Trade Policy In Regulated Economies

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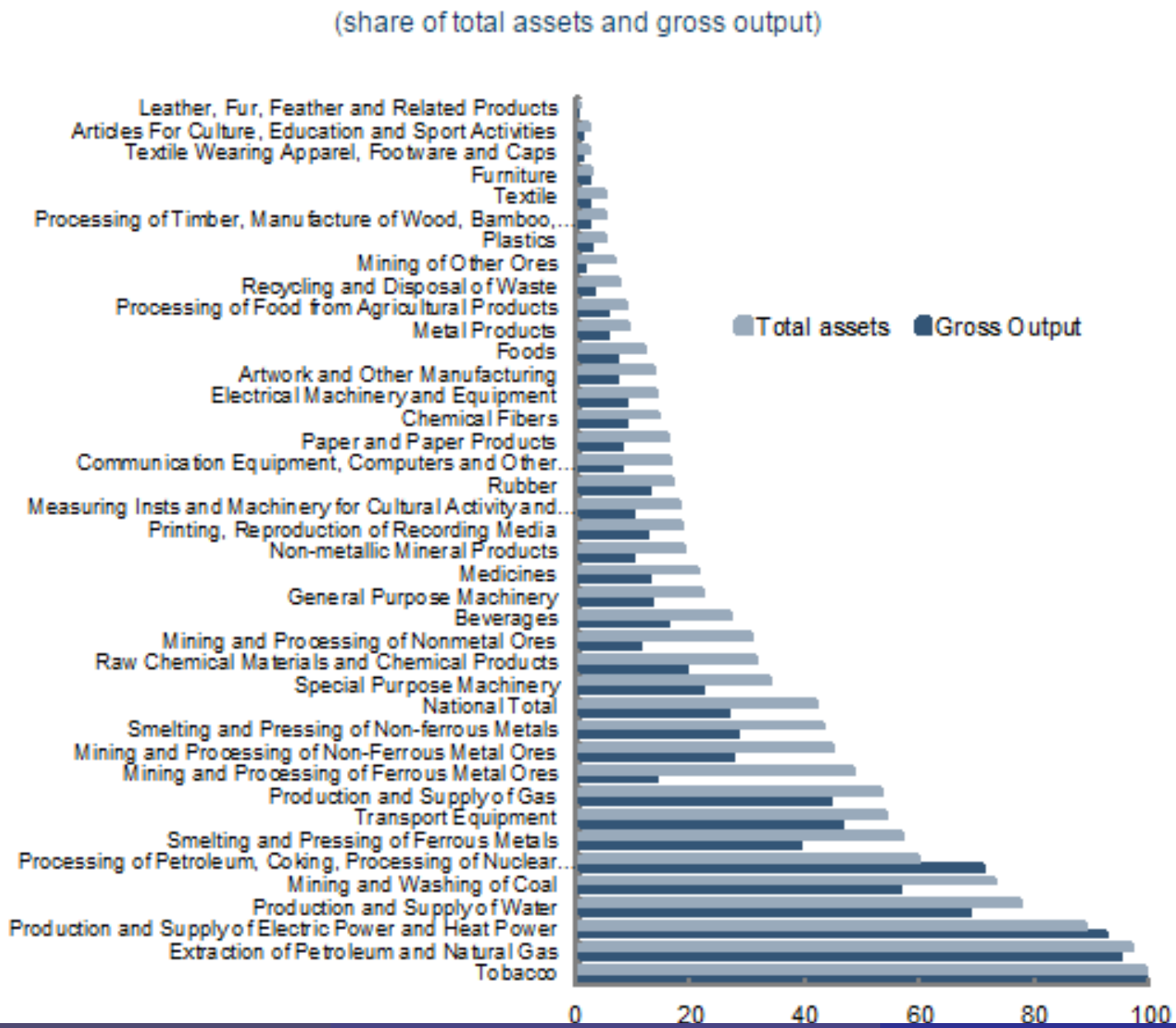
Introduction

- Jagduish Bhagwati, described Foreign Direct Investment (FDI)as the investments that is made by Multi National Companies (MNC) in order to skip the protectionist measures that is taken by home country.
- Many countries use protectionist barriers to prevent job losses and protect home industry from computation which is stemmed from cheap imported goods. Companies can get rid of this protectionist barrier by opening a new branch in home country.
- Hence, tariff rates couldn't serve as a protection alone to domestic entrepreneur(either it is private or State Own Enterprise), we should also consider that restrict foreign direct investment directly.

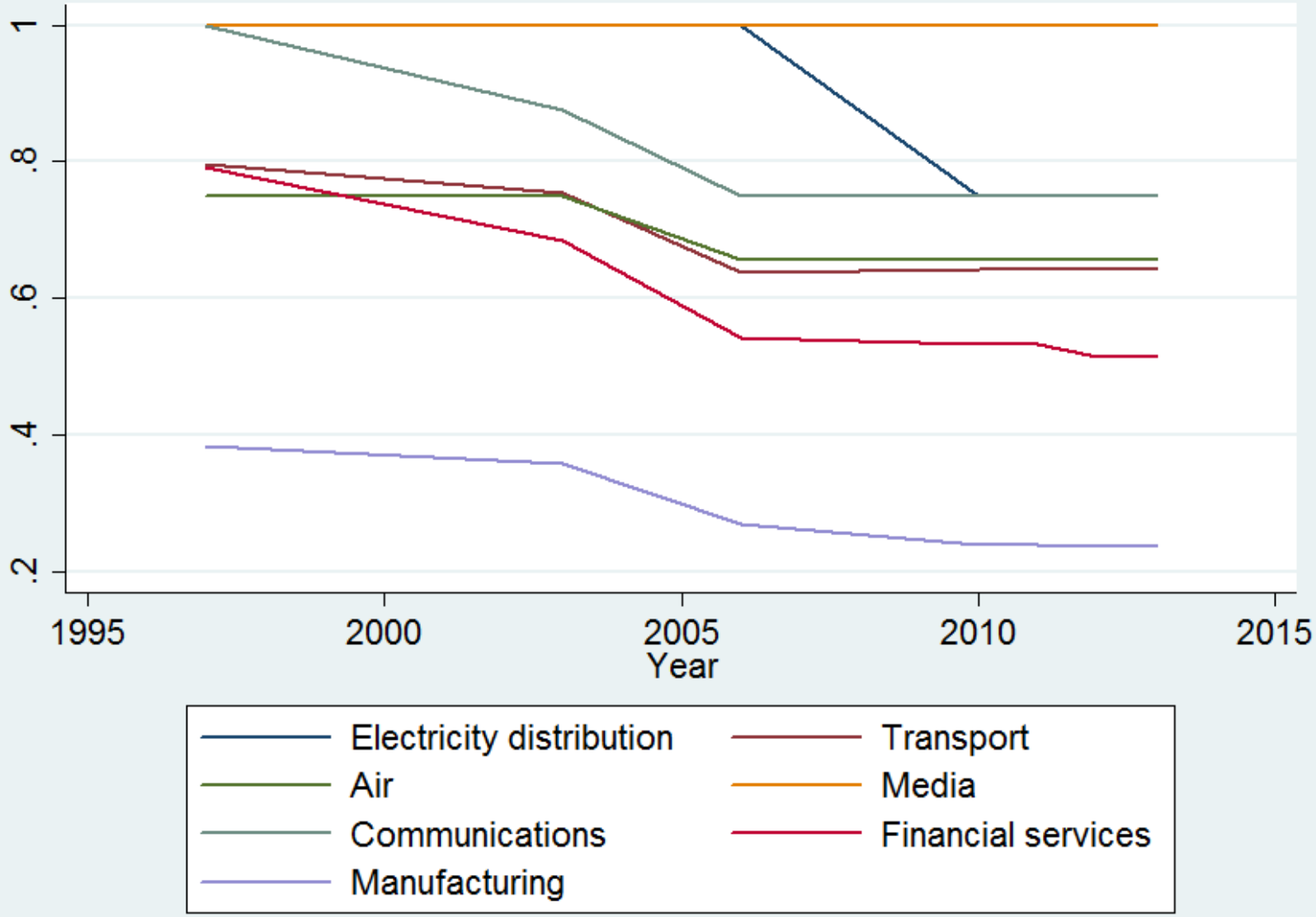
State Own Enterprises



State Own Enterprises

Year	Existing Condition, or Reform Event, or Policy Change
2006	While introducing the SASAC's "Guidance on restructuring the State-owned Assets and Enterprises," the head of SASAC declared that the state should absolutely control seven industries including defence, power generation and distribution, petroleum and petro-chemicals, communications, coal, airlines, and water transportation and the state should dominate (strongly control) equipment manufacturing, autos, electronic communications, construction, steel, non-ferrous metal, chemical, geologic survey and design, and science and technology.
2009	The State Council introduced a revitalization program for the 10 vital industries including steel, autos, ships, petrochemicals, textiles, light manufacturing, non-ferrous metals, equipment manufacturing, electronic products and transportation and storage. One of the main components of the revitalization program is supporting and encouraging industrial reorganization through mergers and acquisitions by large and strong firms, of which most are SOEs.

Fdi Restriction Index



Fdi Restriction Index

	Sector / Industry	2013
2	Fisheries	1
3	Media	1
4	Radio & TV broadcasting	1
5	Other media	1
6	Maritime	0.895
7	Electricity distribution	0.75
8	Communications	0.75
9	Fixed telecoms	0.75
10	Mobile telecoms	0.75
11	Legal	0.75
12	Air	0.655
13	Transport	0.642
14	Insurance	0.625
15	Electricity	0.53
16	Financial services	0.513
17	Banking	0.5
18	Accounting & audit	0.5
19	Tertiary	0.484
20	Primary	0.456
21	Total FDI Index	0.418
22	Other finance	0.415
23	Transport equipment	0.41
24	Business services	0.388

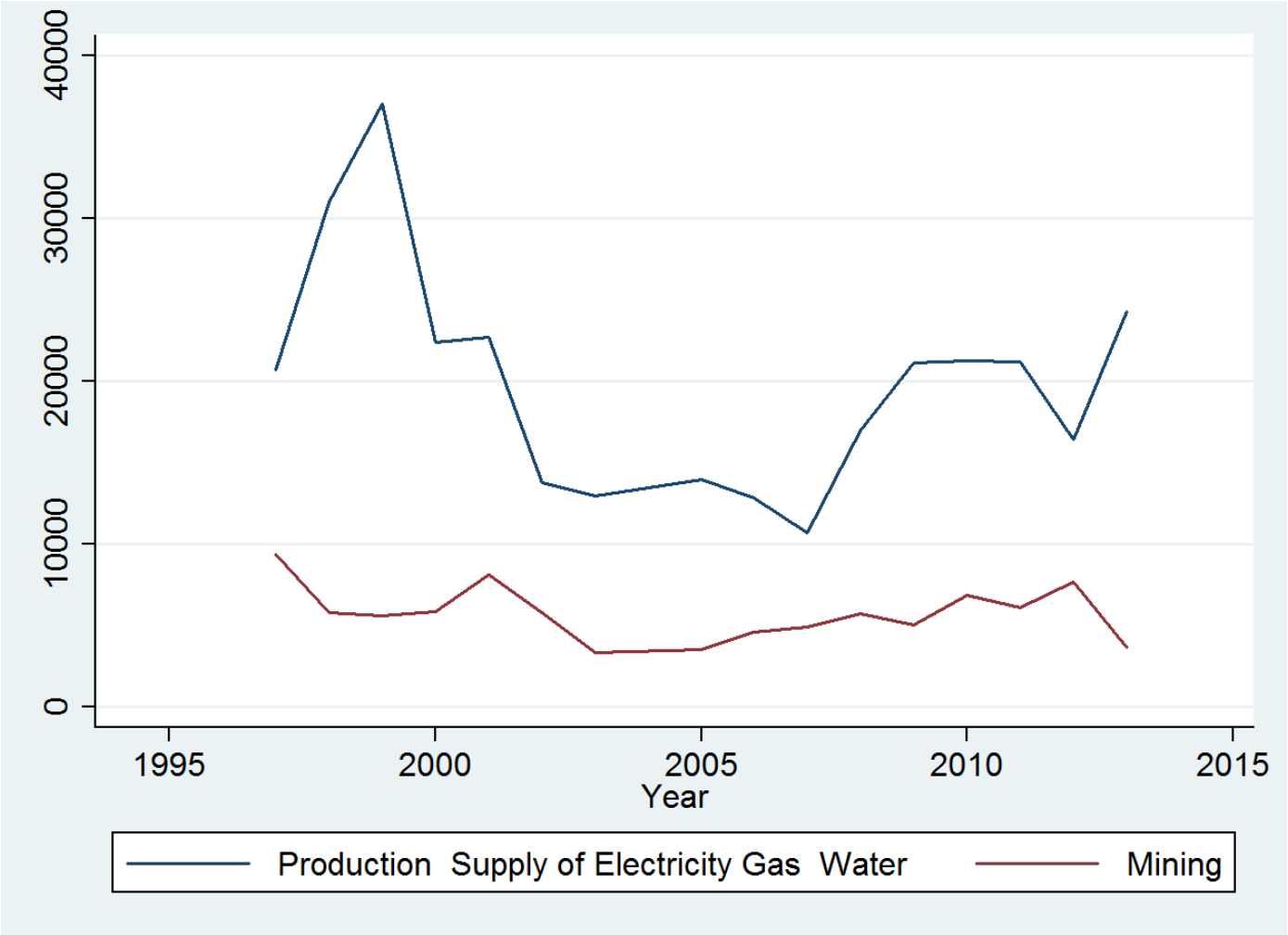
Fdi Restriction Index

23	Transport equipment	0.41
24	Business services	0.388
25	Surface	0.375
26	Construction	0.345
27	Mining & Quarrying (incl. Oil extr.)	0.328
28	Real estate investment	0.325
29	Agriculture	0.31
30	Electricity generation	0.31
31	Secondary	0.294
32	Retail	0.288
33	Distribution	0.256
34	Agriculture & Forestry	0.248
35	Manufacturing	0.236
36	Wholesale	0.225
37	"Metals, machinery and other mineral	0.203
38	"Electric, Electronics and other instrun	0.2
39	Food and other	0.198
40	Forestry	0.185
41	Oil ref. & Chemicals	0.17
42	Hotels & restaurants	0.17
43	Architectural	0.15
44	Engineering	0.15

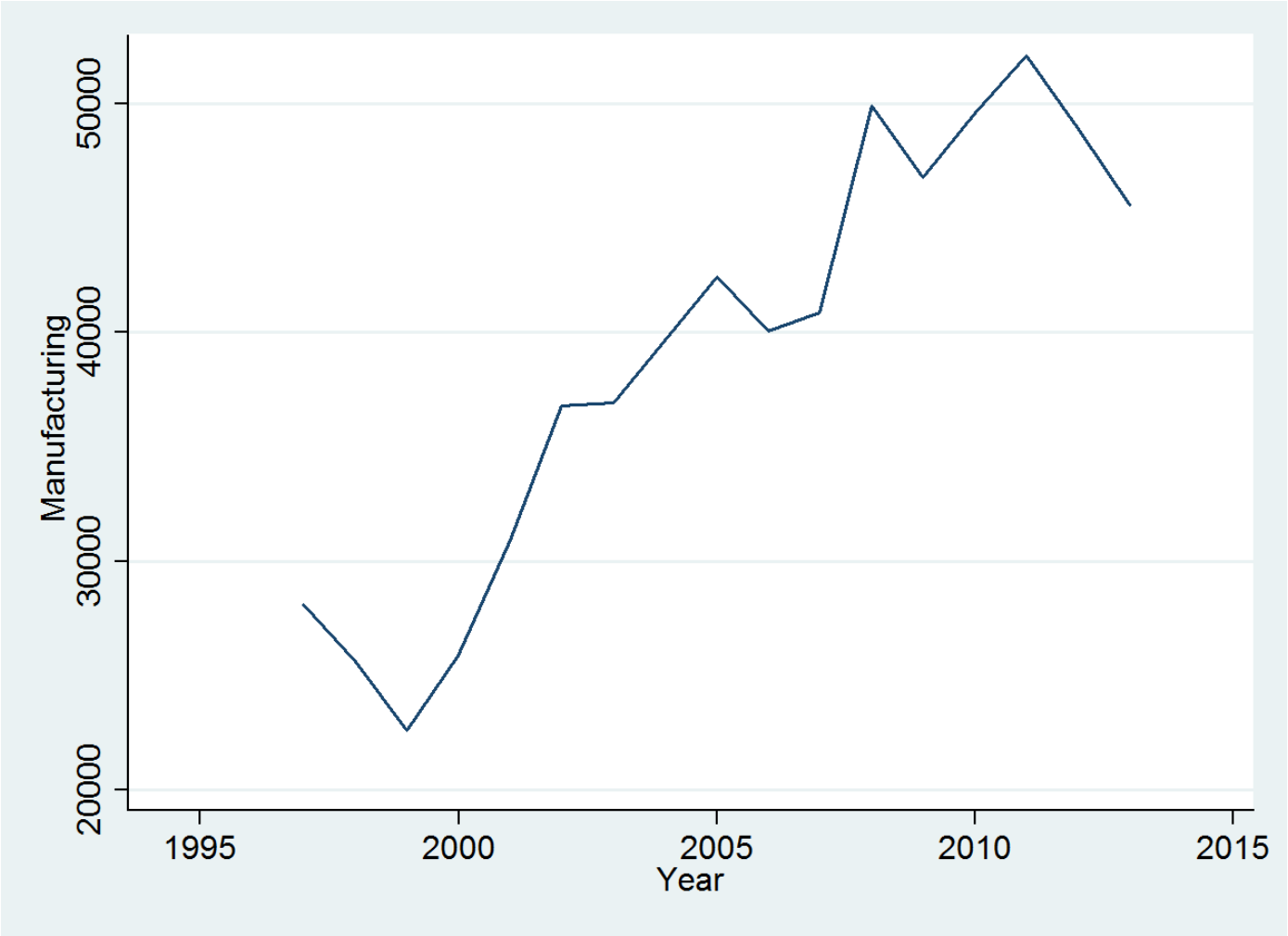
Weighted Tariff Rate

	1998	2001	2006	2011
Sugars and sugar confec	27.39538	77.67024	46.00965	46.8173
Vehicles	38.3077	38.07048	17.64579	19.5972
TransportEquipment	16.18533	19.56058	10.75876	16.17899
Arm	15	13	13	13
Tabacco	56.69831	36.94958	11.89634	12.3012
Fishery	20.89129	19.50474	10.16924	10.6084
AgricultureAndForestry	68.56663	70.08441	7.478946	7.706183
FoodAnyOtherIndustry	18.06331	16.66493	9.174325	7.29779
Manufacturing	14.1899	12.79144	4.933085	5.677808
Ships	6.442339	6.625178	7.361167	5.06578
MetalMechinary	12.33933	10.83809	4.12668	3.792433
Aircraft spacecraft	3.662371	3.898291	1.02875	3.24983
Railway	4.083777	4.484823	3.144729	3.19414
Forestry	6.579406	5.590117	5.620224	3.13823
OilChemicals	7.795234	6.632033	3.203753	1.85722
ElecElecnoInstr	12.68964	11.3197	2.921097	1.436214
Primary	23.94106	17.65903	1.934187	1.280382
Mining	3.23524	2.272881	0.987645	0.299418

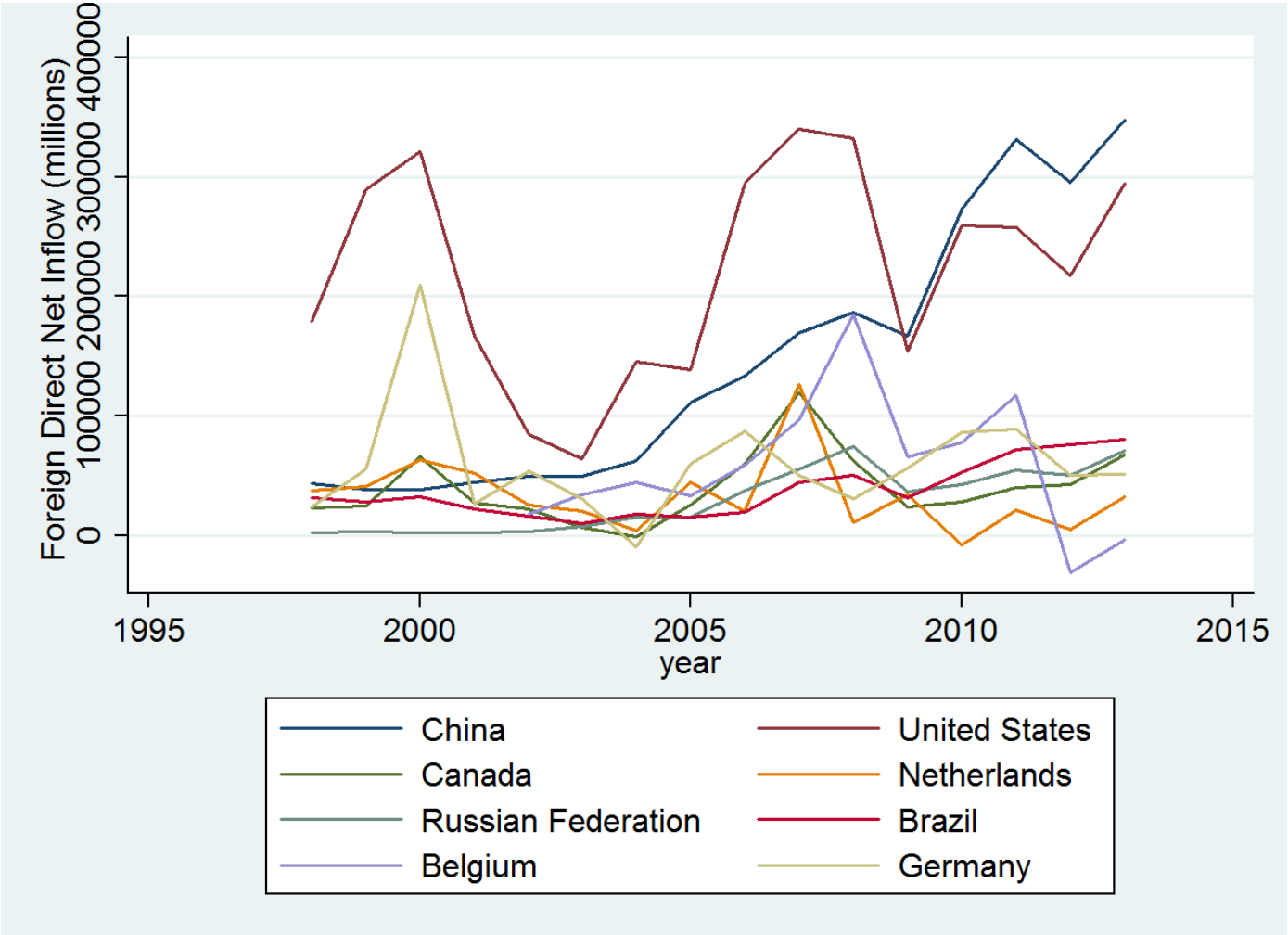
FDI Inflow


40000
30000
20000
10000
0
1995
2000
2005
2010
2015
Year
Production Supply of Electricity Gas Water
Mining

FDI inflow


Manufacturing
20000
30000
40000
50000
1995
2000
2005
2010
2015
Year

FDI inflow


Foreign Direct Net Inflow (millions)
0
100000
200000
300000
400000
1995
2000
2005
2010
2015
year
China
United States
Canada
Netherlands
Russian Federation
Brazil
Belgium
Germany

Model

The utility function is represented as

$$U = x_0 + \frac{\theta}{\theta - 1} x^{\frac{\theta - 1}{\theta}}, \qquad \theta > 0, \theta \neq 0 \tag{1}$$

where x_0 denotes consumption of the numeraire good and x is an index of consumption of the differentiated products and $\theta > 0$ denotes the elasticity of demand for the CES aggregate. The consumption index is denoted as

$$x = \left[\sum_{j \in N_d} x(j)^{\frac{\epsilon - 1}{\epsilon}} + \sum_{j \in N_i} x(j)^{\frac{\epsilon - 1}{\epsilon}} + \sum_{j \in N_m} x(j)^{\frac{\epsilon - 1}{\epsilon}} + \sum_{j \in N_{soe}} x(j)^{\frac{\epsilon - 1}{\epsilon}} \right]^{\frac{\epsilon}{\epsilon - 1}}, \qquad \epsilon > 1 \tag{2}$$

where $x(j)$ represents of the product j, and N_h, N_i, N_m are differentiated products from different sources: home, import , multinational companies produce at home; respectively. In addition, the $\epsilon > 1$ is the own-price elasticity of demand of each brand. We denote by p_j the prices of each good $j = d, i, m, soe$.

Model

Hence maximizing the utility subject to budget constraint gives us

$$x_j = p_j^{-\epsilon} q^{\epsilon-\theta}, \quad \textit{for} \quad j = i, d, m \quad \textit{and} \quad x = q^{-\theta} \tag{3}$$

The cost of production good differ by the type of company: c_j, j=h,m,i. Importer also incur a tariff cost τ, so marginal cost is $c_i + \tau$ for importer. I further assume that multinational use exactly same technology and labor type both in foreign country and home country. Hence, the order is given as: $c_{soe} > c_d > c_m = c_i$ and after tariff imposed $c_{soe} > c_i + \tau > c_d > c_m$. Each company produced where marginal cost is equal to the marginal revenue. So by using demand equations in 3 and profit maximizing condition, we have find prises.

$$
\begin{aligned}
p_d &= \frac{\epsilon}{\epsilon - 1} c_d \\
p_i &= \frac{\epsilon}{\epsilon - 1} c_i (1 + \tau) \\
p_m &= \frac{\epsilon}{\epsilon - 1} c_m \\
p_{soe} &= \frac{\epsilon}{\epsilon - 1} c_{soe}
\end{aligned}
\tag{4}
$$

The profit functions takes form

$$
\begin{aligned}
\pi_m &= (p_m - c_m) x_m \\
\pi_i &= (p_i - (c_i + \tau) x_i \\
\pi_d &= (p_d - c_d) x_d
\end{aligned}
\tag{5}
$$

After substituting prices in 4 into the 5 we get

$$
\pi_j = \frac{p_j x_j}{\epsilon}, j = d, i, m, soe \tag{6}
$$

$$G(n_m, \tau, t) \equiv \alpha V + \beta n_{soe}\pi_{soe} + n_m t\pi_m + n_i \tau x_i + n_d t\pi_d, \quad (7)$$

where β is the weight given SOE profit, E is employment level in SOE, τ is tariff and t is the profit tax applied to all private and multinational companies, α is the weight assign to the welfare of the society and $V = Income + \frac{q^{1-\theta}}{\theta-1}$. Lets further assume that multinational companies pays a wage premium $w - 1 > 0$ and to produce one unit multinational companies need a_m. Hence total wage premium paid by multinational is equal to the $(w-1)n_m a_m x_m$. The multinational price is $p_m = wa_m\epsilon/\epsilon - 1$, then total wage premium can be written $(\epsilon - 1)(w-1)/w\epsilon]n_m p_m x_m$. So utility takes form after including wage premium.

$$U = L + \frac{\epsilon - 1}{\epsilon}\frac{w-1}{w} n_m p_m x_m + \frac{1}{\theta - 1}[n_d p_d x_d + n_i p_i x_i + n_m p_m x_m + n_{soe} p_{soe} x_{so} \quad (8)$$

Hence government welfare maximization function is

$$
\begin{aligned}
G(\tau, t, m) &\equiv \alpha V + \beta n_{soe}\pi_{soe} + n_m t\pi_m + n_i \tau x_i + n_d t\pi_d \\
&= \alpha L + \alpha \frac{\epsilon - 1}{\epsilon} \frac{w - 1}{w} m p_m x_m \\
&+ \frac{\alpha}{\theta - 1}[n_d p_d x_d + n_i p_i x_i + n_m p_m x_m + n_{soe} p_{soe} x_{soe}] \\
&+ \beta n_{soe}\pi_{soe} + n_m t\pi_m + n_i \tau x_i + n_d t\pi_d
\end{aligned} \tag{9}
$$

Hence government welfare maximization function is

$$s_{imt} = -\beta s_{soe_{it}} + \alpha(\epsilon - 1)(1 - 1/w_{it}) - \epsilon \frac{\tau_t}{p_f t} s_{iit} + Complicated_t erm \tag{10}$$