

Exploring determinants of open data re-use for public services in Berlin

Basanta Thapa

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Ragnar Nurkse Department of Innovation and Governance

Tallinn University of Technology

Open Government Data myth: „If you build it, they will come“

- Focus on supply side of OGD
- Promised benefits: Economic, democratic, service innovation
- Now: 2600+ open data portals worldwide
- OGD re-use modest
- „We have an open data portal, now how do we get the benefits?“
- Refocus on user side
 - UK announced “Government Developer Engagement Strategy”
 - Berlin undersecretary desperate for open data impact

Research questions

- “little is known about the conversion of public data into services of public value” (Janssen et al. 2012)
- Research at an early stage: exploratory, no theories
- *What types of open data users can be distinguished?*
- *What factors determine the engagement of open data users?*
- *What are the motivations of open data users?*

Open Data Berlin – a mixed bag

- data supply
 - 2011 first open data portal in German-speaking countries
 - 1200+ datasets
- re-user pool
 - lively media and civil society scene (including OKF Germany)
 - OGD scene “committed, very diverse, and of international appeal” (Seibel 2016)
- talent pool
 - 80 computer science degree programs
 - 7th in Global Startup Ecosystem Report 2017
- Apps: 48 (many derelict) vs. 237 in Vienna
- Quango report identifies about 20 business uses of open data
- Regular hackathons



Berlin Open Data: App landscape

- mostly public transportation apps and visualization of statistical data
- few crowdsourcing apps (Wheelmap & Kiezatlas)
- mostly by open data hackers and output of hackathons

At least three apps that produce „public service“ beyond data viz:

- *Kindergarten-Suche* (search for kindergartens)
- *Bürger baut Stadt* (info and alarms for construction projects)
- *Intelligent Zoning Engine* (optimize school districts; for PA)

Berlin Open Data: User types

1. open data activists
2. third sector organisations (non-open data)
3. developers & data scientists showcasing
4. companies (e.g. freemium services)

Extant Literature: Open Data User Motivation

Is the Public Motivated to Engage in Open Data Innovation?

Gustaf Juell-Skielse, Anders Hjalmarsson, Paul Johannesson, Daniel Rudmark

Citizen involvement in public sector innovation: Government and citizen perspectives

Basanta E.P. Thapa^{a,*}, Björn Niehaves^b, Claudius E. Seidel^c and Ralf Plattfaute^d

Why engage in co-production of public services? Mixing theory and empirical evidence

Carola Van Eijk and Trui Steen

Leiden University, The Netherlands

Juell-Skielse et al. 2014

Motivation	Avg.	Dev.	Type
Fun and Enjoyment	6,8	0,6	Intrinsic
Intellectual Challenge	6,3	1,2	Intrinsic
Status and Reputation	6,0	1,4	Intrinsic
User Need	5,8	1,6	Extrinsic
Professional and Personal Identity	5,5	1,8	Intrinsic
Autonomy	5,3	1,8	Intrinsic
Learning and Skills Development	4,9	2,0	Extrinsic
Money	4,9	1,8	Extrinsic
Reciprocity	4,7	1,9	Both
Signaling and Career Concerns	4,3	2,2	Extrinsic

Extant Literature: Drivers and Barriers

**Critical Factors for Open Data Publication and Use:
A Comparison of City-level, Regional, and
Transnational Cases**

Iryna Susha*, Anneke Zuiderwijk**, Yannis Charalabidis***,
Peter Parycek****, Marijn Janssen**

OPEN DATA IMPACT
WHEN DEMAND AND SUPPLY MEET

Key Findings of the Open Data Impact Case Studies

By Stefaan Verhulst and Andrew Young*

**Open Data as Enabler of Public Service Co-creation:
Exploring the Drivers and Barriers**

Maarja Toots, Keegan McBride, Tarmo Kalvet, Robert Krimmer

Barriers	Drivers
Data and technology	
B.DT1 – Lack of availability of open data	D.DT1 - Availability of open data
B.DT2 - Lack of data quality, fragmentation of datasets	D.DT2 - Provision of high-quality easy-to-use datasets, provision of datasets of key importance
B.DT3 - Messy data formats and lack of metadata	D.DT3 - Harmonization of data and metadata
B.DT4 - Missing infrastructure to support open data	D.DT4 - Open Data Portal
Stakeholders (perceptions, attitudes, culture)	
B.S1 - Political environment	D.S1 - Citizen demand and visionary policy-makers
B.S2 – Lack of awareness of open data and benefits	D.S2 - Awareness of open data and benefits
B.S3 - Technological skillset missing	D.S3 - Training and skills development
B.S4 - Requires trust and participation	D.S4 - Participation
Organizations	
B.O1 - Existing business models	D.O1 - Development of new business models
B.O2 - Missing innovation orientation in public sector	D.O2 - Presence of innovative orientation in public sector
B.O3 - Incompatible organizational processes	D.O3 - New organizational processes required
Legislation and policies	
B.LP1 – Legislation on data sharing and licenses	D.LP1 - Legislation on data sharing and licenses
B.LP2 - Limited legal obligation to publish open government data	D.LP2 - Strengthening legal obligations to publish government data as open data by default
B.LP3 - Privacy and security concerns	D.LP3 - Increases transparency and accountability

(Toots et al. 2017)

Proposition of a „perfect storm“ for coproduced open data services

- “This ‘perfect storm’ consisted of having **external funding**, **motivated stakeholders**, **innovative leaders**, **proper communication channels**, an existing **OGD portal**, and **developing the model in an agile way** that accepted the fact that mistakes would be made throughout development.” (McBride et al. 2018)

Survey of the Berlin open data ecosystem

- web survey, disseminated via email & Twitter
- open questions first, directed questions later

Respondents:

- open data intermediaries (e.g. OKF, Technologiestiftung Berlin, Stiftung Neue Verantwortung, hackathon organisers)
- open data developers (via app list on open data portal)
- hackathon participants
 - opportunity to ask for open data re-use that did not happen

Areas of inquiry

- ask for factors from Toots et al. 2017 and beyond
- ask for motivation of open data developers (~30) and hackathon participants
- ask for role of hackathons, contests, and intermediaries

Analysis

- qualitative content analysis of survey results:
directed content analysis (Hsieh & Shannon 2005)
- cluster analysis
 - What different types of open data service co-producers are there?
 - How do their motivations differ?
 - How do their drivers and barriers differ?

Results / Contribution

- furthering research on factors & motivations of open data re-use
- bringing together types of open data users, motivations and drivers & barriers
- test the „perfect storm“
- provide tentative policy recommendations

Next steps

- derive items from existing literature
- build survey
- test survey

Contact

Basanta E.P. Thapa, MA
Doctoral Researcher

DFG Research Training Group „Wicked Problems, Contested Administrations“
Faculty of Economic and Social Sciences
University of Potsdam

thapa@uni-potsdam.de

www.wipcad-potsdam.de