An Economic Perspective on the Use of Data and Data Localisation

Dr Matthias Bauer

European Center for International Political Economy (ECIPE), Brussels

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Outline

1. The Use of Data in the (Global) Economy
2. Barriers to the Free Flow of Data
3. Data Localisation
4. Conclusions

Data is everywhere

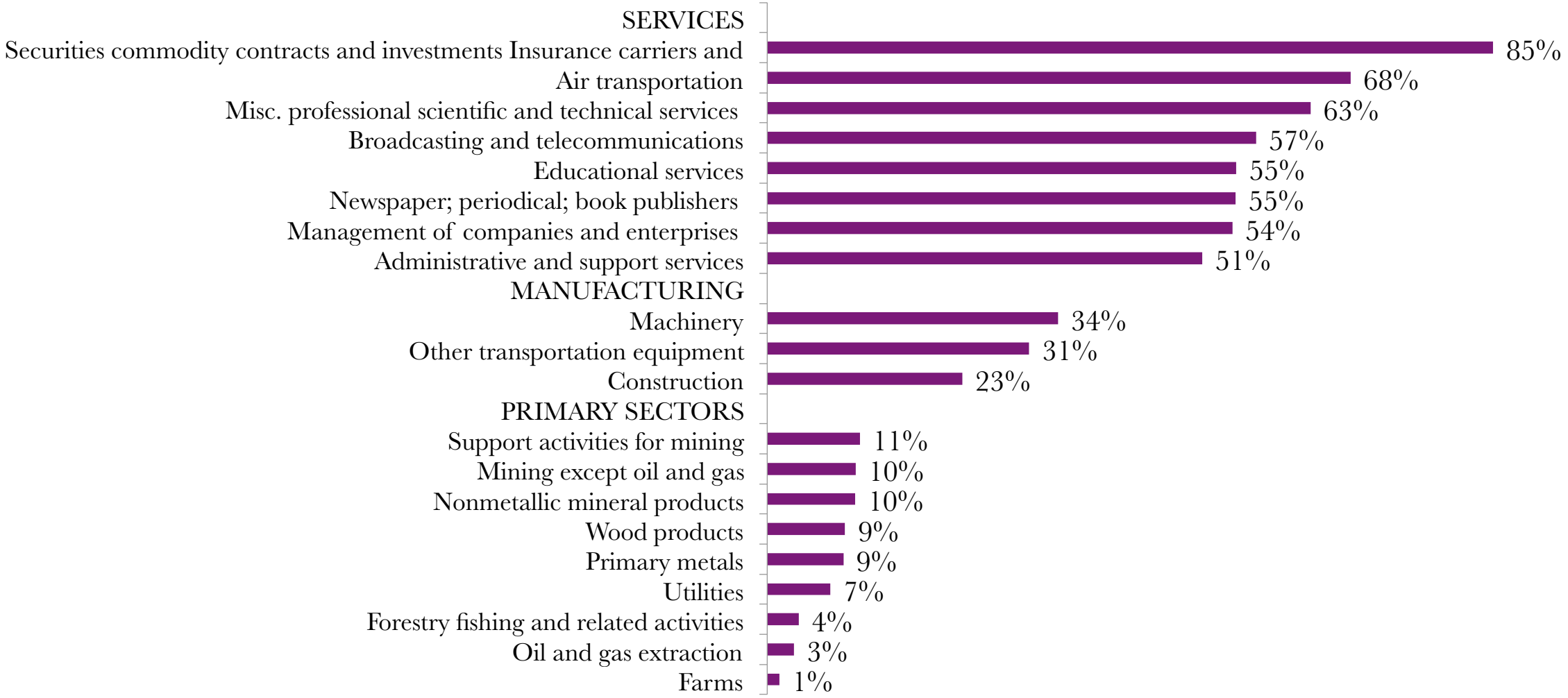
- Input and output of production

- All sectors of production incl. agriculture, extraction, manufacturing

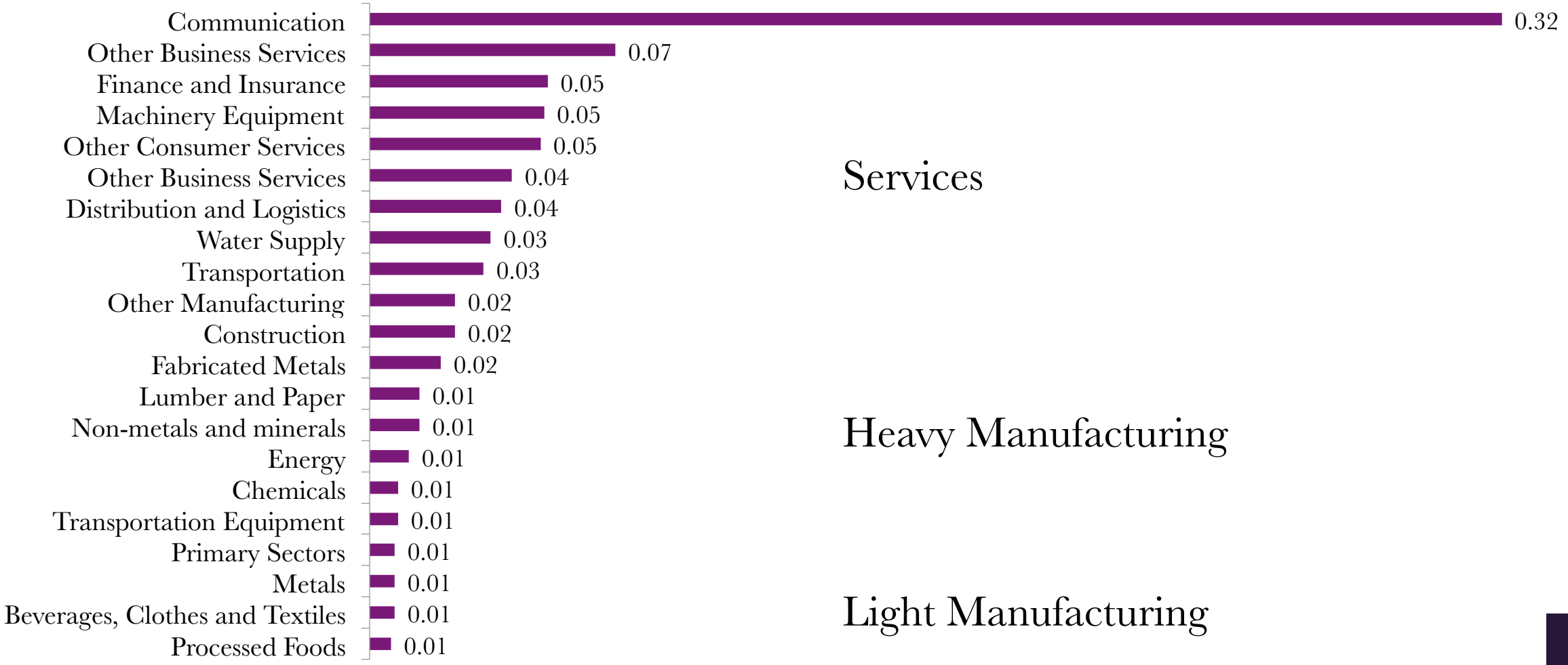
- Particularly intensive in services industries

- Services sectors represent 60 per cent of Russian economy

IT-Capital as a Share in Total Capital



Use of Data: Not only Google, Facebook, Apple



Note: data processing intensity index based on own calculations.

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Barriers to the Free Flow of Data

- Technology not a barrier anymore
- Encompasses data privacy and security laws
- Most ‘felt’ in industries and services sectors that use data intensively with considerable feedback to upstream and downstream sectors

Internet and Privacy Regulations

1. Mandatory restrictions and procedures for collection of private data (admin)

2. Obligation to employ data privacy officers & annual protection impact assessments (admin)

3. Bans of processing of certain data (loss of business)

4. Liability: business risks due to sanctions after data 'accident'

5. Data Localisation: mandatory strorage of critical data on servers physically located in a certain country (investment and admin)

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Storage of ‘Critical’ Data on Servers ‘at home’

- Underlying idea: to safeguard private and public data & to stimulate national economy
- Problem: local data clusters more prone to attacks & economic losses outweigh benefits of a few additional jobs in data centres and (legal) consultancies
- Consequence: obligation to switch to domestic data centres offering storage and data processing services
- Implication: discimination of foreign suppliers in all industries

The Economic Impact of Data Localisation

Static Impact (medium-term)	Dynamic Impact (longer-term)
Decline in Productivity	Decline in Investment
Decline in Output	Decline in innovation: - Lack of Competition - Technological progress - Organizational knowledge - New business models
Rise in Consumer Prices	
Decline in Investment	
Estimated	NOT estimated

Methodological Considerations

- Analysis of data regulation measures for Brazil, China, EU, India, Indonesia, Korea, Vietnam, and Russia – incl. Data Localisation
- Augmented OECD Product Market Regulation Indices
- Estimated impact on total factor productivity and cost of trade
- TFP and cost estimates as input to Computable General Equilibrium Model (CGE)

10 Regulatory Measures on Data Privacy

Regulatory measure	Outcome
Is there a data localisation requirement?	Yes / Limited / No
Is there a strict consent requirement for the collection, storage, dissemination of personal data?	Yes / No
Does the law provide users with the right to review their stored information?	Yes / No
Does the law provide users with the right to be forgotten/ deleted?	Yes / No
Is a notification of breaches towards the government/user obligatory?	Towards government / user / government & user
Are data protection impact assessments obligatory?	Yes / No
Is a data protection officer required?	Yes / No / Qualified Yes
Are there administrative sanctions for non-compliance? How high?	Varies according to height of sanctions
Does the government require easy access to companies' data?	Yes / No
Are companies required to retain data for a fixed period of time?	Yes / No

Results


-0.27
Loss in GDP from FZ-242
-0.19
Loss in Services Output from FZ-242
-0.25
Loss in Manufacturing Output from FZ-242
-0.25
Loss in Exports in Services from FZ-242
-0.4
Loss in Exports in Manufacturing from FZ-242

Results

- GDP loss approx. 5.7bn USD based on 2014 GDP (380bn RUB)
- Manufacturing more affected than services
- Decline in aggregate investment of 1.4 per cent (7bn USD or 466bn RUB)
- Relative shift in production structure towards less innovative, more volatile sectors such as agriculture and raw materials in which Russia has a comparative advantage
- Longer term adverse effects resulting from less technological innovation, less innovation in terms of organisational knowledge and business models, and less competitive behavior - all not taken into consideration
- Results likely underestimate long-term impact

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Conclusions

1. Data is everywhere
2. Data is mostly embedded in services
3. Barriers in data are disruptive: they can have a great knock-out effect on the entire economy
4. Negative impact on competition, productivity and investment in the short to medium term
5. Negative impact on innovation 1) in new technologies and 2) innovation in terms of new business models in the medium to long term
6. Feedback on economic development and international competitiveness

Barriers in data are disruptive!

Thank you for your kind attention.