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Modelling the impact of Anti-Competitive Market Distortions on GDP per capita

Contents

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UK Adoption of EU CBAM

- Carbon Leakage
- Historic trade approaches to Process and Production Methods (PPMs)
- What is the harm CBAM seeks to avoid
- How does it work?
  - Carbon Price
  - Carbon Intensity
  - Tariff

Objective

Understand the impact of Anti-Competitive Market Distortions (ACMDs) on GDP per capita in a broad range of countries

Our current framework

Measures the extent of ACMDs through 3 key pillars of competition

- Domestic Competition
- Property Rights
- International Competition

Estimates the cost of ACMDs to GDP per capita through these pillars based on 10 years of data for 110+ countries

Application

Our models can be used as a basis to evaluate the impact of different policies on GDP per capita

Further potential

- Extend modelling and incorporating trade partners to quantify the spillover effects of ACMDs across borders
- Sub-sample modelling to estimate effect of distortions across different groups (e.g. based on income or region)

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Overview of our study

Sample

118
countries

10 years
(2010-2019)

3 Models:

Competition indices

1. Property Rights Index
2. International Competition Index
3. Domestic Competition Index

→ GDP per capita

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Domestic Competition Index (1/2)

Sub index	Source	Weights
Labour freedom score	Index of Economic Freedom	25.0%
Minimum wage Associational right Paid annual leave Notice period for redundancy dismissal Severance pay for redundancy dismissal Labour productivity Labour force participation rate Restrictions on overtime work Redundancy dismissal permitted by law		
Business freedom score	Index of Economic Freedom	25.0%
Access to electricity Business environment risk Regulatory quality *Women’s economic inclusion*		
Financial freedom score	Index of Economic Freedom	6.3%
The extent of government regulation of financial services The degree of state intervention in banks and other financial firms through direct and indirect ownership Government influence on the allocation of credit The extent of financial and capital market development Openness to foreign competition		

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Domestic Competition Index (2/2)

Sub index	Source	Weights
Electricity cost	WB Doing Business	3.1%
Electricity time	WB Doing Business	3.1%
Quality of roads	Global Competitiveness Index	3.1%
Quality of ports	Logistics Performance Index	3.1%
Mobile telephone subscription	Global Competitiveness Index	3.1%
Individuals using internet %	Global Competitiveness Index	3.1%
Government Integrity Score	**Index of Economic Freedom**	**25.0%**
Perceptions of corruption		
Bribery risk		
Control of corruption		

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Property Rights Index

Sub component	Source	Weights
Efficiency of the judicial system		**30%**
Efficiency of the legal framework in challenging regulations	*Global Competitiveness Index*	*80%*
Efficiency of the legal framework in settling disputes	*Global Competitiveness Index*	*20%*
Integrity of the legal system		**17%**
Strength of investor protection	*WB Doing Business*	*53%*
Legal rights index (financial)	*WB Doing Business*	*32%*
Judicial independence	*Global Competitiveness Index*	*15%*
Enforcing contracts		**15%**
Enforcing contracts (cost)	*WB Doing Business*	*60%*
Registering property (cost)	*WB Doing Business*	*20%*
Enforcing contracts (time)	*WB Doing Business*	*15%*
Registering property (time)	*WB Doing Business*	*5%*
Resolving insolvency		**13%**
Outcome (0 as piecemeal sale and 1 as going concern)	*WB Doing Business*	*59%*
Time (years)	*WB Doing Business*	*17%*
Cost (% of estate)	*WB Doing Business*	*14%*
Recovery rate (cents on dollar)	*WB Doing Business*	*10%*
Intellectual property protection	**Global Competitiveness Index**	**25%**

International Competition Index

Sub component	Source	Weights
LPI timeliness indicator	Logistics Performance Index	11%
LPI international shipment indicator	Logistics Performance Index	36%
LPI customs indicator	Logistics Performance Index	10%
Trade Freedom score	Index of Economic Freedom	29%
Freedom of foreigners to visit	Human Freedom Index	8%
Freedom to own foreign currency	Human Freedom Index	4%
Capital controls	Human Freedom Index	1%

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A unit increase in the index capturing…

Domestic Competition	Property Rights	International Competition

…is associated with an increase of…

12.1% - 13.3%	6.6% - 11.1%	7.6%

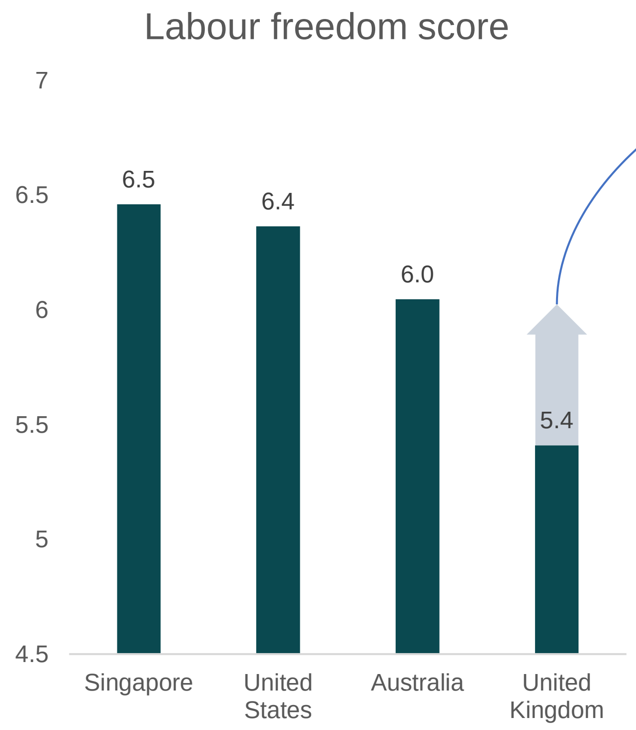
…in GDP per capita

Maximising competition in the UK to the same level as the best performing country in each pillar will lead to increases in GDP of:

	+0.5pts	+0.6pts	+0.3pts
% change	5.9% - 6.4%	4.0%-6.8%	0% - 2.2%
GDP per capita	£1,928 - £2,120	£1,317 - £2,231	£0 - £737
GDP	£130bn -£143bn	£89bn - £151bn	£0 - £50 bn

Reported relationships were significant to a 99% confidence level. The lower end of the range is the coefficient estimated from a model that accounts for time trends while the higher end is based on a model that does not. Regression outputs can be found in the technical appendix.

Policy Simulation – Domestic Competition



- Increase **labour freedom score** by **0.6pts**. (UK=5.4, Australia=6.0), through policies relating to:
  - Minimum wage
  - Ease of hiring and firing employees
  - Rigidity of hours
  - Labour productivity
  - Labour force participation rate

- Domestic Competition Index increase by **0.15**

- This is associated with an **increase in GDP per capita of 1.8-2.0% or £597-656** or **an increase in GDP of £40-44bn**

- GDP per capita estimates in absolute terms are informed by ONS GDP per capita 2022, CVM market prices.

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Policy Simulation – International Competition

1 International shipments

- Improve **the ease of arranging competitively priced shipments**: E.g. increase in score by **0.5 pts** (UK=5.0, Belgium=5.5)
- International Competition index increase by 0.18
- This is associated with an **increase in GDP per capita of up to 1.4% or £449**
- This would represent an increase of up to **£30bn in GDP**

2 Trade freedom

- Improve the trade freedom score **by reducing trade-weighted average tariff rate and non-tariff barriers.** E.g. increase in trade freedom score by **0.5 pts** (UK=6.2, Iceland=6.7)
- International Competition index increase by 0.15
- This is associated with an **increase in GDP per capita of up to 1.1% or £364**
- This would represent an increase of up to **£25bn in GDP**

- GDP per capita estimates in absolute terms are informed by ONS GDP per capita 2022, CVM market prices.

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Summary of Costs of UK adoption of EU CBAM

- Significant impacts across IC and DC pillars

- Different Impacts Based on Supply Chain Changes

- GDP per capita impacts are between £150 and £300 for existing supply chains, between £210 and £650 if supply chains would have realigned otherwise

Probable Underestimate

Alternatives Exist

- TAC Report
  - Negligible to £30 GDP per capita negative impact

- CFA
  - Positive impact on GDP per capita
  - Potentially £1,000 **improvement** of GDP per cap

Geopolitical Impacts

- This is without considering other geopolitical impacts
  - Bifurcation of G7/BRICS supply chains
  - Consequent instability in developing countries
  - Resource nationalism and potential conflict