

Trade Facilitation and Food Security in Jordan: Addressing Transport Non-Tariff Barriers Amid Regional Crises

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Sara Ashour¹, Jonas Luckmann², Harald Grethe³

¹ PhD Researcher

² Lecturer and Senior Researcher

³ Chair of the International Agriculture Trade and Development Group



Background

- **Second most water-scarce globally** (UNICEF, 2025).
- **90% food import dependency** (DOS, 2025).
- **Low food tariffs (5-30%)** (Jordanian Customs, 2025).
- **9 Free Trade Agreements** covering the Arab region, EU, USA, Canada, and Singapore.
- Last decade, **imports through Aqaba port or Saudi land borders**.
- **Closure** of critical land borders due to geopolitics affecting freight costs.

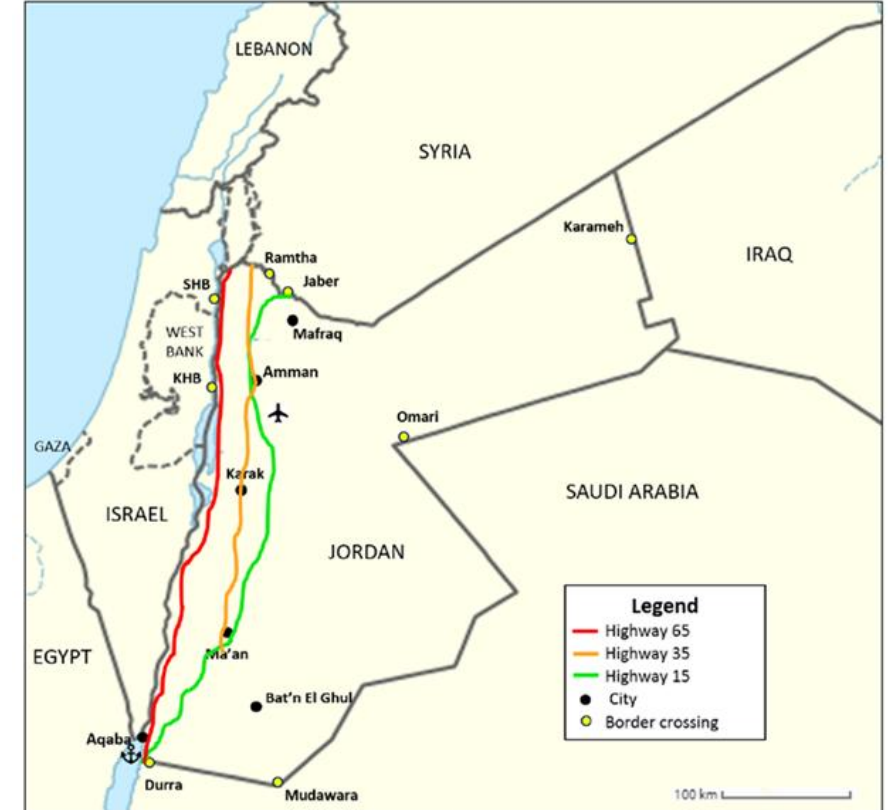


Figure 1. Jordan Road Network. Source: Wikimedia Commons, JICA Survey Team, 2018.

Nassib Jaber: Trade Disruptions at a Lifeline Corridor



April 2015

Border **closed** due to rebel takeover, and Jordan shuts crossing due to security concerns.

October 2018

Border officially **reopens** for trade and passengers after 3.5 years.

May 2025

Full **reopening** for truck freight and commercial activity.

July 2018

Syrian government retakes control of the Nassib border.

December 2024

Temporary **closure** due to escalating regional tensions, with limited access permitted later.

Background

Motivation

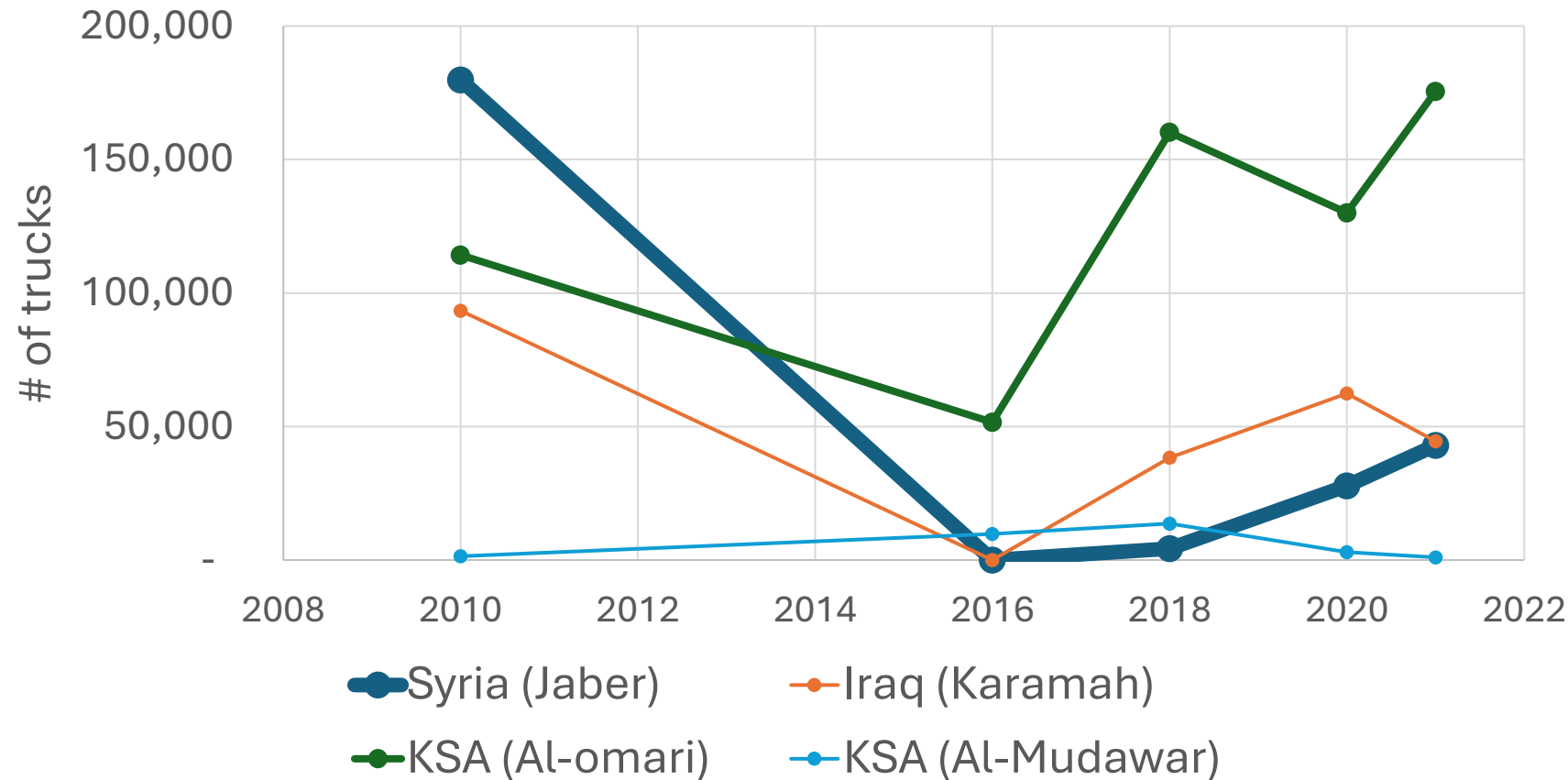
Model

Closure

Results

Conclusion

Trucking Trade Activity at Jordan's Top Border Crossings (2010–2021)



**70% individually-owned
≈ 4% of GDP**

Figure 2- Source: Ministry of Transportation Annual Report, 2022).

Defining Trade Facilitation Through the Lens of Transport Barriers



Prevalence of transport-related Non-Tariff Barriers (NTBs) and their impact on freight costs. Examples:

- Limited implementation of international transport agreements (one-way hauling),
- Lack of harmonized truck regulations across Arab countries,
- Poor quality of some national fleets,
- Visa difficulties



National and regional interest in developing the corridor

Aim :

Analyze different approaches to modeling the reduction of transport-related NTBs

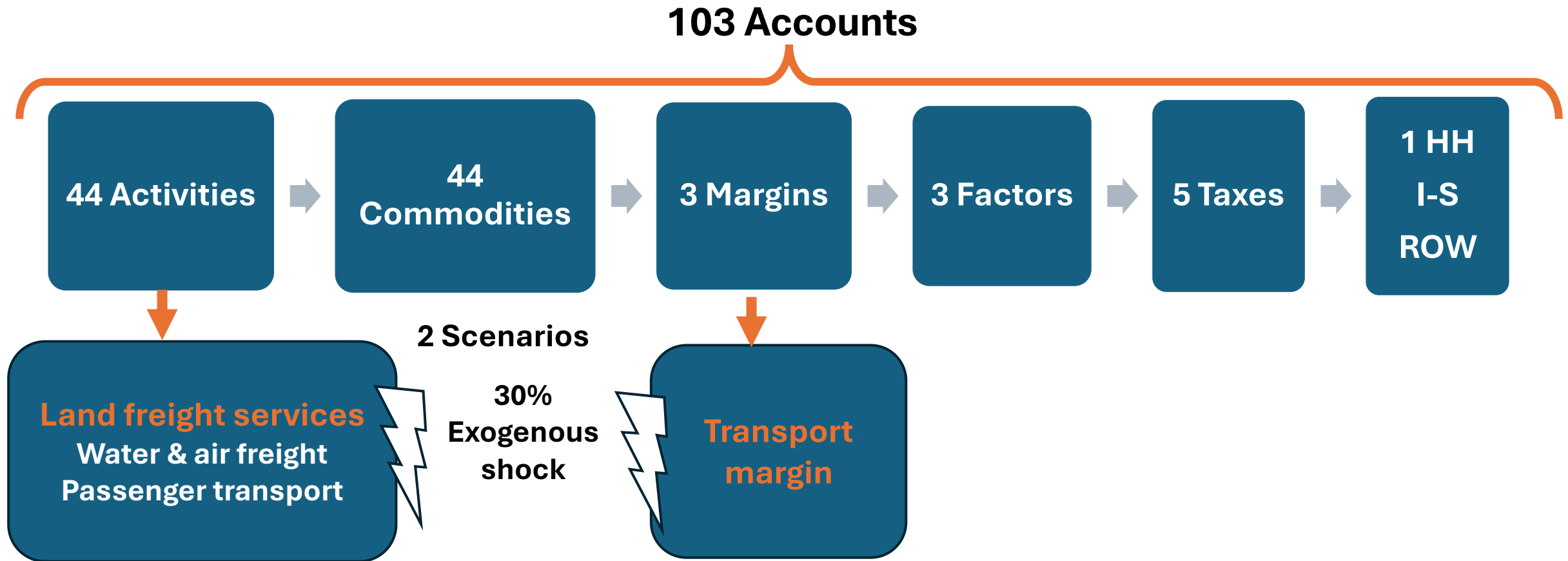
Research Question :

What will be the effect of this on Jordan's food security?

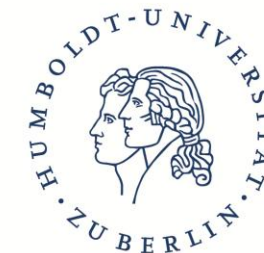
Data and Model



- Newly developed **2021 Social Accounting Matrix**
- **Comparative-static, single-country CGE model (STAGE-2)** (McDonald, 2015)



Logic Behind Different Scenarios

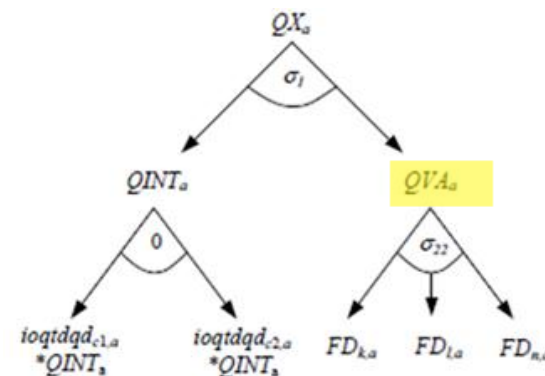


✓ **Both** affect trade and domestic prices

✗ **Different** economic mechanisms and parts of the model.

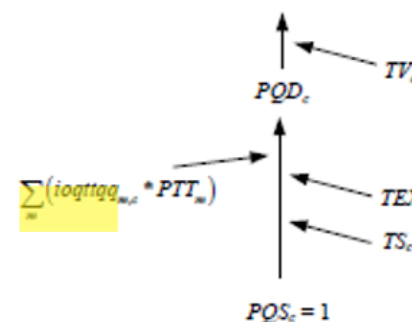
	Productivity Scenario	Margin Scenario
Mechanism	Lowers unit cost of providing transport services	Lowers wedge between producer and consumer prices
Modeled in	Production Fn. “Activity Land Freight”	Trade Margin Fn. “Transport Margin”
Beneficiary	All users of domestic transport services (e.g., firms, households)	Only users of traded commodities (domestic and international), esp. with high transport costs

Production Relationship for the STAGE Model: Quantities



Scenario 1:
Value added

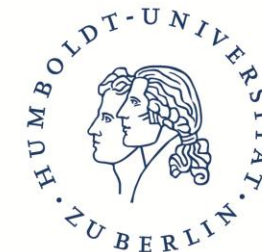
Price Relationships for the STAGE Model



Scenario 2:
Transport margin quantity

Figure 3 - Source: (McDonald, 2015)

Closure Rules

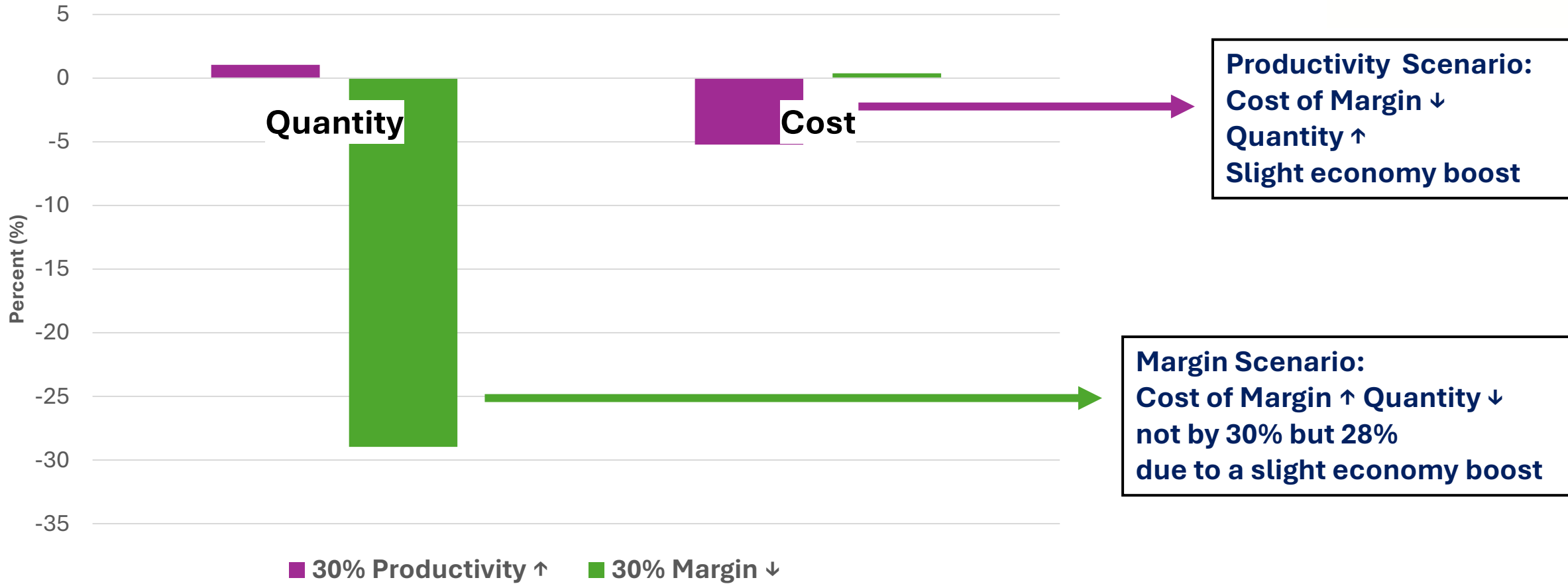


Minimal neo-classical closure

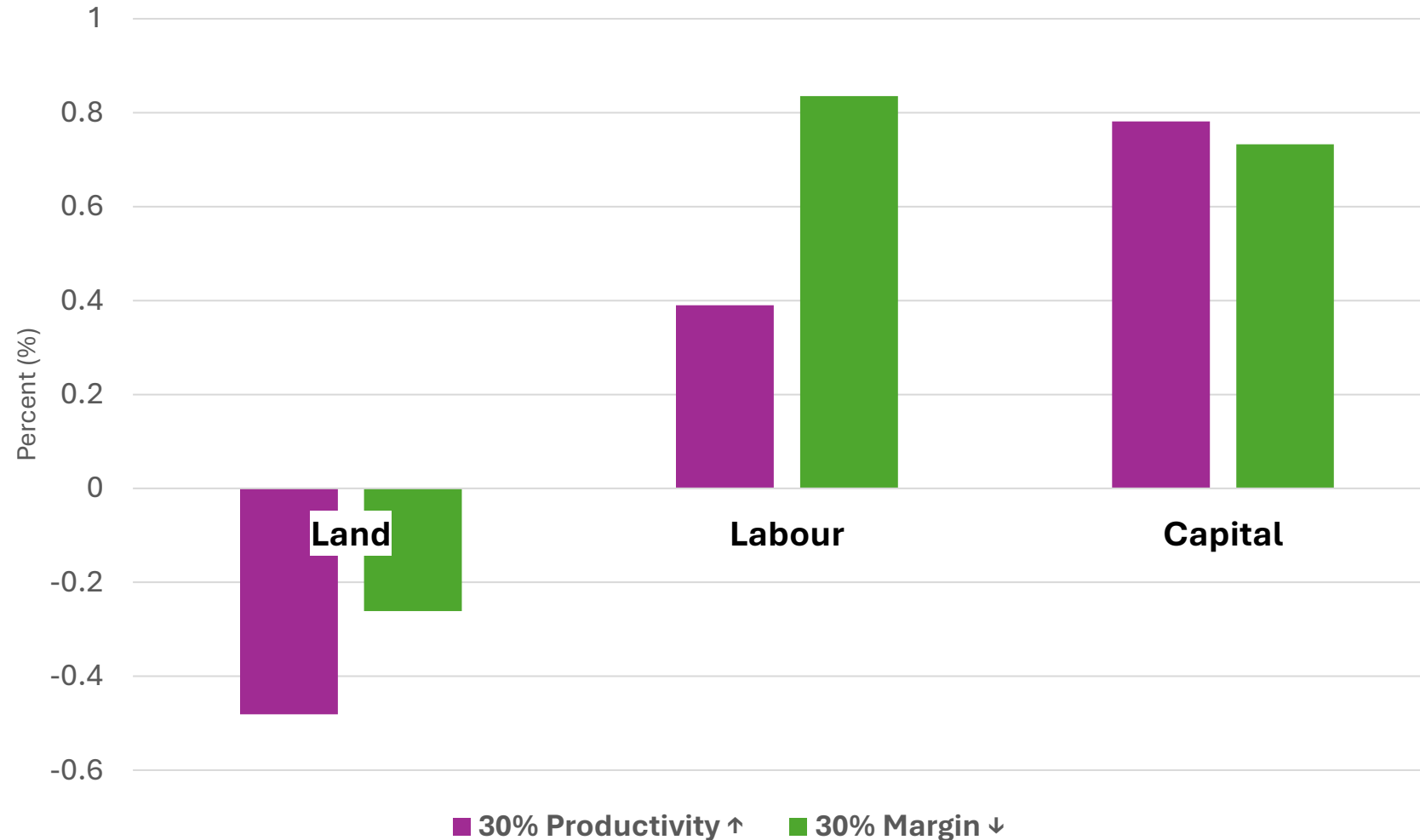
Flexible	Exchange rate
Fixed	External balance
Fixed	Savings
Flexible	Household income tax
Mobile & fully employed	Factors
Numeraire	CPI

Results:

Margin Change (Cost & Quantity)



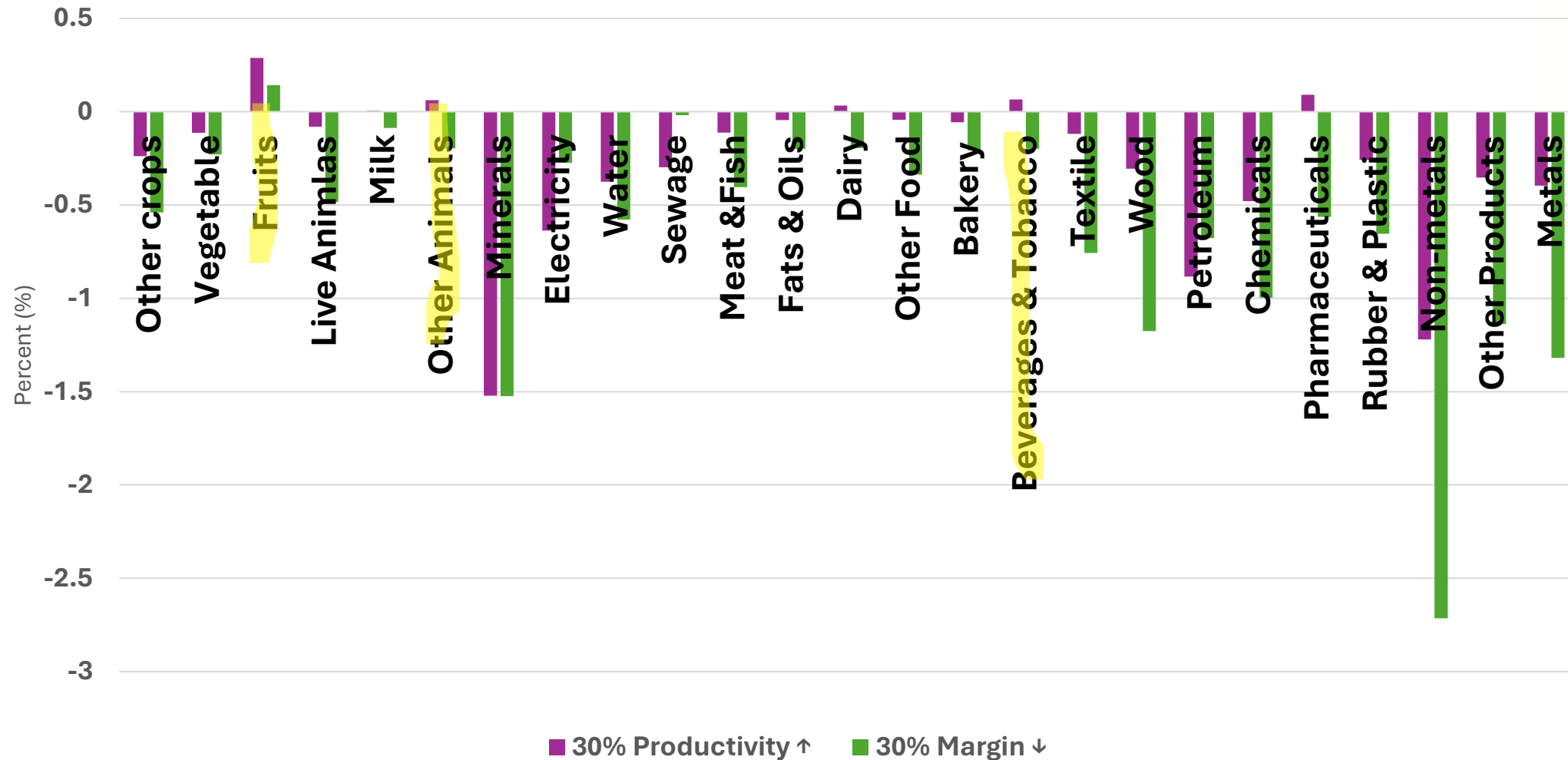
Factor Prices



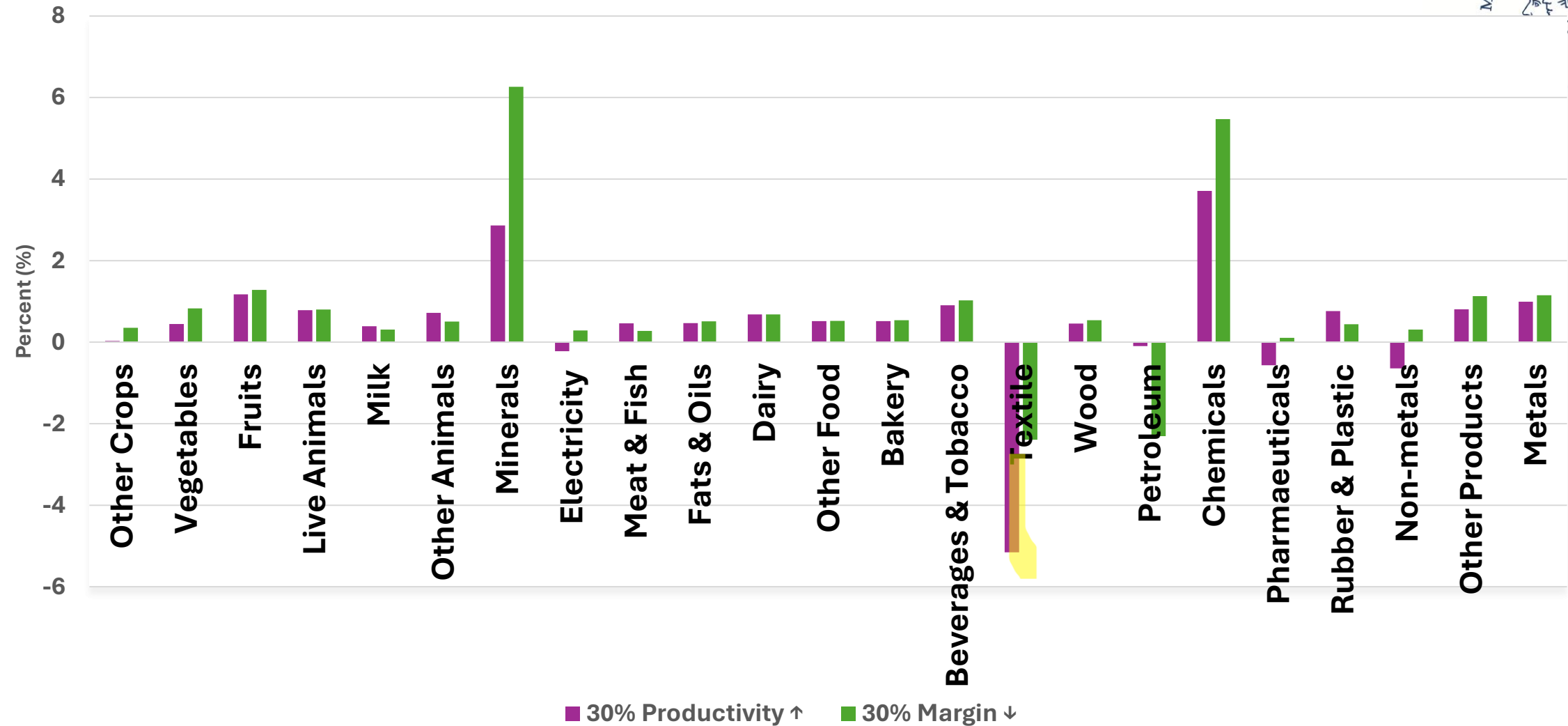
More gains for capital & labor-intensive sectors

Why?
Agriculture is less transport-intensive

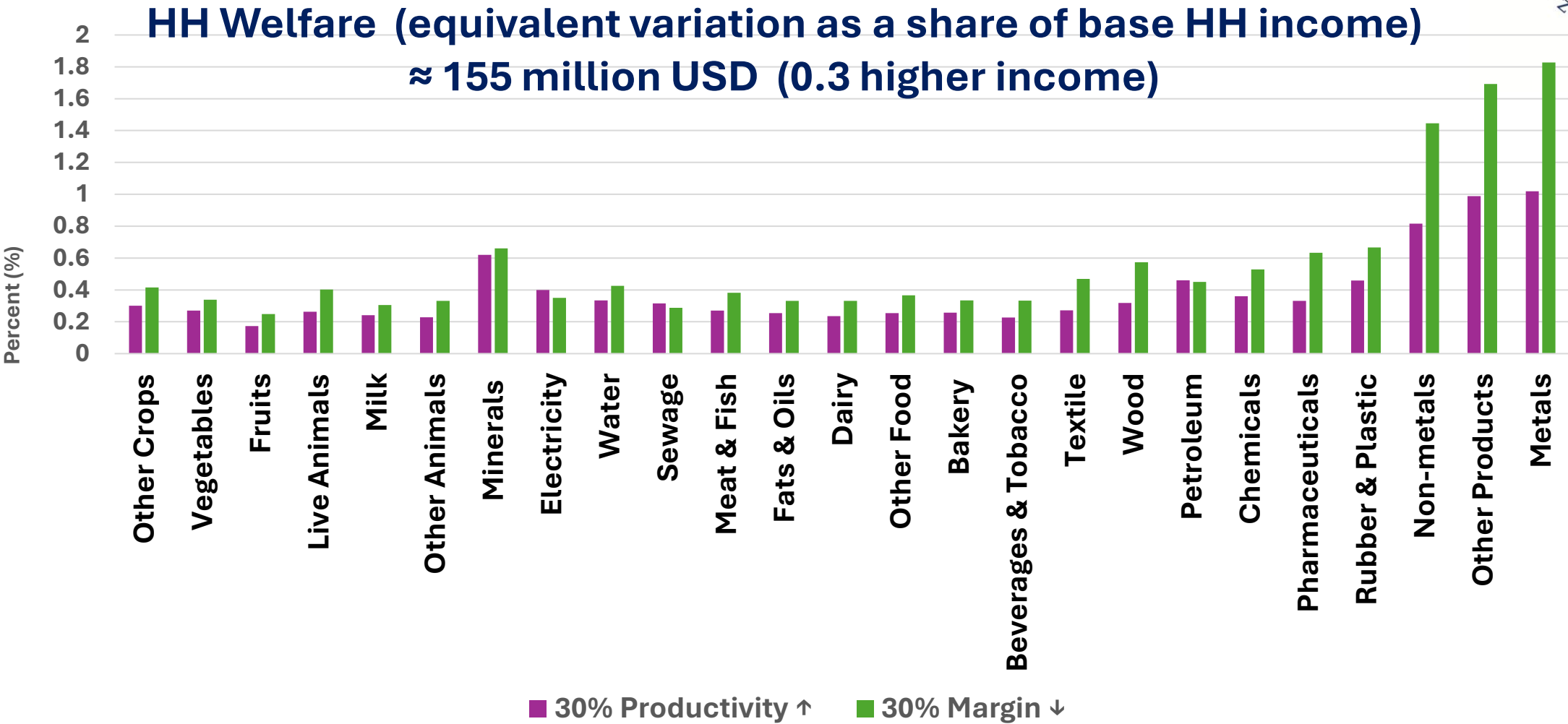
Consumer Price Change



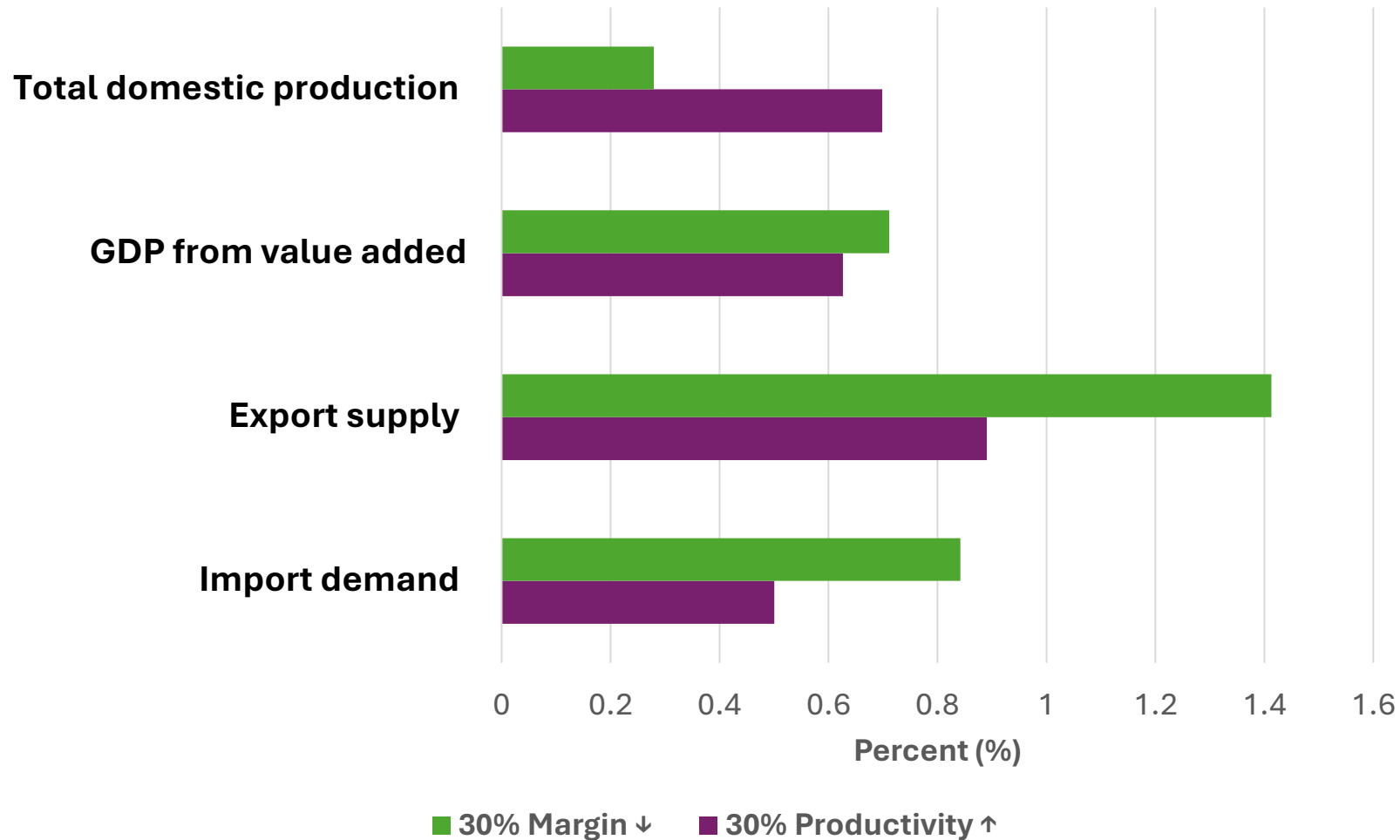
Import Supply



Household Consumption



Macro-Indicators



**GDP ↑ in both scenarios
between 0.6-0.7%
≈ 288 million USD**

Conclusions

- Both **improve food availability and accessibility through imports and higher consumption.**
- Effects are **similar**, but **benefits** extend more to **nonfood** transport-heavy sectors.
- **Policy impacts** depend on **which NTBs are addressed** and who gains (ex. reducing inefficiencies yields stronger long-term gains; re-routing cuts costs faster).
- **Transport** should be **central to food security strategies**, especially in net food-importing countries like Jordan.

References

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Thanks for your attention

Sara Samir Ashour
Trade Policy Analyst and PhD Candidate
at Humboldt Universität Zu Berlin
Email: sara.ashour@hu-berlin.de



[LinkedIn](#)