

Chapter 2

DTRI Rankings

Table 2.1 presents the full DTRI ranking based on the index score for 64 countries covered in our analysis. The table also shows the ranking position of countries in the four main clusters covered in the DTRI index: (A) Fiscal Restrictions, (B) Establishment Restrictions, (C) Restrictions on Data, and finally (D) Trading Restrictions. Each cluster covers certain thematic areas, which we refer to as chapters. The composition of the clusters is the following:

(A) Fiscal Restrictions: covering chapters (1) Tariffs and Trade Defense, (2) Taxation and Subsidies, and (3) Public Procurement;

(B) Establishment Restrictions: covering chapters (4) Foreign Investment Restrictions, (5) Intellectual Property Rights (IPR) measures, (6) Competition Policy, and (7) Business Mobility;

(C) Restrictions on Data: covering chapters (8) Data Policies, (9) Intermediate Liability, and (10) Content Access;

(D) Trading Restrictions: covering chapters (11) Quantitative Trade Restrictions, (12) Standards, and (13) Online Sales and Transactions.

The DTRI is a simple average of the four clusters. The clusters themselves are a weighted average of the chapters that belong to each relevant cluster. Each chapter is also comprised of a weighted average across their sub-chapters. This sophisticated weighting approach is explained in detail in Section 4.

Table 2.1: DTRI Score and Ranking, Including Clusters A-D

Rank	DTRI		A. Fiscal Restrictions & Market Access		B. Establishment Restrictions		C. Restrictions on Data		D. Trading Restrictions	
	Country	Index	Country	Index	Country	Index	Country	Index	Country	Index
1	CHN	0.70	IND	0.63	CHN	0.77	CHN	0.82	CHN	0.63
2	RUS	0.46	BRA	0.62	THA	0.54	RUS	0.63	ARG	0.57
3	IND	0.44	CHN	0.60	VNM	0.50	TUR	0.60	VNM	0.51
4	IDN	0.43	ARG	0.49	TWN	0.46	FRA	0.45	BRA	0.49
5	VNM	0.41	PAK	0.49	MYS	0.45	IDN	0.44	IDN	0.48
6	BRA	0.40	IDN	0.43	CHE	0.44	VNM	0.43	RUS	0.43
7	TUR	0.38	ZAF	0.43	ECU	0.42	DEU	0.41	IND	0.40
8	ARG	0.38	NGA	0.41	IND	0.40	KOR	0.39	TUR	0.37
9	FRA	0.36	RUS	0.40	RUS	0.40	BRN	0.38	ECU	0.35
10	THA	0.35	USA	0.37	FRA	0.40	DNK	0.35	MYS	0.35
11	MYS	0.34	TUR	0.35	DEU	0.40	MYS	0.35	NGA	0.34
12	PAK	0.33	GRC	0.33	USA	0.38	LTU	0.34	FRA	0.33
13	DEU	0.33	KOR	0.33	IDN	0.36	FIN	0.33	PAK	0.31
14	ECU	0.32	PRY	0.32	JPN	0.35	ITA	0.31	TWN	0.30
15	KOR	0.31	ECU	0.31	ZAF	0.34	GBR	0.31	ESP	0.29
16	NGA	0.29	CHL	0.28	PHL	0.34	IND	0.31	KOR	0.28
17	ZAF	0.27	ITA	0.28	BRA	0.33	PAK	0.30	THA	0.28
18	MEX	0.27	THA	0.27	BEL	0.33	ESP	0.30	HKG	0.27
19	ROU	0.27	BRN	0.27	SVK	0.33	HUN	0.30	MEX	0.27
20	BRN	0.26	PHL	0.27	BGR	0.32	THA	0.29	CAN	0.26
21	ESP	0.26	HUN	0.26	COL	0.32	ROU	0.27	DEU	0.26
22	USA	0.26	FRA	0.26	BRN	0.32	POL	0.27	ROU	0.25
23	TWN	0.25	GBR	0.25	GRC	0.31	MEX	0.26	HRV	0.25
24	GRC	0.24	AUS	0.25	ROU	0.31	SWE	0.26	CYP	0.25
25	ITA	0.24	MEX	0.24	MEX	0.30	AUS	0.25	ITA	0.25
26	HUN	0.23	BGR	0.24	CAN	0.29	CHE	0.25	ISR	0.23
27	AUS	0.23	CZE	0.24	AUS	0.28	CAN	0.25	HUN	0.22
28	SVK	0.23	DEU	0.24	ARG	0.28	SGP	0.25	POL	0.20
29	CAN	0.23	LVA	0.24	PAN	0.27	EUR	0.24	SVK	0.20
30	CHE	0.22	LTU	0.24	CRI	0.26	GRC	0.23	SVN	0.20
31	FIN	0.22	NLD	0.24	PRT	0.25	COL	0.23	CRI	0.19
32	PHL	0.22	ROU	0.24	NOR	0.25	NGA	0.23	EST	0.17
33	BEL	0.22	EUR	0.23	NLD	0.25	MLT	0.22	PHL	0.17
34	POL	0.22	PRT	0.23	KOR	0.25	PER	0.22	EUR	0.16
35	DNK	0.22	PAN	0.22	PRY	0.24	NZL	0.22	FIN	0.16
36	LTU	0.21	VNM	0.22	PER	0.24	PRT	0.22	AUS	0.15
37	EUR	0.21	CYP	0.21	SGP	0.24	AUT	0.21	BEL	0.15
38	PRY	0.21	SVN	0.21	SWE	0.23	ZAF	0.20	CZE	0.15

Rank	DTRI		A. Fiscal Restrictions & Market Access		B. Establishment Restrictions		C. Restrictions on Data		D. Trading Restrictions	
	Country	Index	Country	Index	Country	Index	Country	Index	Country	Index
39	COL	0.20	JPN	0.21	AUT	0.23	ECU	0.20	DNK	0.15
40	SWE	0.20	AUT	0.21	ESP	0.23	LUX	0.20	LTU	0.15
41	BGR	0.20	BEL	0.21	ISR	0.22	EST	0.20	MLT	0.15
42	ISR	0.19	HRV	0.21	TUR	0.22	IRL	0.20	COL	0.14
43	HRV	0.19	POL	0.21	EUR	0.21	LVA	0.20	USA	0.12
44	GBR	0.19	SVK	0.21	PAK	0.21	SVK	0.19	CHL	0.12
45	AUT	0.19	ESP	0.21	POL	0.20	BEL	0.19	PRY	0.11
46	PRT	0.19	SWE	0.21	NGA	0.19	ISL	0.19	ZAF	0.11
47	CZE	0.18	FIN	0.21	LUX	0.19	ISR	0.18	SGP	0.11
48	CYP	0.18	DNK	0.20	FIN	0.19	SVN	0.18	JPN	0.11
49	SVN	0.18	EST	0.20	LVA	0.19	ARG	0.17	AUT	0.10
50	JPN	0.18	MYS	0.20	HRV	0.18	HKG	0.16	GRC	0.10
51	EST	0.18	IRL	0.19	CZE	0.18	CZE	0.16	LUX	0.10
52	LUX	0.17	LUX	0.19	CHL	0.17	PRY	0.16	SWE	0.10
53	LVA	0.17	MLT	0.19	DNK	0.16	USA	0.15	GBR	0.10
54	NLD	0.17	CHE	0.17	HUN	0.15	BRA	0.15	BRN	0.08
55	MLT	0.16	ISR	0.13	EST	0.14	BGR	0.14	ISL	0.08
56	CHL	0.15	TWN	0.13	SVN	0.13	CYP	0.14	NOR	0.08
57	SGP	0.15	COL	0.12	LTU	0.12	NOR	0.13	BGR	0.07
58	PER	0.15	PER	0.11	CYP	0.12	NLD	0.13	IRL	0.05
59	CRI	0.14	CAN	0.10	ITA	0.11	TWN	0.12	LVA	0.05
60	PAN	0.13	ISL	0.09	ISL	0.10	HRV	0.11	NLD	0.05
61	HKG	0.13	CRI	0.09	MLT	0.09	PHL	0.11	PRT	0.05
62	IRL	0.13	NZL	0.08	GBR	0.09	JPN	0.04	PER	0.05
63	NOR	0.13	NOR	0.05	IRL	0.07	CHL	0.04	CHE	0.03
64	ISL	0.11	HKG	0.02	NZL	0.07	CRI	0.04	PAN	0.02
65	NZL	0.09	SGP	0.02	HKG	0.07	PAN	0.03	NZL	0.00

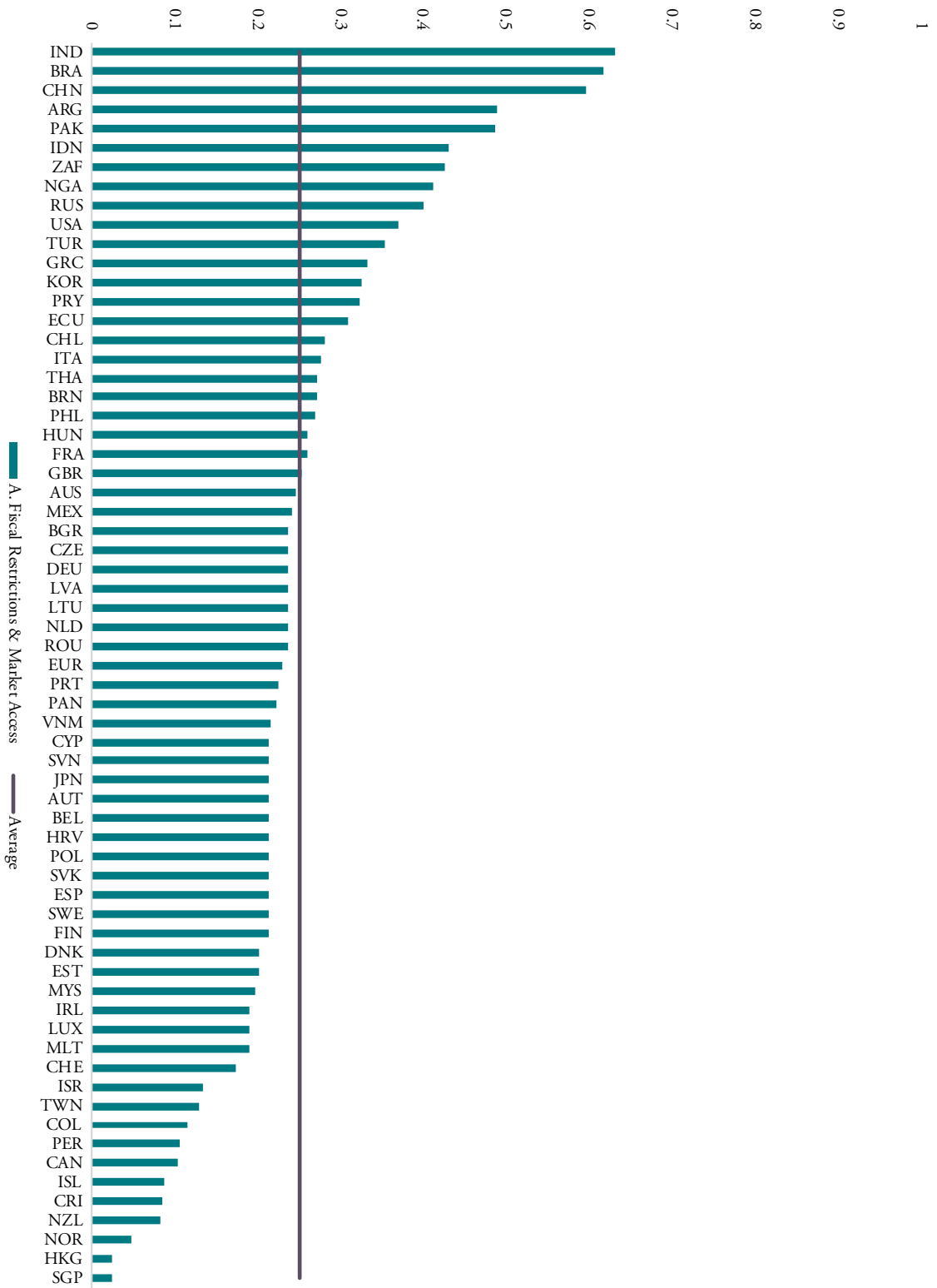


Figure 2.1: DTRR Cluster A - Fiscal Restrictions & Market Access

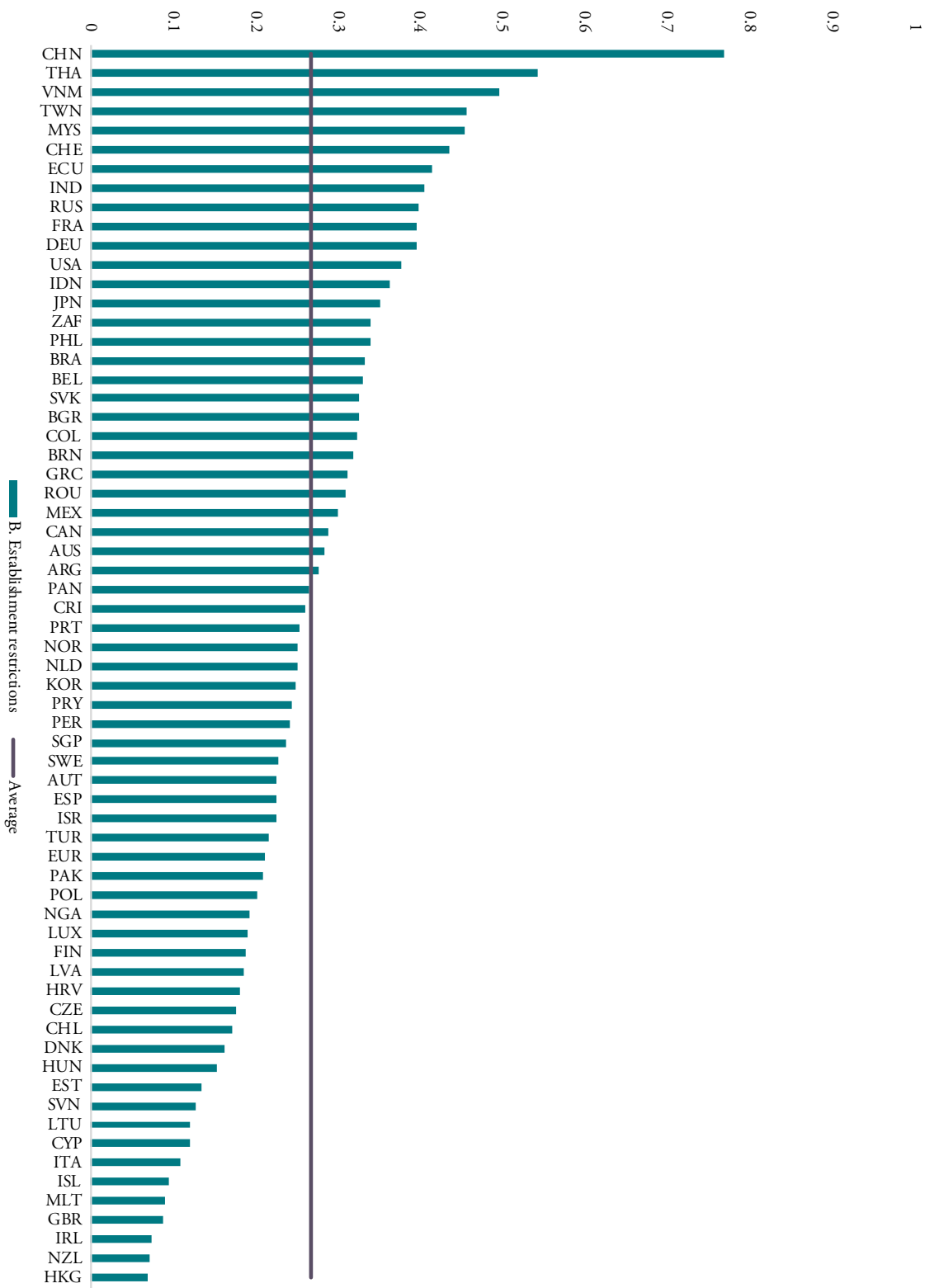


Figure 2.2: DTRI Cluster B - Establishment Restrictions

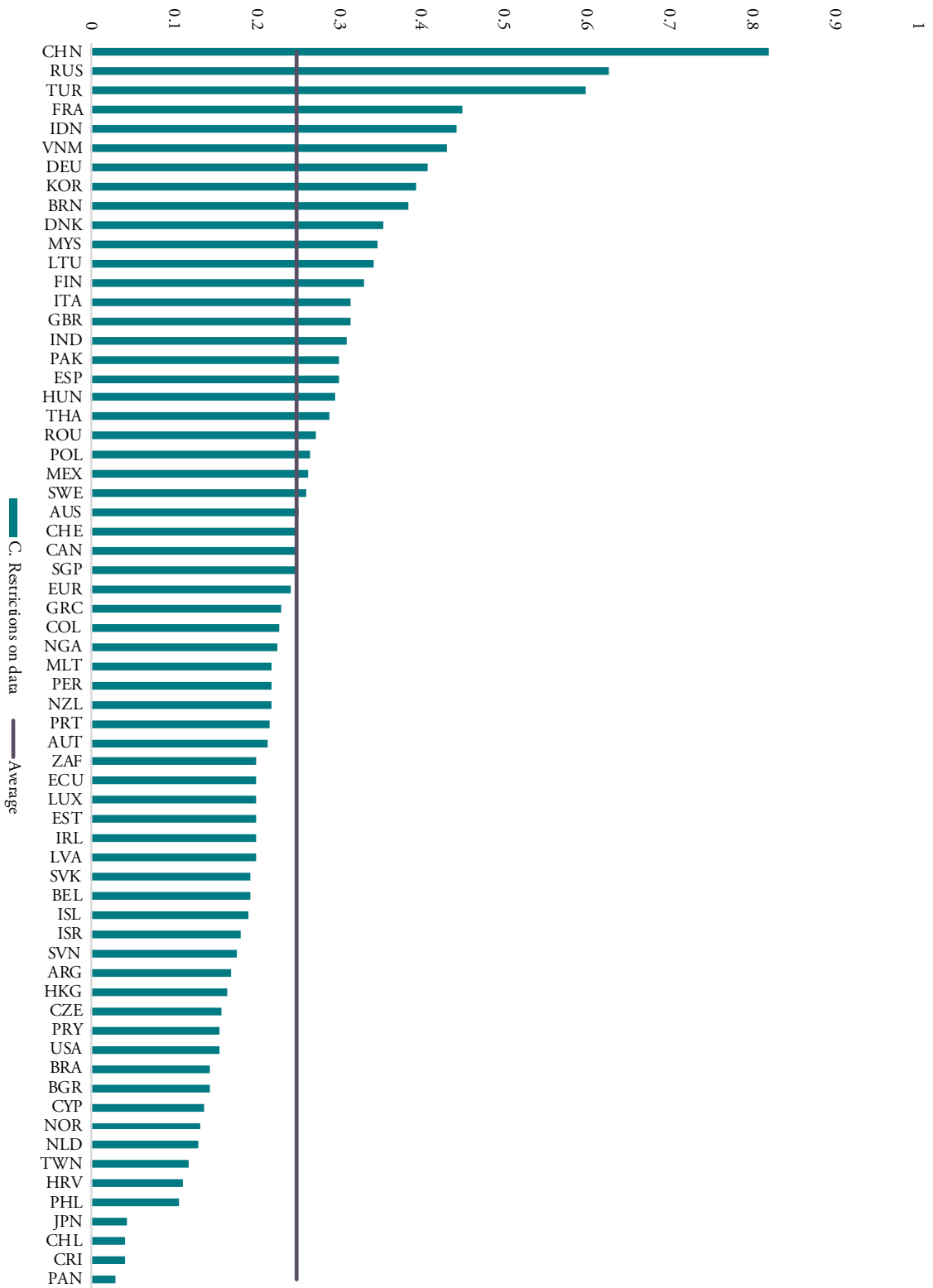


Figure 2.3: DTRI Cluster C - Restrictions on Data

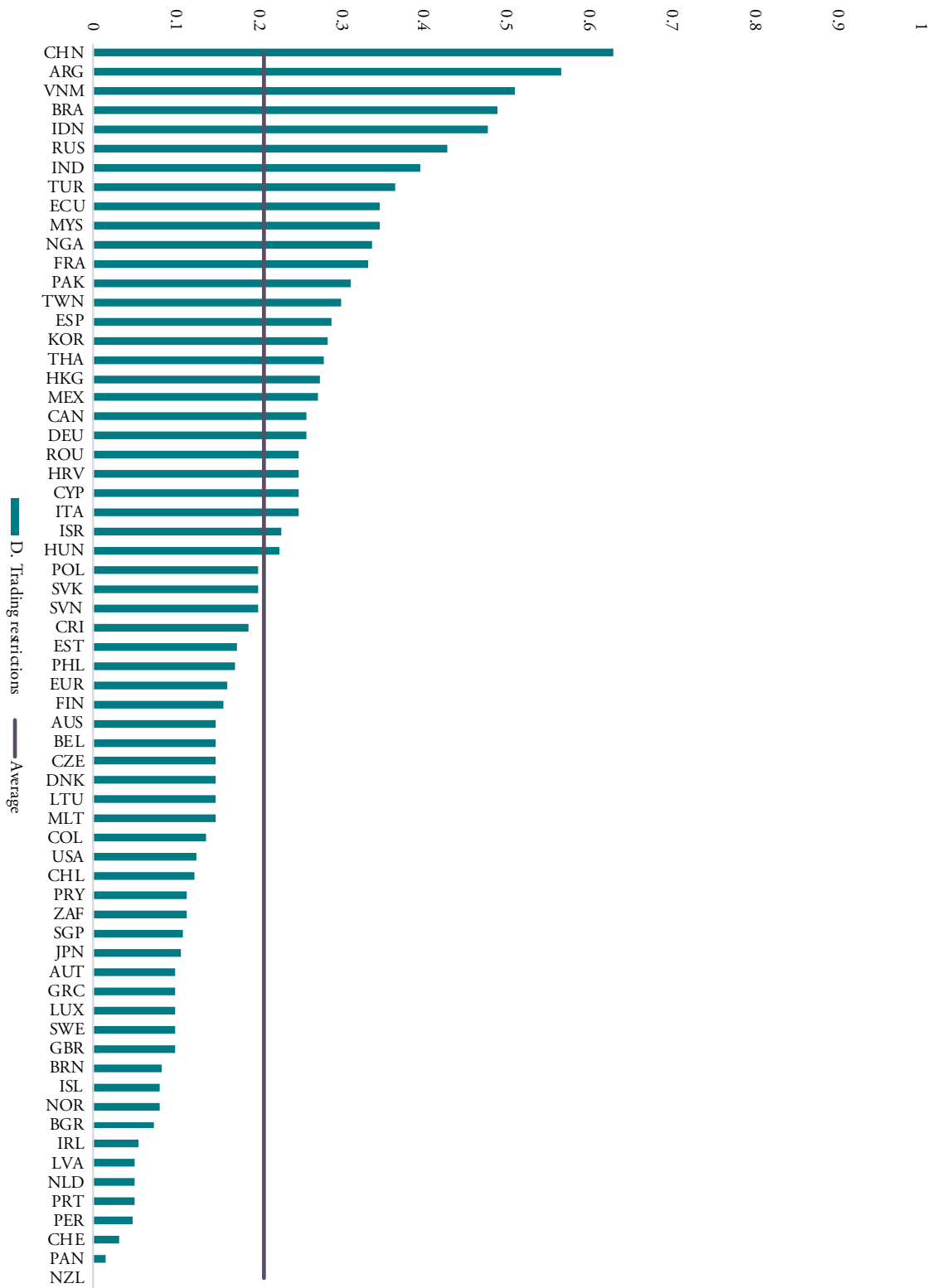


Figure 2.4: DTRI Cluster D - Trading Restrictions

Box 2: The DTRI and Economic Indicators

The DTRI consists of a score assigned to each country which summarises the country's overall policy framework with regards to digital trade.

Besides increasing transparency, the index uncovers policy patterns across countries in the global economy and provides a simple way of comparison between different countries. The DTRI ranges from 0 (i.e. completely open) to 1 (i.e. virtually restricted) with increasing values representing higher levels of digital trade costs for businesses.

Overall, the DTRI is negatively associated with the level of economic development, as illustrated in Figure B1. The figure shows the DTRI on the horizontal axis with the level of development displayed on the vertical axis. The figure clearly shows that higher levels of digital trade restrictiveness are particularly observable in countries which are economically less developed.

Moreover, the figure shows that some of the most restrictive economies in digital trade are also countries which have large markets, as indicated by the size of the circles. To put this in perspective, the Top 10 most restricted countries in digital trade according to the DTRI represents nearly half of the world population.

Besides the level of development, the DTRI is also found to be higher in countries with lower levels of Information and Communication Technology (ICT) and digital capacities. This can be seen in Figure B2 where each of the two panels shows a negative relationship between the DTRI and an indicator that proxies for the extent to which countries employ ICT, namely ICT-use (left-hand panel) and Technological Readiness (right-hand panel) sourced from the World Economic Forum (WEF). For example, countries such as Indonesia, India, Vietnam or Russia show low levels of technological readiness and ICT-use whilst at the same time applying many distortive digital trade measures.

Furthermore, when looking at the relationship between the DTRI and existing indexes that measure economic restrictiveness a positive correlation appears (Figure B3). Although these policy indexes measure restrictiveness in different parts of the economy, such as restrictions in product and services markets specifically, they are nonetheless expected to be associated. One important explanation is that countries which apply policy measures in one part of the economy are generally also likely to apply restrictive policies in other economic areas.

The left-hand panel of Figure B3 confirms such patterns of a positive link when using the OECD's PMR index, which measures a country's overall Product Market Regulations such as state controls, barriers to entrepreneurship and sector-specific domestic services regulations. Countries with higher levels of DTRI are also the ones with higher economy-wide regulations.

Similarly, the DTRI also relates well with another indicator of restrictiveness in digital trade presented by the United States International Trade Commission (USITC), i.e. in USITC (2014), which offers a ranking of digital trade barriers based on a survey of US firms (Figure B3, right-hand panel). The USITC indicator provides a sense of digital trade restrictiveness in terms of percentage of respondents to the survey that face digital trade restrictions in certain countries. Also, in this case, a positive relationship is found: countries with a high score on the DTRI are also assessed by the USITC's survey as more restrictive in digital trade.

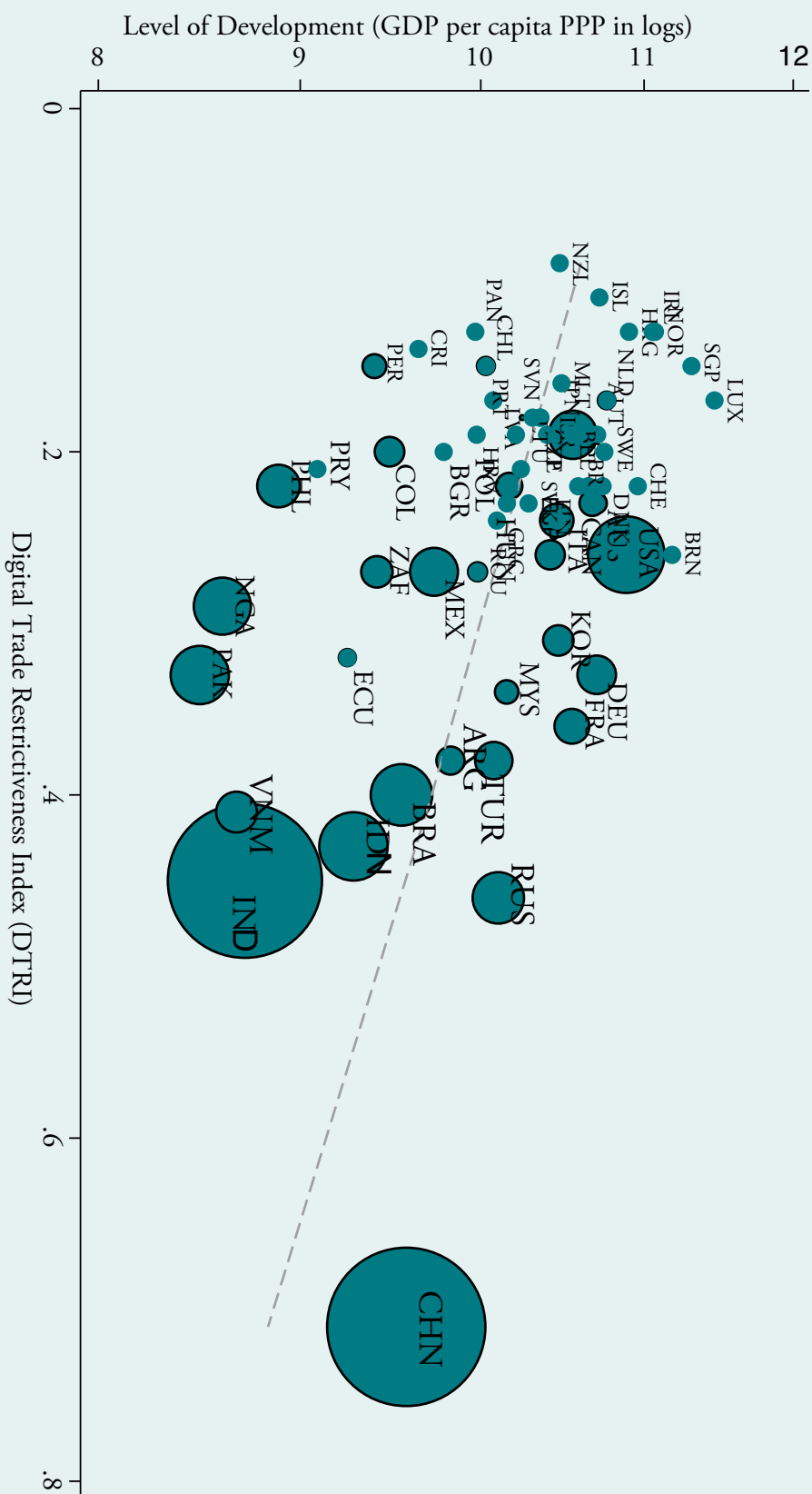
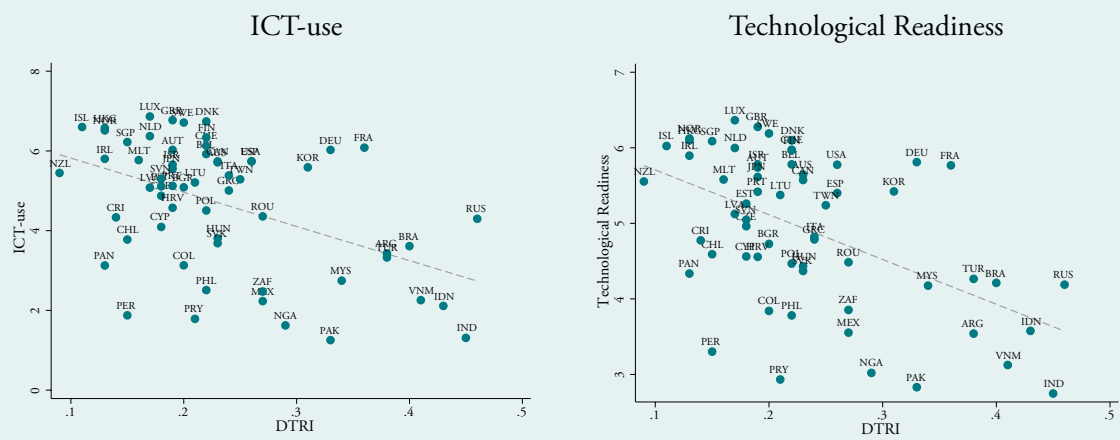


Figure B1: DTRI and Level of Development

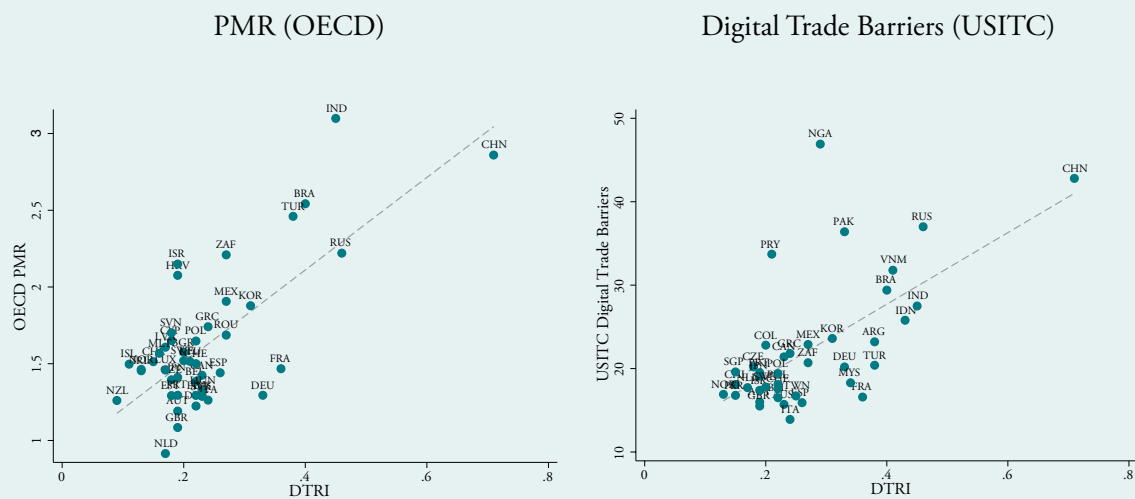
Note: The vertical axis plots the log of GDP per capita in Purchasing Power Parity (PPP) (in log scale) in 2016 which is a standard proxy that represents a country's level of development. The horizontal axis plots the overall DTRI score. The size of the circles for each country reflects the size of the market by taking population as a proxy. The dashed grey line running through the graph represents the downward sloping (i.e. negative) relationship between the level of development of economies and the overall DTRI score. In other words, the lower the level of development across all countries, the higher the restrictiveness of countries' digital trade policies. Country ISO 3-digit code belongs to each circle. GDP per capita PPP is sourced from World Development Indicators for the latest year available (2016).

Figure B2: DTRI and Level of Technology



Source: ECIPE and WEF; authors' calculations. China (CHN) is omitted because it forms an outlier.

Figure B3: DTRI and Other Restrictiveness Indicators



Source: ECIPE, OECD and USITC; authors' calculations. USITC digital trade barriers refers to Table 4.2 in USITC (2014).