

9 September 2019

# Evaluating sustainability impacts of sharing cities

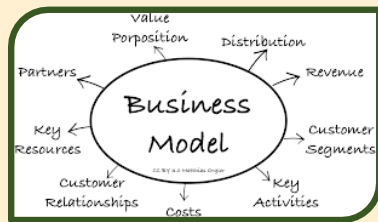


## Sharing Cities Summit



**Dr. Jagdeep Singh**

10 October 2019



# BUSINESS MODELS



# SUSTAINABILITY



# INSTITUTIONALISATION



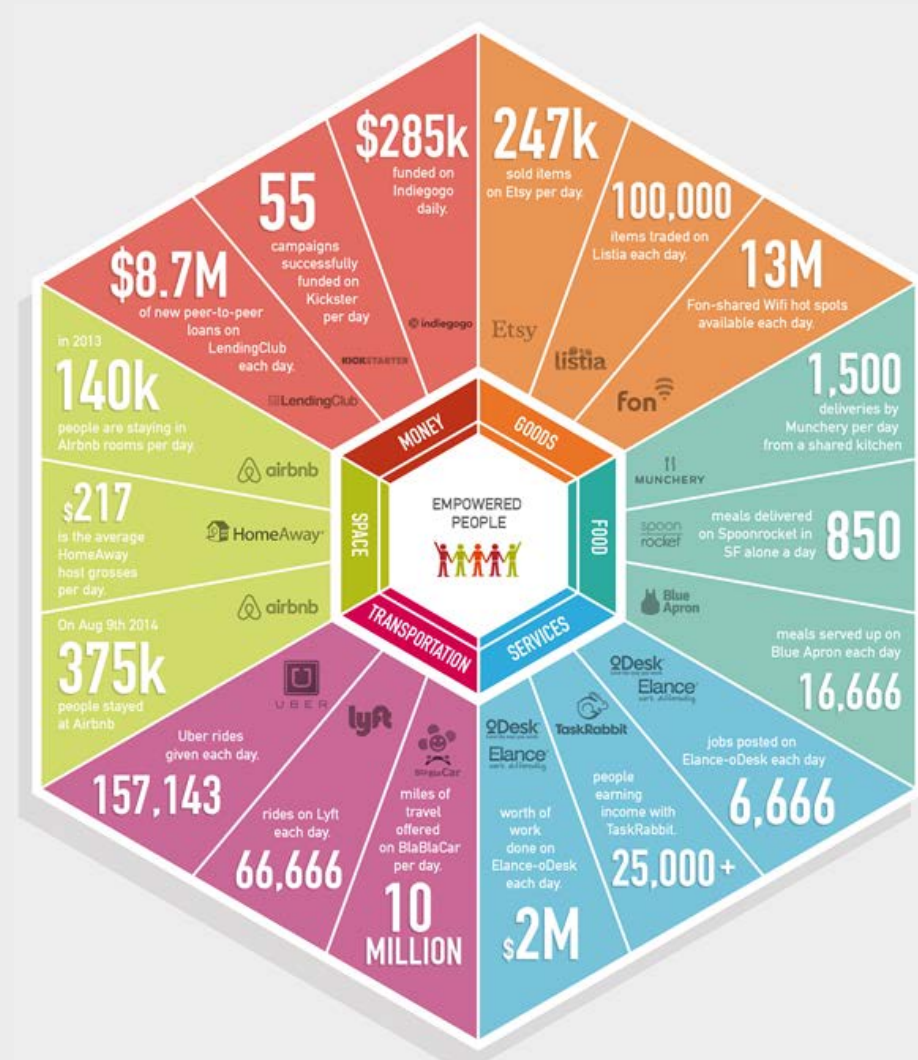
# SHARING ECONOMY

Tension Between Potential &  
Practice



# Sharing economy growth

## Economic discourse



Source: <http://www.catalystcompanies.co/infographic-a-day-in-the-life-of-the-collaborative-economy/>

**VOICES**

Berlin is right to clamp down on Airbnb. Local authorities should do the same.

*Kirsty Major*



**BUSINESS NEWS**

**Technology sector**

Uber Australia to ban low-rated passengers

Ride-sharing group's plan for star system reminiscent of China's social credit scores



Ride-hailing company Lyft partners with Hertz, Shell

12:13 AM ET Fri, 9 Oct 2015

Lyft has partnered with Hertz Global Holdings to offer rental cars to its drivers, the ride-hailing company said on Thursday.

Electric scooter boom faces US city limits

Urban authorities lay out ground rules to tame two-wheeled scooters flooding their streets



India finally drafts regulations for ride-hailing apps

10:04 PM ET Tue, 13 Oct 2015

Uber and Airbnb 'are only used by the young, rich and well educated'

**BUSINESS NEWS**

Brooke Masters: Winners and losers in the sharing economy

We are entering an era in which consumers will value access over ownership

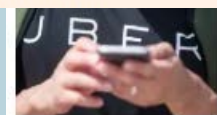


**US & Canadian companies**

Sydney joins Airbnb crackdown to ease rental concerns

Paris, Tokyo and Madrid to add to cities restricting short-term holiday lets

EU says banning Uber and Airbnb should be 'last resort'



Uber accused of illegally influencing move to reduce background checks



Will new China rules strangle Uber or legalize it?

5:22 AM ET Sun, 11 Oct 2015

Beijing is publishing draft rules that would impose taxi-like restrictions on private car-hailing services such as Uber, the FT reports.



**AMERICAS**

Uber and Lyft to leave Austin after failure to lax background checks

**BUSINESS NEWS**

Uber to settle with drivers

**Analysis**

Bike-sharing backpedal puts China's makers in a spin

Hub near Tianjin is latest victim of new economy's boom-and-bust cycle

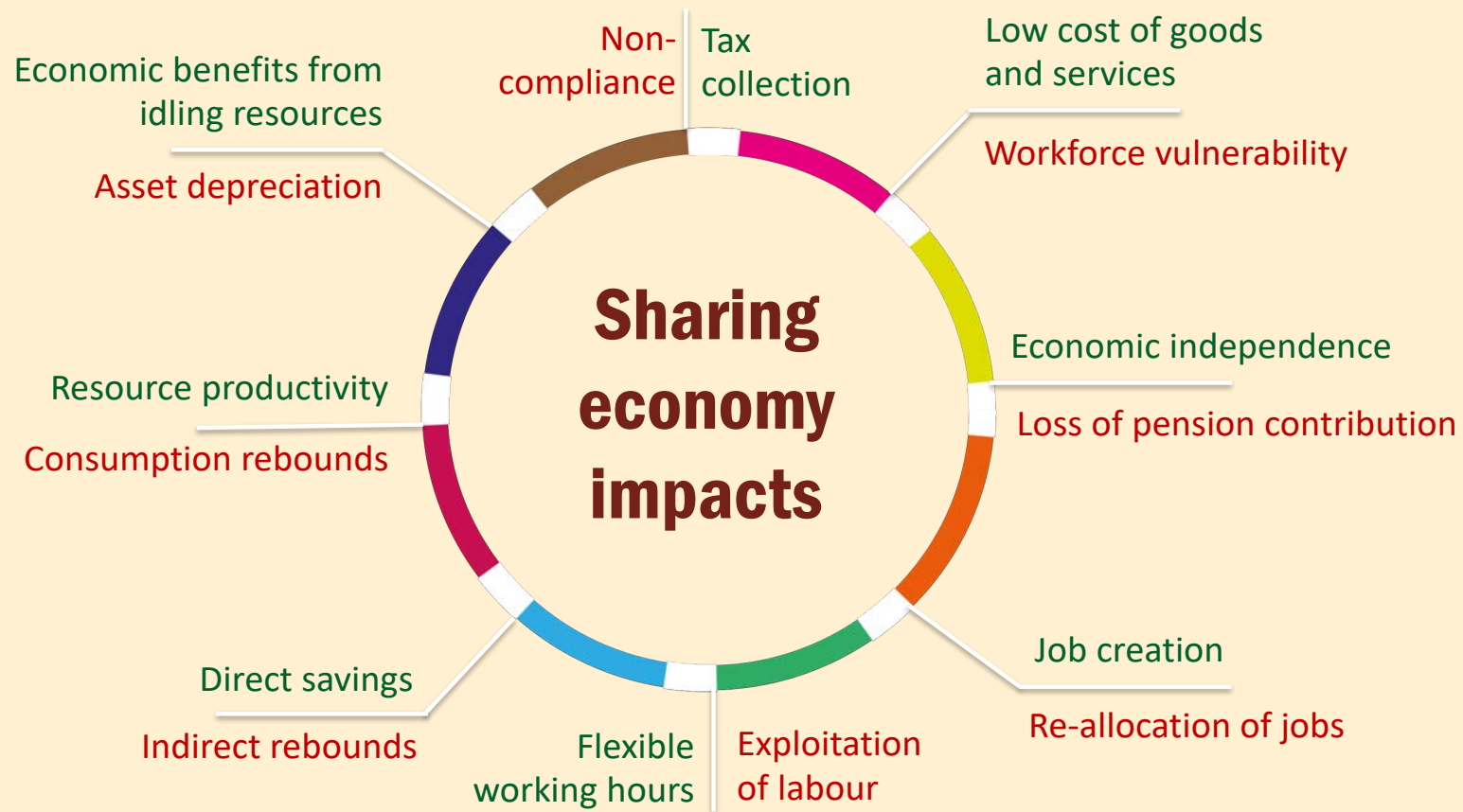


Is Japan the next front in turf war with Uber, Lyft?

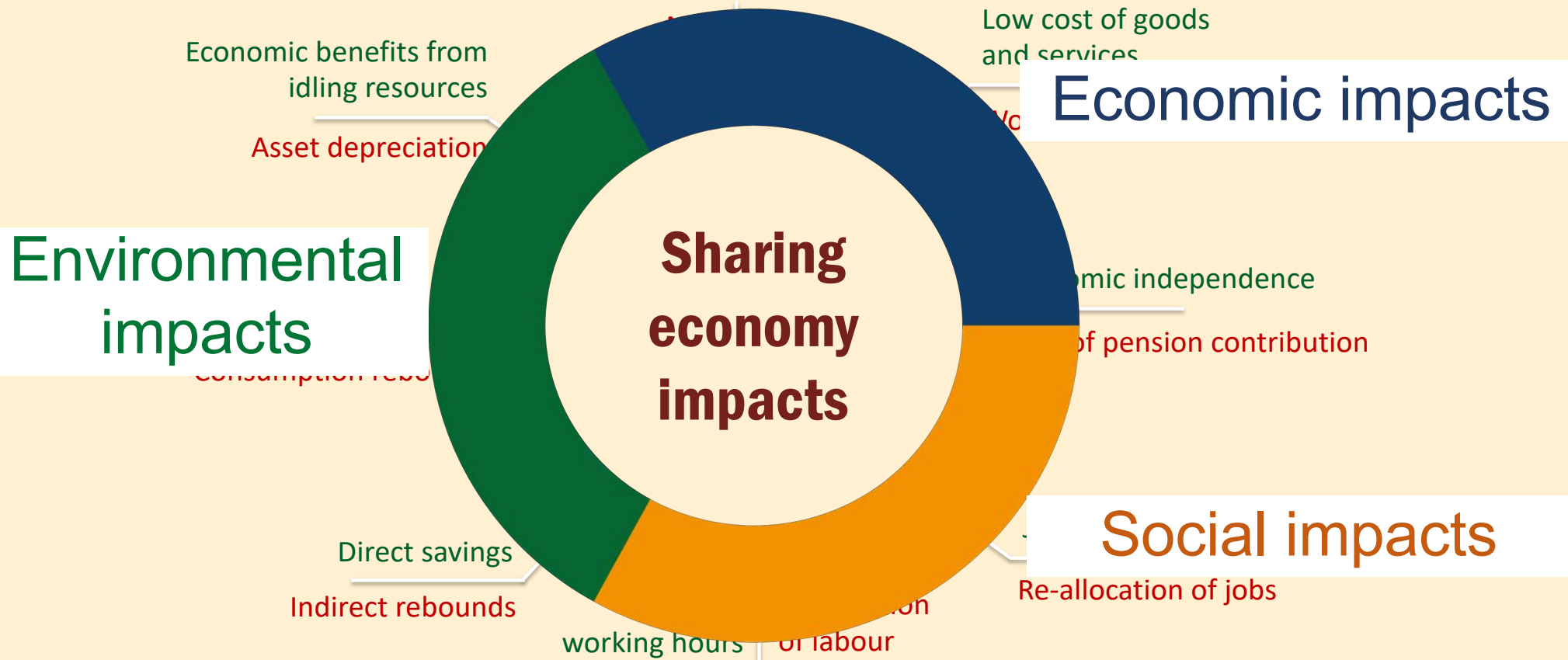
1:56 PM ET Fri, 16 Oct 2015

First comes China. Could Japan be a draw for e-hailing enabled companies?

# IMPLICATIONS OF SHARING ECONOMY



# IMPLICATIONS OF SHARING ECONOMY



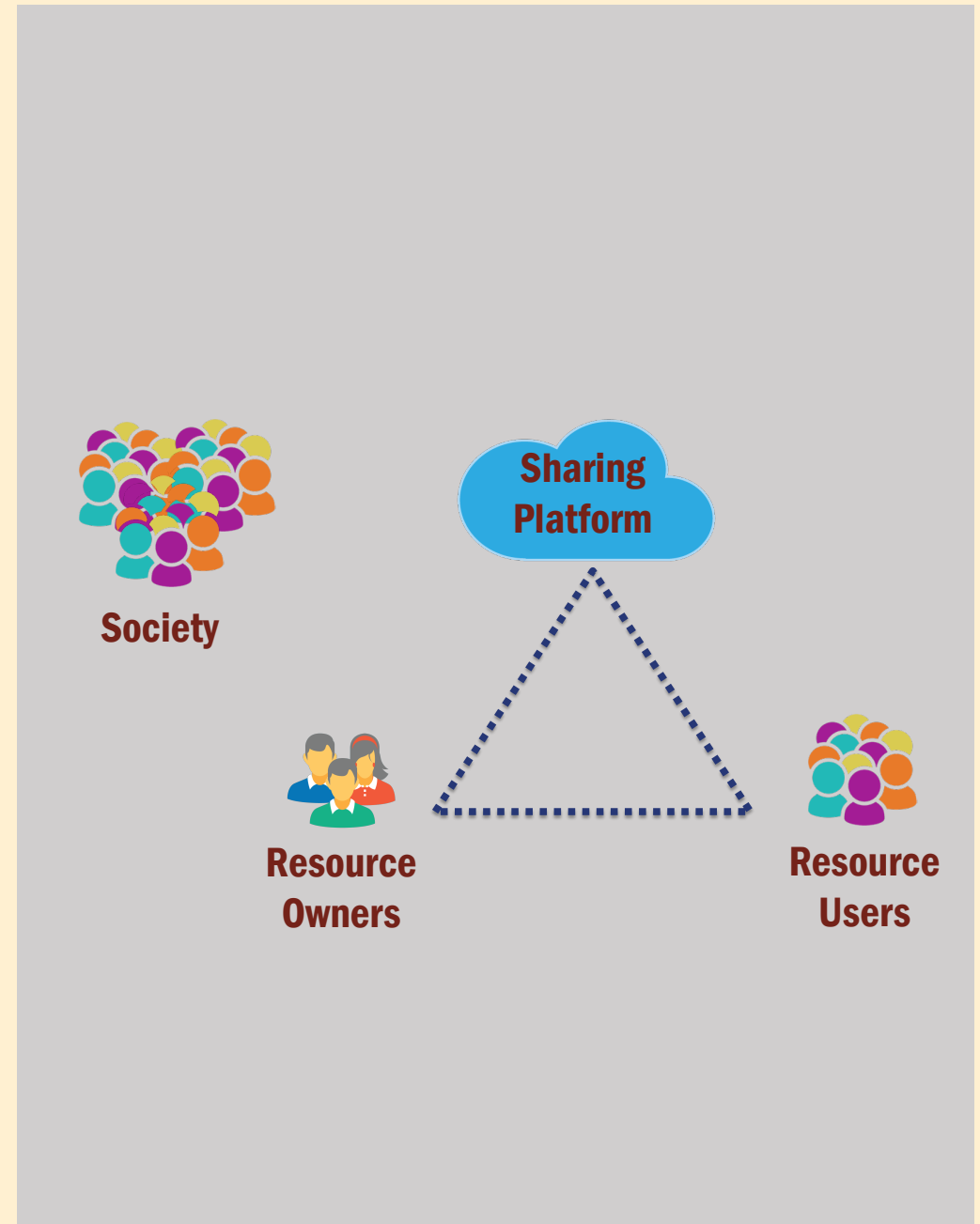
# CONCEPTUAL DEVELOPMENT





# APPROACH

Sharing as a practice



# SUSTAINABILITY IMPACTS OF SHARING ECONOMY AT A MACRO-LEVEL



# ASSESSING THE IMPACTS AT A MACRO LEVEL

- We will develop a **hybrid life-cycle assessment model** (input and output based)
- The **unit of analysis** is going to be a city, but using this model global impacts can be analysed
- **Bottom-up approach** in order to build the data sets

# UNIT OF ANALYSIS



# IMPLICATIONS OF SHARING ECONOMY

## Macro-economic level

(Indirect and rebound effects)

## Organisational level

(Direct impacts)

### Assessment approaches

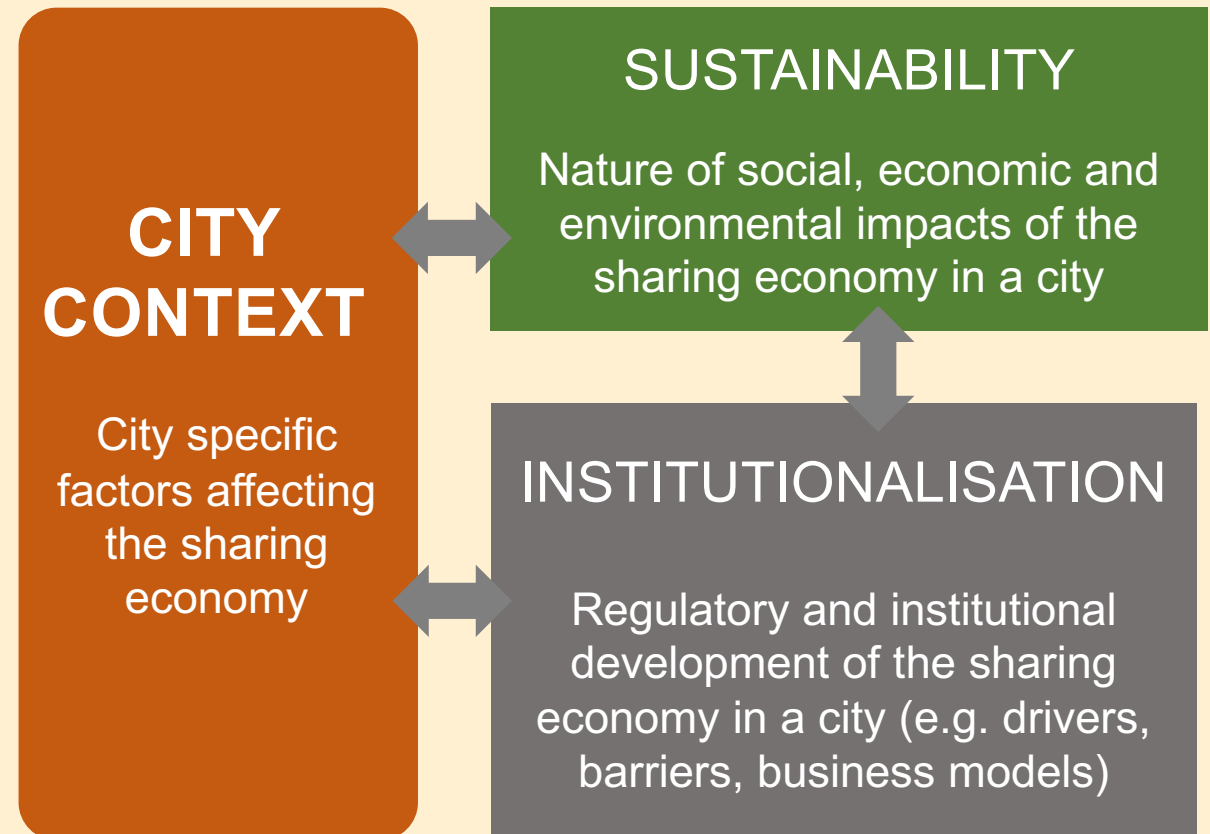
- Narrow focus on SEO and direct impacts:
  - LCA,
  - bottom-up case data
- Wider focus, direct and indirect impacts of SEO being part of city economy:
  - hybrid I/O-LCA, top-down and bottom-up data
  - scaling up from platform case to sector



# CITY CONTEXT

## To understand:

- the role of cities in driving the sharing practices
- the nature of their sustainability implications in cities



# CITY CONTEXT

To compare different cities with the same lens



Amsterdam



Toronto



Shanghai



Seoul



Melbourne



# 3. CITY CONTEXT



## 1. Governance

- a. City governance structure
- b. City regulatory policies for sharing
- c. Power to enforce regulations

## 2. Geography & demographics

- a. Topography
- b. Level of urban sprawl
- c. Tourism in the city
- d. Socio-demographics

## 3. Economy

- a. GDP of the city
- b. Economic structure of the city

## 4. Infrastructure

- a. Technology readiness
- b. Mobility infrastructure
- c. Accommodation
- d. Physical assets

## 5. Innovation

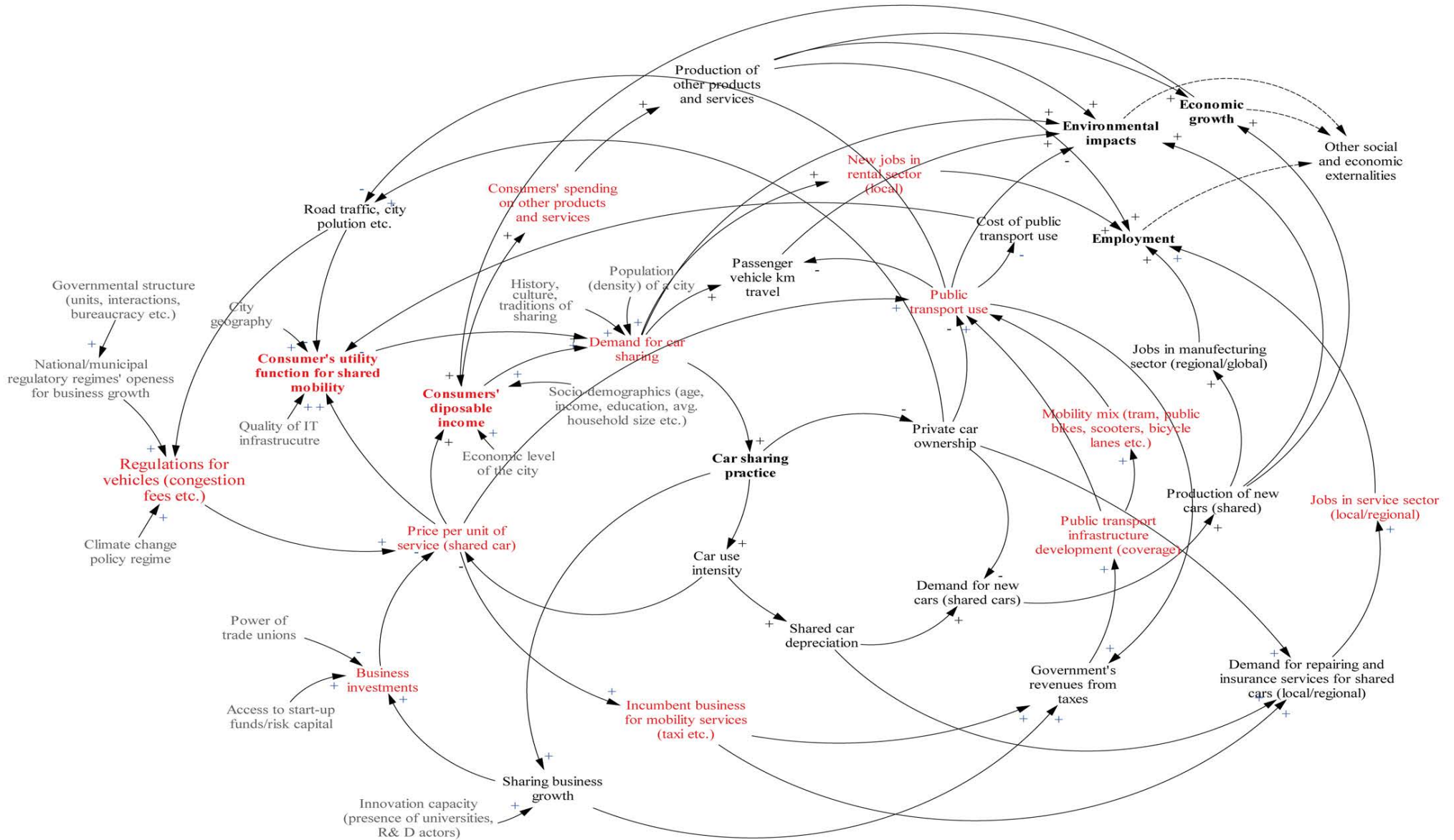
- a. Innovation cities index
- b. City's innovation agenda

## 6. Socio-cultural conditions

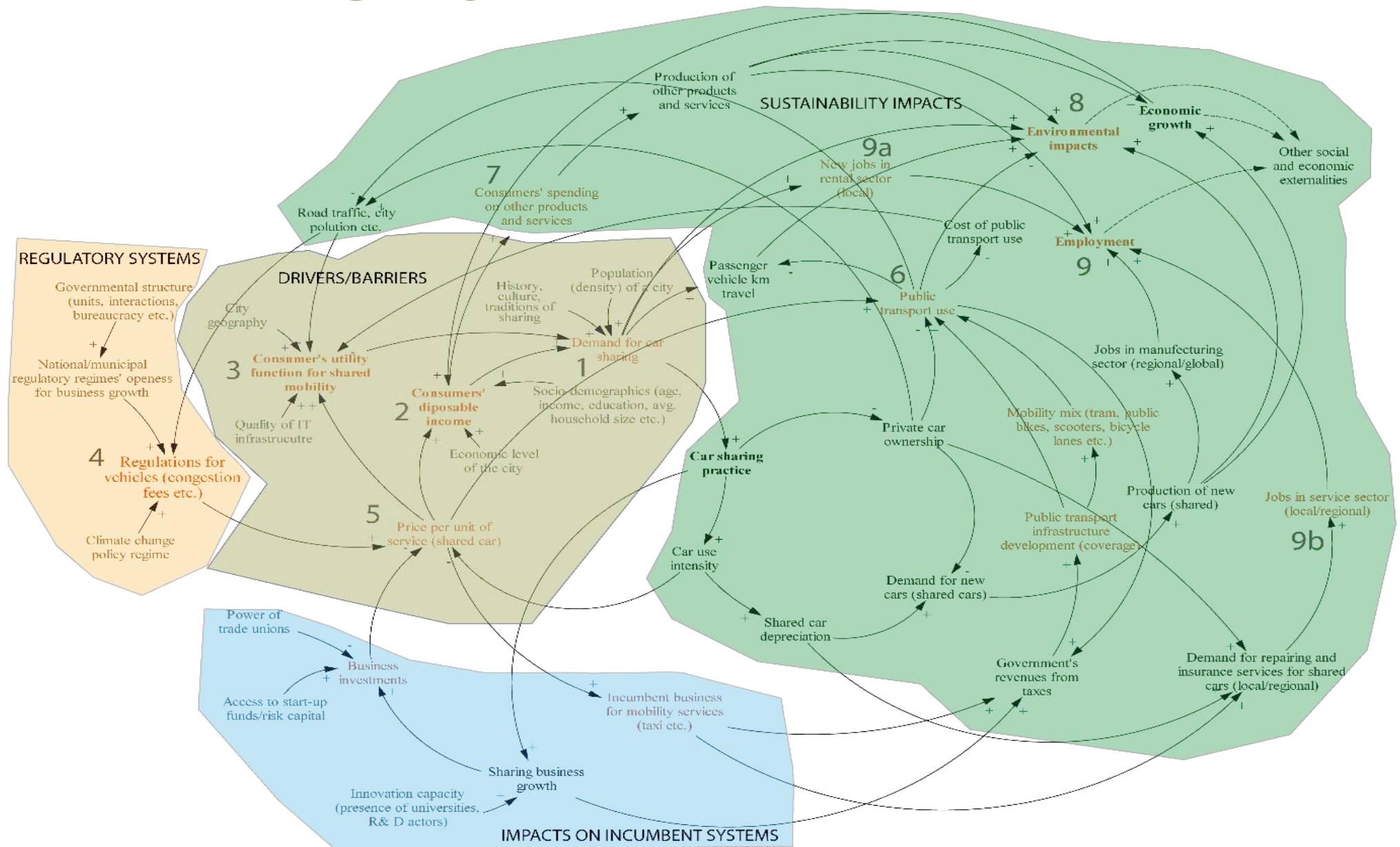
6 dimensions of Hofstede's Cultural Theory model: Power distance, Individualism, Masculinity, Uncertainty avoidance, Long term orientation, Indulgence



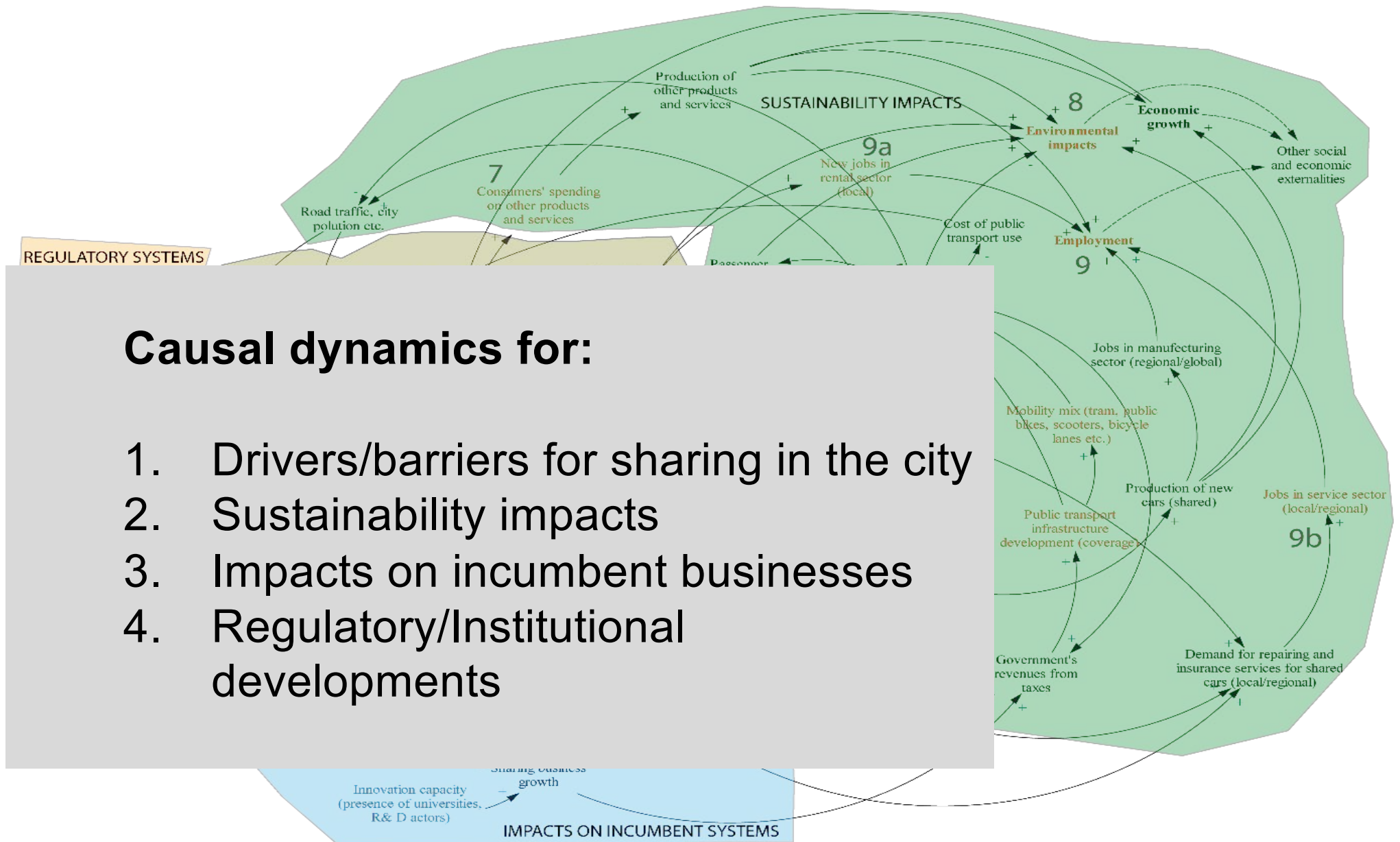
# Sharing dynamics



# Sharing dynamics



# (3) KEY CAUSAL DYNAMICS



# INDICATORS FOR SOCIAL SUSTAINABILITY IN SHARING ECONOMY



A systematic framework to measure the social impacts of sustainability

# LITERATURE ON SOCIAL IMPACT EVALUATION

- Continuous economic growth
- Job provisioning
- Reduces income inequalities
- Empowerment
- Trust
- Social capita
- Open and Inclusive
- Democratic



- Public safety
- Individual privacy
- Labour laws
- Precarious employment
- Unequal gain distribution
- Social exclusion
- Limited liabilities



# SOCIAL SUSTAINABILITY ASPECTS

- Distinct and least overlapping

1. Empowerment
2. Trust among strangers
3. Inclusivity
4. Social justice



# STAKEHOLDER WORKSHOP

## INDICATORS FOR SOCIAL IMPACTS

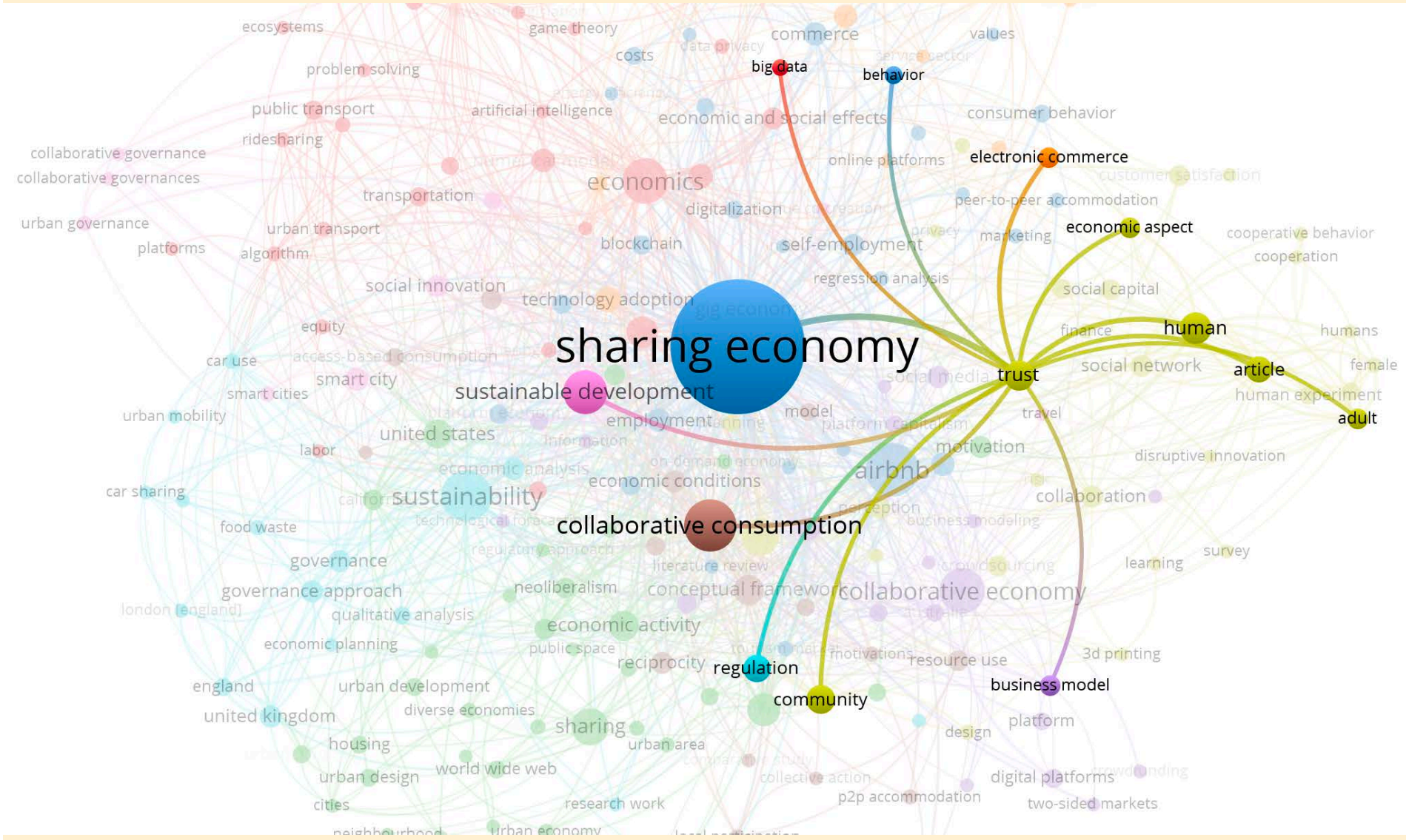


# COMPUTER-ASSISTED TEXT ANALYSIS

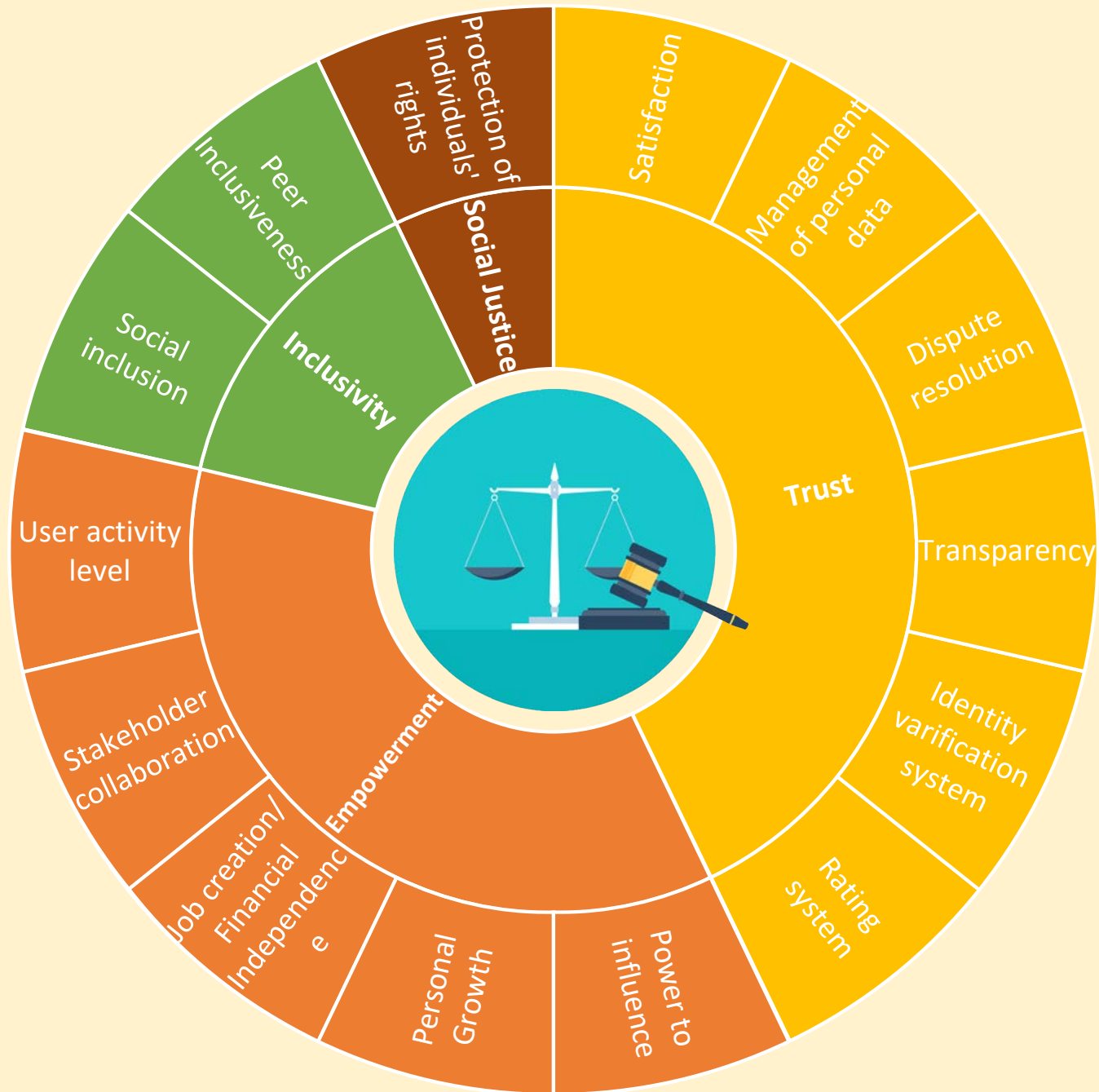
1	Adoption	26	<i>Digital inequality</i>
2	Belonging	27	<i>Governance</i>
3	Collective efficacy	28	<i>Deregulation</i>
4	Community	29	<i>Community governance</i>
5	Conflict	30	<i>Public Power</i>
6	Cooperation	31	<i>Economic Opportunity</i>
7	Cultural capital	32	<i>Sustainable Society</i>
8	Empowerment	33	<i>Sharing for Community</i>
9	Gig labor	34	<i>Sharing for Charity</i>
10	Inclusivity	35	<i>Casual Socialbility</i>
11	Inequality	36	<i>Social Capital</i>
12	Interests	37	<i>Cultural Capital</i>
13	Justice	38	<i>Cosmopolitan Capital</i>
14	Marginal population	39	<i>Financial Democracy</i>
15	Motive	40	<i>Financial Inclusivity</i>
16	Openness	41	<i>Human rights</i>
17	Participation	42	<i>Sociality</i>
18	Power structure	43	<i>Reciprocity</i>
20	Regulation	44	<i>Civic engagement</i>
21	Satisfaction	45	<i>Democratic legitimacy</i>
22	Self-expression	46	<i>E-governance</i>
23	Social cohesion	47	<i>Motivations</i>
24	Social commerce	48	<i>Employment</i>
25	Trust	49	<i>Convenience</i>







# INDICATORS



# PUBLICATIONS

- Plepys, A. and Singh, J. 2019. Challenges and research needs in evaluating sustainability impacts of sharing economy using input- output analysis. Chapter in A Research Agenda for Sustainable Consumption Governance edited by Mont, Oksana. Edward Elgar Publishing; ISBN: 978 1 78811 780 7 <https://www.elgar.com/shop/a-research-agenda-for-sustainable-consumption-governance>
- Palgan V. Y., McCormick, K., Leire C., Singh, J. 2019. Mobile Lab on Sharing in Malmö. IIIIEE, Lund.
- Fjellander, L., Plepys, A., Harris, S., Ljungkvist-Nordin, H., Mata, E. Matschke-Ekholm, H., Katzeff, C., Börjesson-Rivera, M. (2019). Delningens potential (in Swedish: Sharing potential). IVL: 114. Project report: Re:Source project nr. 45295-1.
- Laurenti, R., Singh, J., Toni, M., Cotrim, J., Sinha, R. 2019. Sharing economy state of research: a systematic mapping. Journal of Industrial Ecology (under review)
- Plepys, A. 2018. Factors facilitating the upscaling of sharing in Sweden. IVL/LU/KTH, working paper nr. 371. RE:source programme.



# THANK YOU!



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[www.urbansharing.org/](http://www.urbansharing.org/)



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