



ADVANCES IN CATALYSIS FOR HYDROCARBONS

RESULTS FROM ZEOCAT-3D, C123 & BIZEOLCAT EU RESEARCH PROJECTS



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Expected socio-economic impacts of the BIZEOLCAT project on European Neighbourhood Policy countries

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Objectives

Main objective:

Define the social character of the technology taking into account precepts of sustainable development and the impact to be delivered into the social context and communities.

Three parts:

- A: Baseline study** characterizing the current situation.
- B:** Estimate the potential **impact** of the Bizeolcat processes.
- C:** Develop **guidelines** for establishing viable operations in ENP countries.

The work is carried out primarily by SINTEF and National Institute of Chemistry.

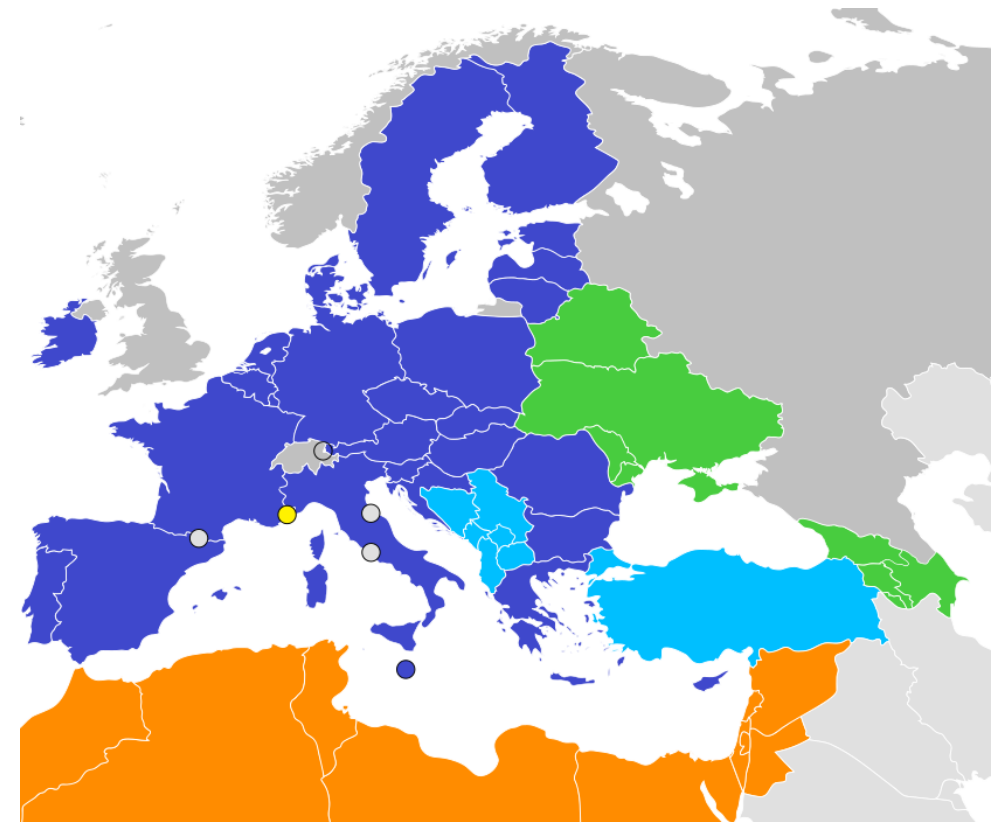


The European Neighbourhood Policy countries

The European Neighbourhood Policy (ENP) is meant to foster collaboration between the EU and its immediate neighbours.

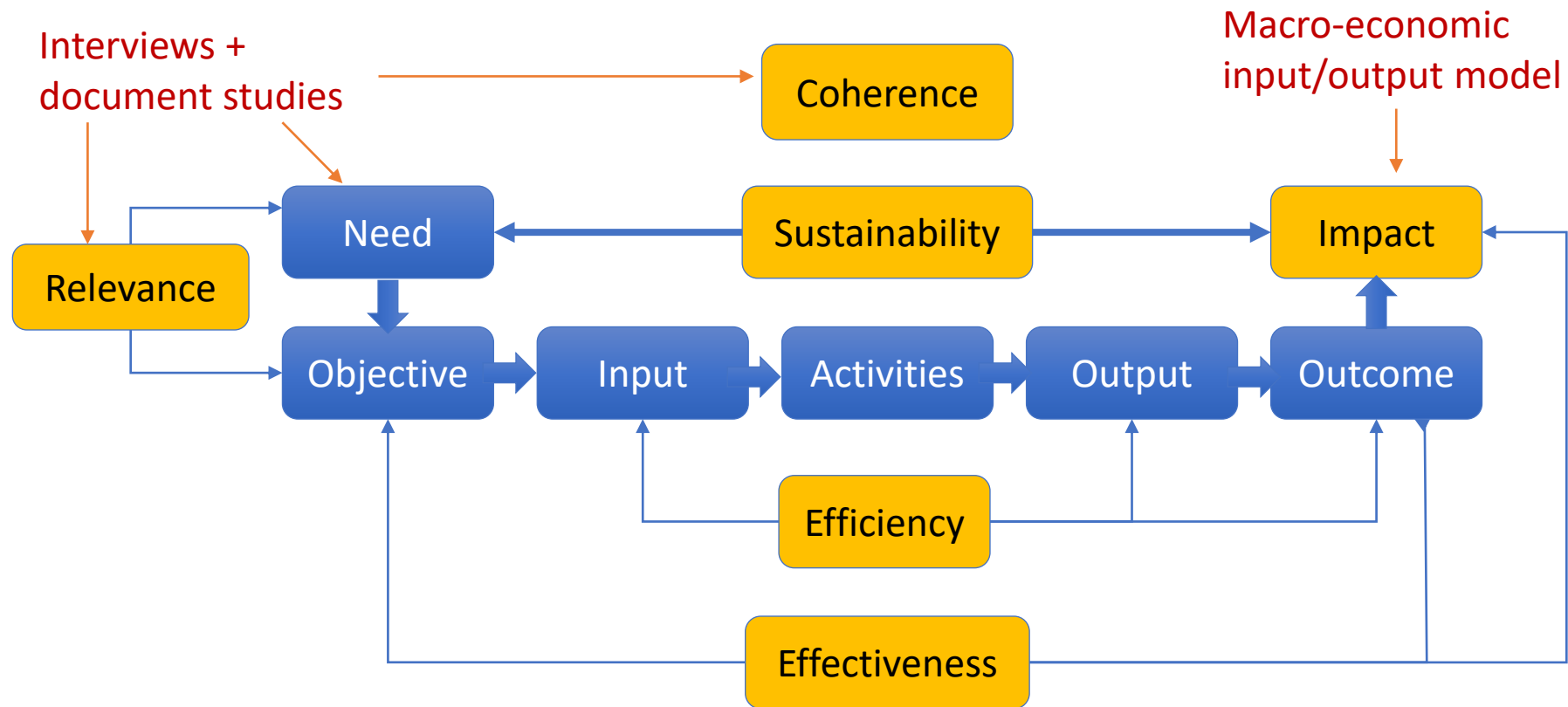
The countries are split in two regions:

- Eastern partnership programme (green)
- Mediterranean partnership programme (orange)





Methodology: The OECD/DAC evaluation criteria





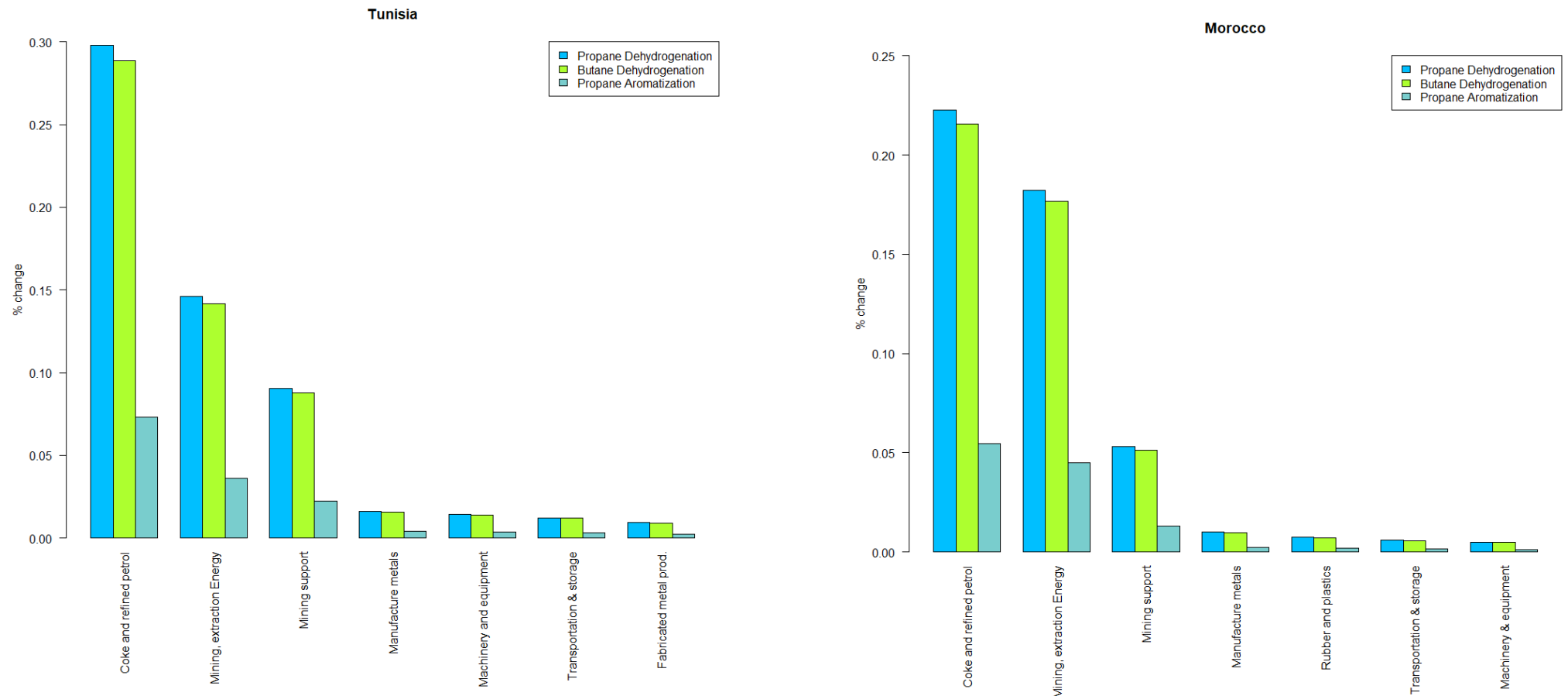
Input/Output analysis

		INTERMEDIATE DEMAND			FINAL DEMAND				Output
		Industry 1	...	Industry N	Households	Government	Investment	Exports	
INTERMEDIATE PRODUCTION	Industry 1								
	...								
	Industry N								
	Imports								
VALUE ADDED	Taxes less subsidies								
	Labour								
	Capital								
	Output								
	Employment								



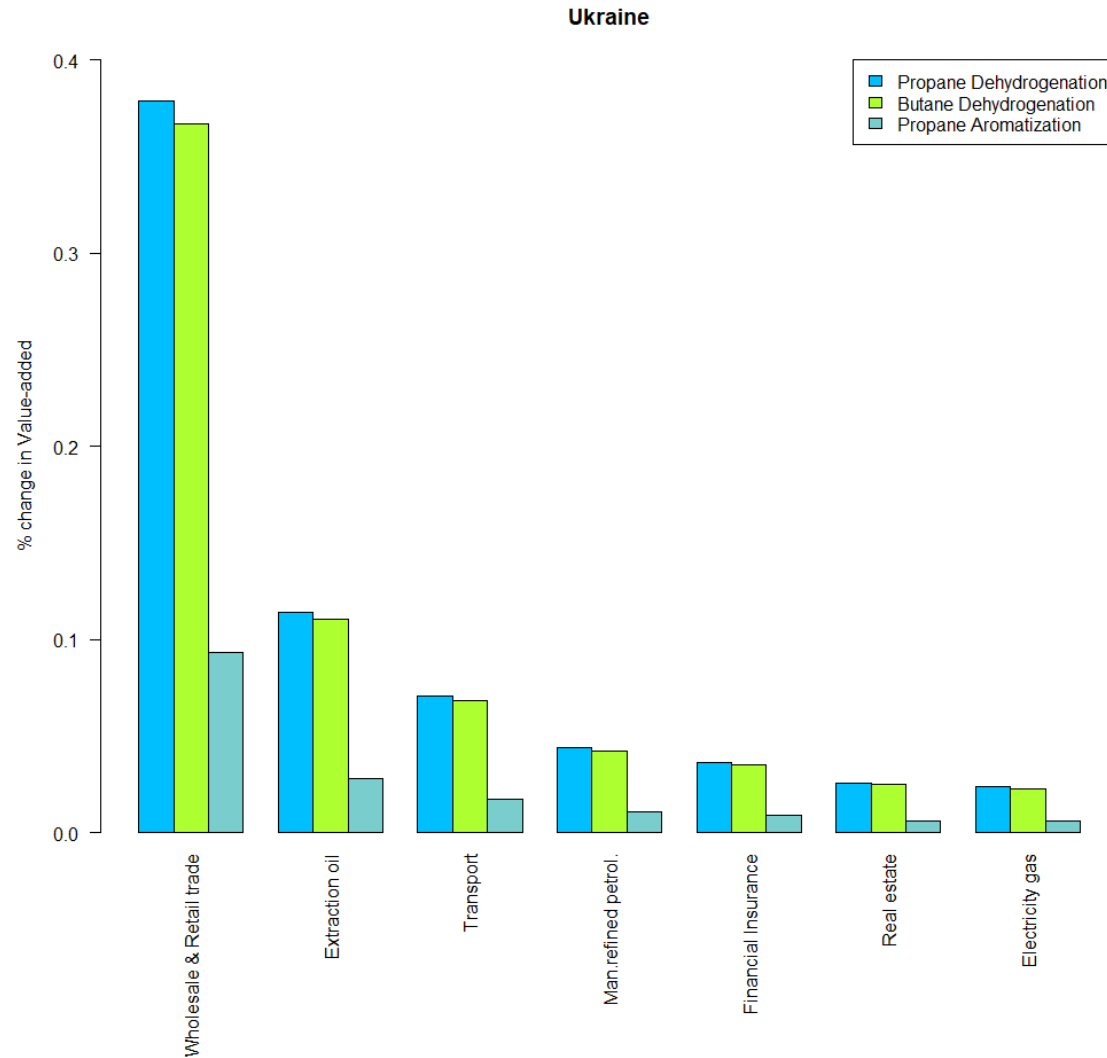


Distribution of ripple effects in Tunisia and Morocco - change in value added by sector





Distribution of ripple effects in Ukraine



We find that the effects in Tunisia and Morocco are concentrated in the sectors for "Coke and refined petroleum products" and "Mining and extraction of energy products".

In comparison, the effects in Ukraine would be largest in the "Wholesale & retail trade", "Extraction of oil" and "Transport" sectors.

This analysis shows how the countries are positioned differently to benefit from the innovative technologies.

NB!: The results don't reflect the ongoing war between Ukraine and Russia.



Expected impacts from a new PDH route in Spain

I/O-tables from Eurostat was used to evaluate the expected impacts from building and operating a plant for propane dehydrogenation (PDH) in Spain.

The model shows that 90-100% of the direct and indirect effects of both the CAPEX and OPEX expenditures will occur in the same country.

The increase in economic value added and job creation is calculated by sector, and we can estimate the distribution of Jobs according to gender and skill level.

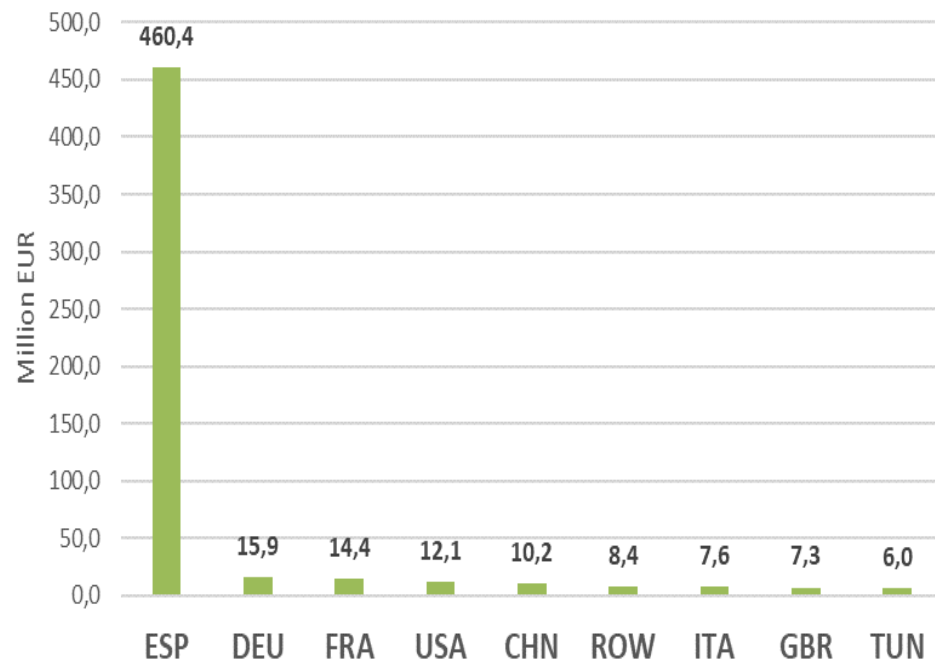
NB!: The input data come from the preliminary techno-economic study of WP1.



Economic value added

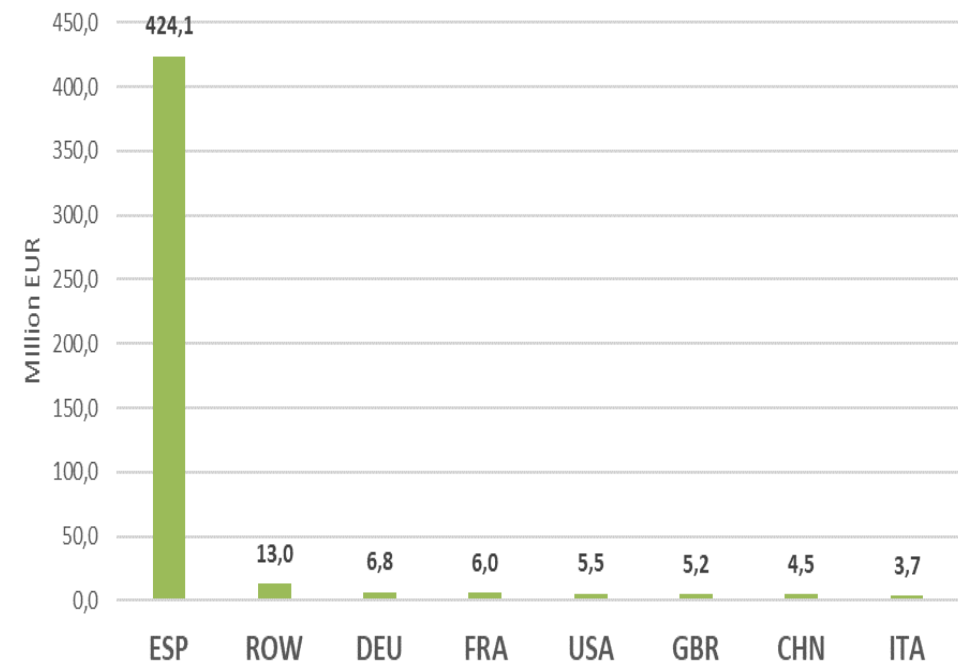
CAPEX

Propane Dehydrogenation



OPEX

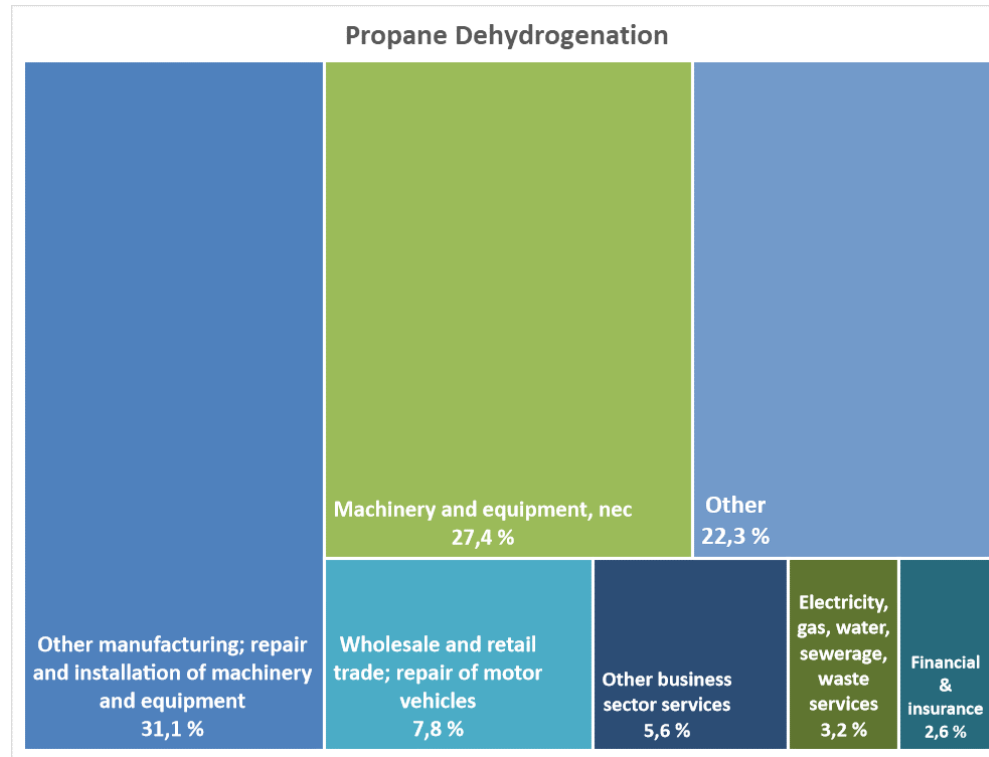
Propane Dehydrogenation



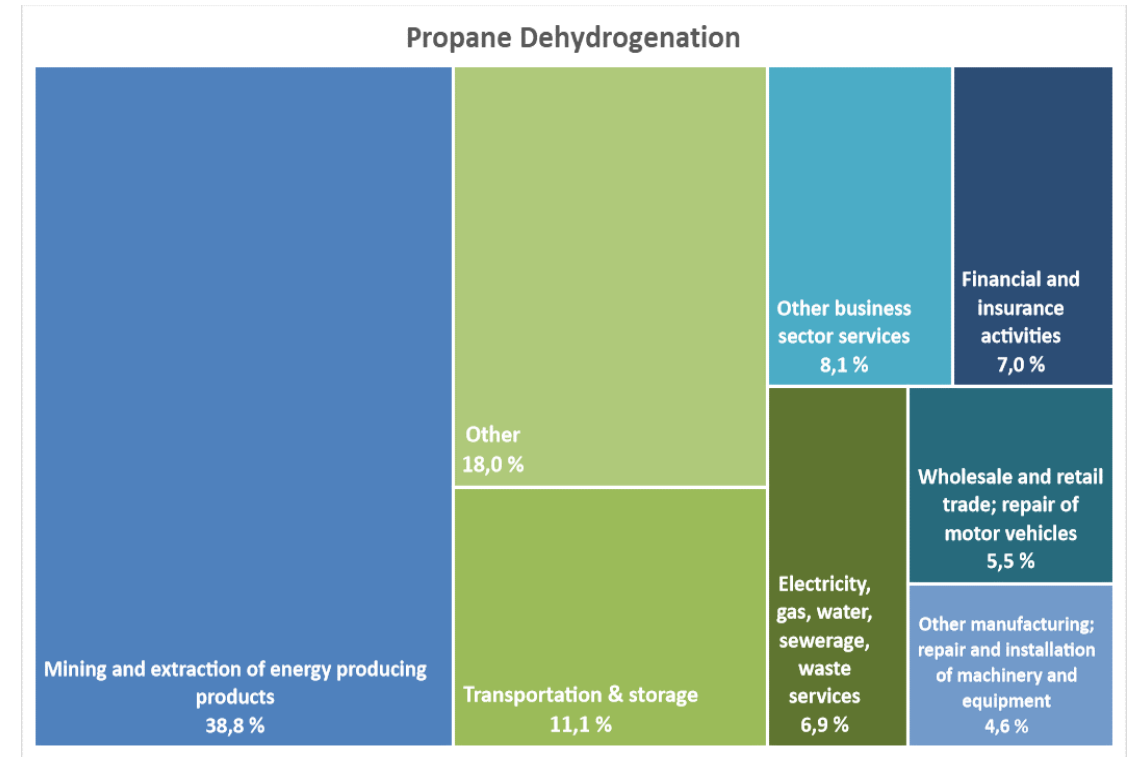


Value added, by sector

CAPEX

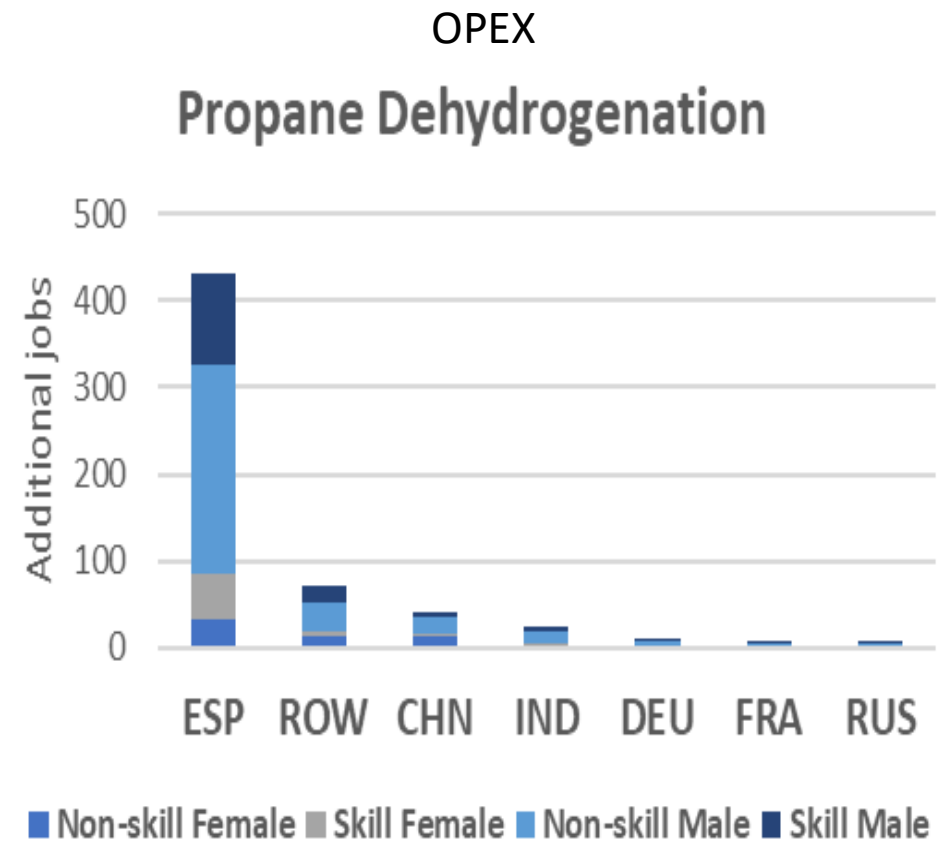
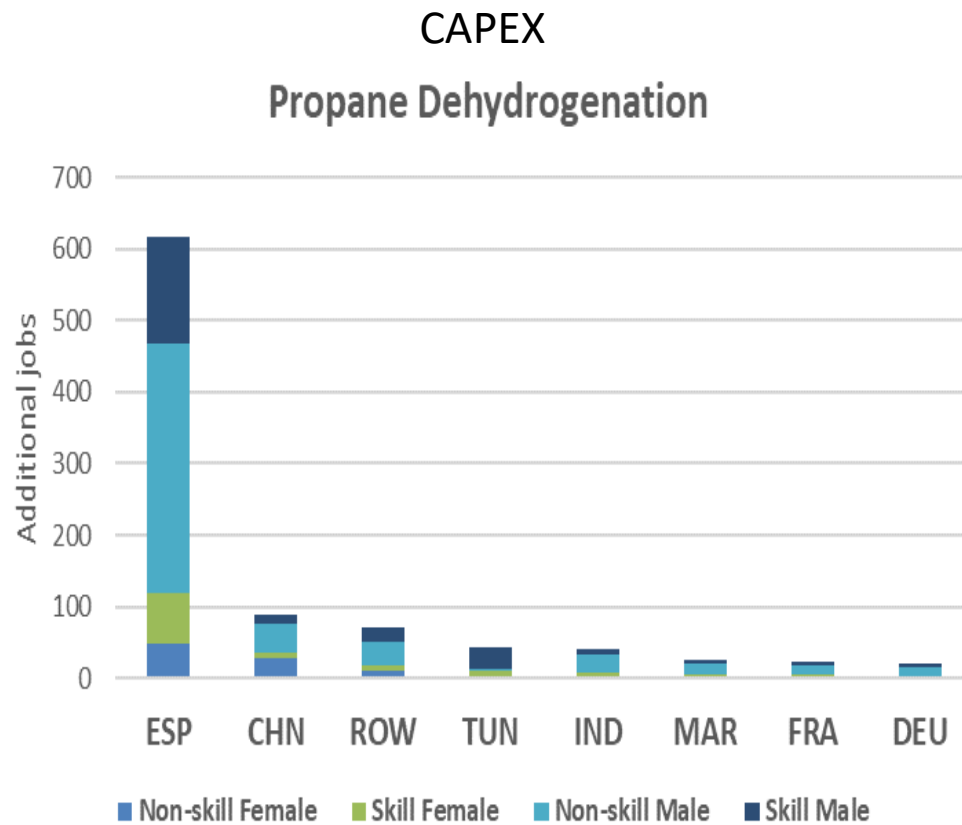


OPEX



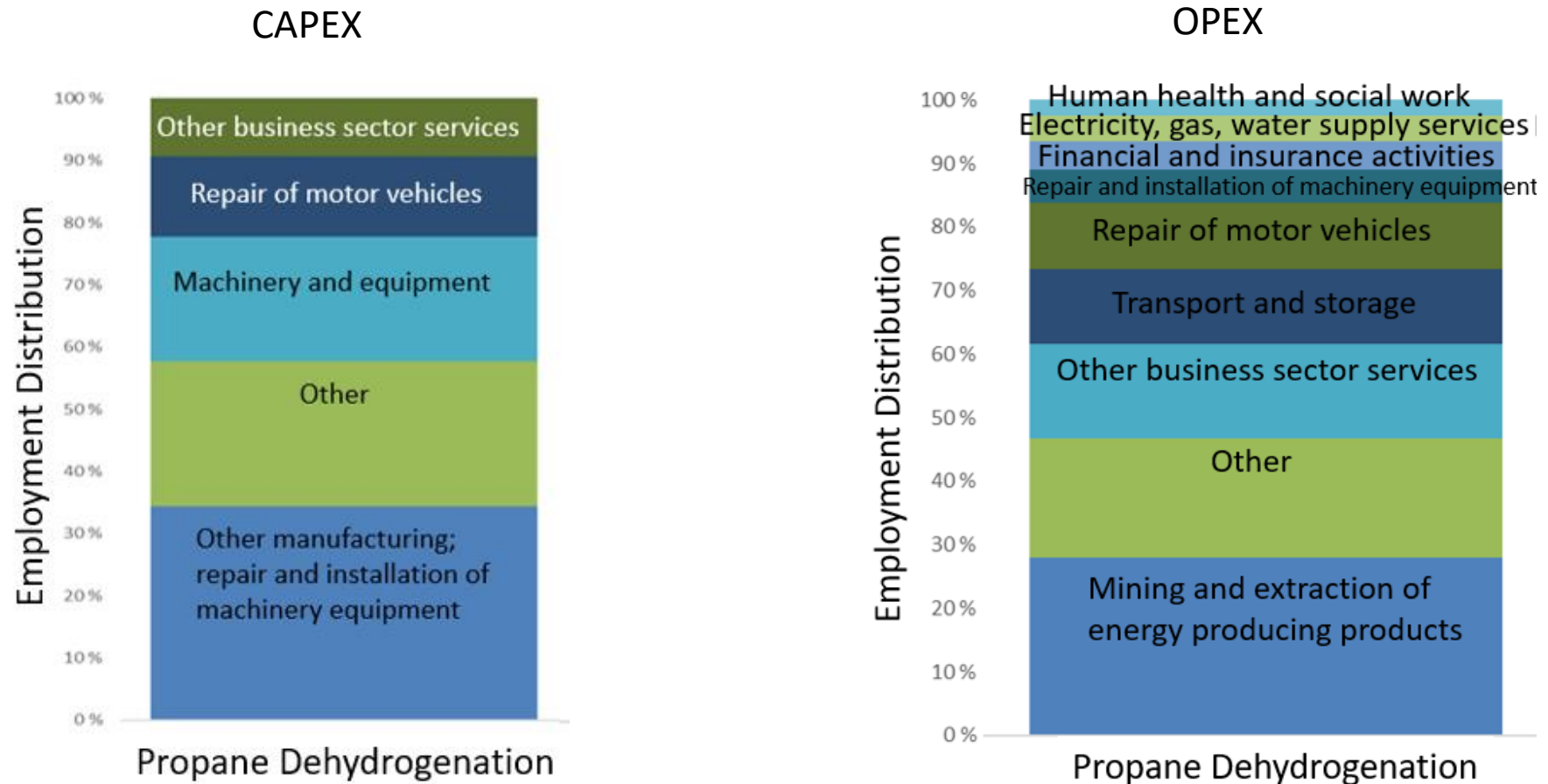


Expected increase in employment





Expected job creation, by sector





THANK YOU

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