supply of coniferous energy wood



Supply of non-coniferous energy wood



Conclusion

- ▶ Supplied quantity of timber do not depend on price
- ▶ Supply of both types (coniferous and non-coniferous) of energy wood was linked to different drivers
- ▶ Influence of both incidental and actual felling
- ▶ Coniferous energy wood - incidental felling, rotation age of stand
- ▶ Non-coniferous energy wood – actual felling, costs

Thank you for your attention!