

Open government – open for business?

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Open
Government
Partnership

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Abstract

Many activities related to opening government have a demonstrated, empirical potential to create business value, foster broader economic opportunities, and promote a business climate for growth and dynamism. What's more, opening government plays a highly relevant, if not essential, role for economic stewardship and for putting economies on sustainable, inclusive trajectories of good growth. These are the central insights from this scan of the empirical literature on the economic and business dimension of open government. More specifically, opening government is found to have created sizeable business opportunities, innovation impetus, and to a somewhat lesser extent, new jobs—particularly in the area of open data. A growing body of empirical evidence also suggests that opening government has helped countries attract investments and capital, boost trade, reduce red tape, and remove barriers to market entry, all pointing towards an enhanced business and investment climate. At least equally important, there is compelling evidence that opening government supports good growth by enabling the containment of some of the major negative side effects of economic growth, by improving the targeting and efficacy of inclusive economic policies and benefits schemes, and by making it easier for businesses to live up to some of their fundamental societal responsibilities. Overall, the research landscape on opening government and business and economy nexus is still rather fragmented, and there are many promising, feasible, and much-needed avenues for future investigations in this fast-moving area.

Rationale

This synthesis paper seeks to review the state of empirical evidence with regard to the principal question of how open government interlinks with business and broader economic opportunities. It is based on the idea that the business case for open government is not as well-understood and visibly established as other productive and beneficial impacts of open government. More specifically, the guiding brief for the paper sets out the following questions to be addressed in a maximum of 15 pages:

- Does opening government lead to better investment climates and/or better economic growth?
- How have open government reforms helped the private sector engage more effectively with government?

Approach

The paper is based on an extensive review of the related policy and academic literature, covering several disciplines including business and economics, political science, international relations, development studies, sociology, organizational and information science, technology studies, as well as the grey literature of policy and industry reports to the extent that they contain sound empirical analysis. Altogether more than 200 papers and reports have been scanned, 40% of which had a focus on quantitative evidence, while 30% were more qualitative in nature. The remaining 30% turned out to be papers that were more conceptual or speculative in nature but did not contain any significant empirical evidence. The following sections profile studies that have established a positive impact of open government with regard to the research questions in sound, empirical ways. It should be noted that there are also some empirical investigations that failed to detect significant positive impact, highlighting once again the long-standing empirical lesson from both governance and technology studies that there is no magic bullet tool or approach that can claim universal efficacy. Impact is always contextual and contingent upon a varying set of



intervening variables. Yet the studies included here convincingly support the idea that positive impacts have been achieved and are feasible, even in less-than-favourable conditions.

This scan has also included working paper repositories and conference proceedings, in order to also capture more recent studies that have not gone through the typical protracted publishing process. However, to preview one finding, it was rather surprising to find that the policy popularity of the open government/open data thematic has not translated yet into a strong pipeline of empirical, as opposed to conceptual, academic work that would seek to thoroughly assess the economic and business impact of open government. There are very few submissions to key academic conferences in business, finance, economics, and political science that speak to these questions, pointing to a great potential for future research opportunities in this area.

Relevant country-level case studies and empirical insights were also identified by scanning the detailed source materials used in the scoring (impact category) of more than 100 countries for the 2016 Open Data Barometer. The literature review was further complemented by a small set of conversations with business stakeholders drawn from personal contacts unrelated to open government networks, in order to provide some additional context, and explore how the open government potential for business is perceived by business representatives who are not directly involved in these efforts.

Definitions and delineations

For the purpose of the study, “*opening government*” is defined as comprising of all activities that promote one or several of the four Open Government Partnership (OGP) value clusters used to assess the relevance of commitments made in national action plans.¹ This means the following four clusters delineate the scope of the inquiry:

1. Access to information: activities that pertain to making government-held data and broader government information categories publicly available and/or more accessible (e.g. strengthening access to information rights and their enforcement, lowering access costs, expanding formats, channels);
2. Civic participation: activities that enhance formal public or broader civic participation (e.g. opening up decision making, expanding public participation throughout the policy cycle, strengthening essential freedoms of expression, assembly, press, expanding plebiscitary elements);
3. Public accountability: activities that focus on rules, regulations and mechanisms that make it easier and more effective for citizens to assert their rights and hold government effectively to account for its (non)performance (e.g. improving access to justice, strengthening public scrutiny and complaints/appeals, public audit, appeals procedures identify); and
4. Technology and innovation for openness and accountability: activities that promote the development, access to and use of new technologies that foster openness, civic participation, and public accountability.

Two important filters common to all these four clusters, and thus also taken into account for this analysis, are the requirements that:

1. Relevant activities contain a public-facing dimension (e.g. internal reforms to strengthen intra-organizational oversight is not sufficient); and



2. Relevant technology-centered innovations are not just about efficiency improvements, but also come with public openness, participatory, or public accountability qualities (e.g. introducing online business registration only qualifies if it also raises the public accessibility of related information).

The relevant dependent variables as prescribed by the research terms of reference are operationalized as follows:

“*Economic growth*” is interpreted not only as narrowly adhering to economic valuations within the frame of Gross Domestic Product (GDP) or national accounts. Instead, a larger set of direct and proximate indicators identified in the literature is used. These indicators that help to illuminate impacts on economic growth parameters more broadly include business opportunities in the form of revenue or market capitalization of firms/subsectors, whose business model directly or indirectly relate to opening government activities: related employment growth and innovative dynamism.

How open government impacts *investment climate* is examined by searching for studies that explore open government in the context of a set of parameters commonly understood to be either conducive for doing business or to directly reflect more intensive business activity. These parameters serve as proxies for business appeal and include attracting investment and capital, boosting trade, reducing red tape (again as long as it also enhances public information, participation, or accountability), facilitating ease-of-market entry, and non-discriminatory market access.

The emphasis put in the ToR on *better* growth is operationalized by paying specific attention to how opening government is empirically linked to:

- Promoting pro-poor growth and inclusive economic activity, including broader access to partaking in public procurement opportunities, making economic subsidy and policy schemes more pro-poor and improving the efficacy of economic benefit schemes;
- Helping contain major side effects of economic growth (economic growth externalities), such as environmental pollution and degradation; and,
- Supporting business in realizing central obligations of good corporate citizenship (e.g. compliance with applicable laws and regulations).

In order to keep the analysis manageable within 15 pages and focused on the business and economic dimension of open government, the scope of the inquiry is delineated by:

- A focus on the immediate business environment, not broader contextual factors such as health and education, since the relation between these two areas and open government are subject to extensive research already, and would bring a huge amount of additional literature into the analysis that is best discussed separately;
- A focus strictly on business and economic impacts of opening government interventions that is the impact of electronic procurement as sizeable cluster of OGP activities is only considered as it affects businesses or the broader business environment, not the general efficiency of public procurement;
- A focus on side effects (externalities) directly linked to economic production such as pollution, since casting a wider net to include social or political externalities would again lead into different and extensive open government impact literatures; and
- A focus on empirical insights. The paper will not report back on the myriad of contributions to the topic that have been collected but were found to simply be



conceptual or speculative in nature without presenting any sound empirical evidence to support their conjectures.

Organization

These three thematic areas of *new business opportunities*, *conducive investment climate*, and *better growth* provide the overall structure for the enquiry. All relevant findings are sorted into these three categories, starting with the available big-picture correlations between aspects of government openness and business/economic outcomes of interest, and then moving towards more granular evidence, sectoral studies and well-researched case studies of opening activities and the economic and business they produce.

The following exhibit illustrates this approach.



Exhibit 1: Overview

Any impacts of open government on how businesses and governments interact is treated as a cross-cutting question and woven into these three clusters. These three sections are preceded by an introduction that highlights how business, markets, and open government have been closely intertwined for much longer than typically imagined. The final section concludes with a discussion on research gaps and future opportunities.

Introduction: open government and business—a recent, rather complicated love affair

At first sight, the notions of governmental openness and business opportunities don't seem to go together very well. Ideas of openness, public interest, and democracy do not appear to mesh with notions of commercial secrecy, individual profit, and proprietary data assets.

It is thus tempting to view a more symbiotic relationship between business, economic opportunity, and opening government as a rather recent phenomenon and thus also as a still rather uneasy alliance, fuelled by the arrival of technological capabilities for collecting and harnessing data, for improving public services, and for re-designing government that were almost completely unimaginable only 25 years ago.



Yet, transparency, opening government, and economic opportunity have a much longer common history. They have been more closely and more productively interwoven than meets the eye. Here are some examples:

- Progressive companies played an instrumental role in advancing the early transparency and open data agenda in the US in the mid-20th century, forging ahead with nutritional labelling and consumer transparency. Thus, this paved the way for a broader push towards openness and the landmark 1966-67 US Freedom of Information Act even before civil society started to significantly organize around these issues²;
- The existence of the modern corporation itself for which ownership, financing, and control are often exercised by different parties is predicated on a set of extensive governance and disclosure standards mandated, policed, and often co-produced by regulatory authorities³;
- Similarly, untreated information asymmetries are one of the biggest obstacles to establishing competitive, well-functioning markets; in response, extensive information collection and disclosure obligations have been established and are continuously being expanded for both market participants and their public overseers in order to make markets work⁴;
- More recently, in the 1990s, businesses were among the biggest advocates in early efforts to broaden access to public sector information in the hope that this might level the playing field vis-à-vis state-owned enterprises or large private companies with proprietary information⁵; and
- at present, it is businesses, not citizens or civil society groups, that by a large margin appear to be the more avid users of Freedom of Information requests in the US,⁶ as well as of e-government across Europe and the frequently more transparent and information-rich services it affords.⁷

Common to this long history of public-private openness is the recognition that transparency is a basic prerequisite for the very trust, legitimacy, and informed choice that makes not only ever more globalized value chains, but even more fundamentally, makes companies and markets themselves dynamic, innovative, and efficient. This essential catalyzing role for targeted openness—shining the light on specific properties of markets, products actors, or interventions—has often been learned the hard way in the aftermath of economic crises. It has been cultivated and refined over decades, prominently recognized and empirically documented in economic scholarship, and thus provides the important backdrop for an assessment of how the recent wave of open government efforts translates into new economic opportunities.

Making this point is not quaint historical nit-picking. It compels us to treat open government and business opportunity not as a novel niche dynamic likely to fluctuate with the technology hype-cycle, but as natural complements, as the default way of looking at and acting upon this relationship in the policy arena.



A. Opening government: unlocking fresh opportunities for business and economic growth

Direct business and broader economic opportunities from opening government are so far most evident with regard to the value and use of certain categories of open data. The business dimension of and engagement by businesses in other central activity areas, for example in relation to a wide range of social accountability mechanisms, awaits to be researched in more depth.⁸ The analysis in this area will thus be developed around the following subthemes related to open data:

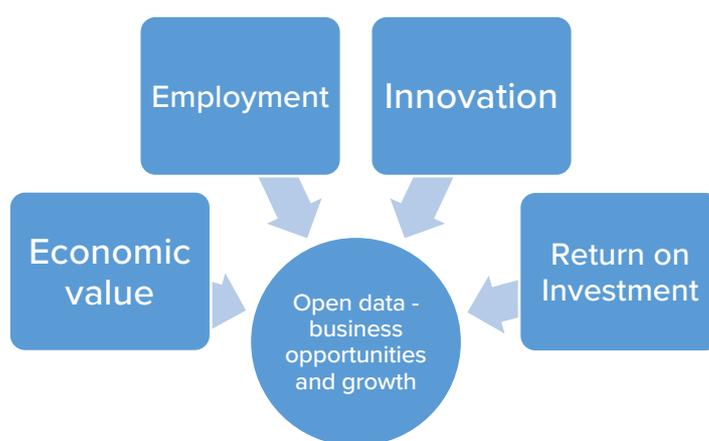


Exhibit 2: Open government for business opportunities and economic growth

The multiple impacts of open data

In line with OGP's criteria for assessing relevance, I conceptualize open data very broadly to comprise all government-held information. Data directly related to holding government accountable, such as political finance data or fiscal information is of particular relevance to open government and will receive particular attention. However, the broader, OGP-endorsed scope of *all government-held information* is a relevant component of opening government and thus part of this analysis, since this definition also covers:

- Many types of data that speak to the outcomes and efficacy of government policies and action (e.g. pollution, crime, health, census data); and
- data that also counts as accountability information insofar as it gives the opportunity to judge governmental performance with regard to its various vital public information functions (i.e. with regard to maintaining accurate and accessible land registries and educating citizens on health hazards).

Open data-related initiatives that cover both core accountability and broader government data account for a sizeable 16% of all OGP commitments (12% of reviewed ones). The immense economic opportunities that attach to many types of open data can be inferred from several perspectives.

The growing recognition and growing mainstreaming of some open data classes

Surveys among business practitioners consistently show that open data in its expansive definition, as all government-held information, has become an integrated and important



element of business models and strategies across sectors. In a 2013 survey of more than 300 senior business executives, close to half of all respondents considered open data important to their strategic decisions, making this the second most important data source for business strategy just behind syndicated third party data. A remarkable 70% of respondents indicated that their companies already analyze open data.⁹ Similarly, a 2014 survey carried out among more than 80 selected companies in the UK found that for close to three quarters of respondents, open data originating from governments is the open data category most important to them.¹⁰ Open data classes of particular importance to business users in developing countries are primarily in the area of business intelligence and market analysis. More than half of business representatives in a focus group in Sierra Leone, for example, regarded the national company register as their most important government data source, followed by demographic data and economic statistics (21% and 18% respectively).¹¹

Open data is widely considered as an important base for and powerful driver of many commercial information services. Even in the early 2000s, with fewer open data initiatives under way, it was estimated that already up to a quarter of information products and services were based on public sector information,¹² thus fuelling the growth of a commercial data sector in Europe that by 2016 had grown to an estimated worth of EUR 300 billion and 6.16 million people in employment.¹³ Public sector information is not only enriching consumer-facing services, but used across business operations. A survey in the UK shows that even in 2006, when open data practices and tools were still somewhat nascent, public sector data was already used by 28% of companies for consumer products, by 44% for industry products, and by 39% for their own business purposes.¹⁴

Usage numbers corroborate these trends for some data categories. Open census data in the US, for example, was downloaded more than 217 million times in 2014,¹⁵ free US weather data finds its way into 15 million weather information products.¹⁶

1. A significant and growing size of the overall economic opportunities

Empirical estimates of open data market size (in terms of economic value), employment footprint (the number of jobs directly or indirectly related to open data), and of the scale and scope of actual data usage provide complementary perspectives on the economic value of the sector. Considering that there has been a long-standing policy debate on the re-use of public sector information that predates the current open government movement, this is also one of the most-analyzed areas. Unfortunately, there is no consistent uniform approach for defining and measuring the relevant parameters. Economic activity related to open data cuts across established statistical classifications. Definitions of base concepts such as public sector information or attributable first and second order effects vary, as well as the selected measurement approaches, geographical scope, and time horizons. The result is an empirical landscape that offers a wide range of estimates that upon closer inspection, however, are squarely consistent with each other and reflect the diversity of concepts, scope, and approaches at play. The following account of some of the major estimates does not seek to impose an elusive order on what are numbers that are not directly comparable and cannot even be slotted into a consistent taxonomy, but confines itself to carefully using the very terms and definitions that each cited study uses and flag some overarching trends in conclusion.

Early estimates in 2000 for what was then the 15 core European Union countries put the annual economic value of re-using public sector information at close to EUR 70 billion and



even more impressively, the same study valued information markets largely based on public sector information re-use in the US at EUR 750 billion.¹⁷

Adapting a more narrow focus and applying two different methodologies that turn out to produce similar results, a comprehensive study in 2006 valued the market for public sector information in the EU25 (plus Norway) at a mean of EUR 27 billion or 0.25% of GDP.¹⁸ This estimate was squarely confirmed by a 2011 study which also calculated the broader economic impact—here also including the value add of PSI for end-users—at EUR 40 billion for the then-EU27 countries. Most importantly the study also indicated that this value could have been much higher and would have reached EUR 200 billion in 2008 and thus 1.7% of GDP if a more progressive regime of openness had been instituted.¹⁹ This considerable value boost through opening up public sector information was also confirmed by a set of detailed case studies that found the number of data re-users increased by a factor of between 10 and 100 when public sector entities moved to low or zero-cost pricing for their data holdings.²⁰ The most recent estimates at the EU-level value the open data market size for the EU28+ countries at EUR 55 billion, and anticipate strong growth to reach a value of EUR 75 billion by 2020.²¹

The global picture of open data looks equally promising. Assessing seven sectors in which open data plays a key role, a 2013 industry report estimated open data to unlock more than USD 3 trillion globally of additional value in these domains.²² Applying a similar methodology across a wider range of sectors led a 2014 study to estimate the average economic value-add of open data for the G20 countries alone at around USD 2.6 trillion or USD 13 trillion cumulatively over five years. The study thus concluded that a committed move towards open data could help G20 countries realize half of their envisioned economic growth targets.²³

Country, case, and sectoral evidence: some star performers point the way

One level down from the big regional and global picture, a plethora of studies provide further evidence for the significant economic opportunities that come with open data. Here are some of the most pertinent and recent examples: For the US, the upper-bound estimate for the annual revenue of firms that *rely on using government data* is put at USD 221 billion.²⁴ For the UK, a widely quoted study looks at *direct and indirect annual economic benefits* from open data both on the business and consumer side and estimates them to amount to GBP 1.8 billion.²⁵ For Spain, a periodic measurement exercise opts to focus on a so-called “infomediary sector,” companies built on re-using public sector information. In its latest iteration, it counts more than 630 companies in this area that post an aggregate turnover of EUR 1.7 billion in 2015.²⁶ Adopting a broader perspective, Australia believes that its open government data can generate *overall annual economy-wide value* to up to 1.5 percent of GDP or AUD 25 billion.²⁷

Case studies of open data companies and business models provide further evidence for the economic opportunities involved. The World Bank, for example, profiles a set of open data unicorns, companies that have grown to be valued at more than USD 1 billion²⁸, while a host of sector scans highlight the growing number of open data firms active in domestic economies.²⁹

Open data valuations are particularly impressive for a set of specific sectors/ data classes. Open meteorological data in Denmark, for example, is estimated worth between DKK 50 and 135 million (EUR 5 million and 13,5 million respectively).³⁰ The geo-sector is typically regarded as a trailblazer. The gross value-add of the entire geospatial data and services



sector, including both public and private services is believed to approach USD 270 billion annually, which amounts to almost half of the value added by the global airline industry. This figure does not include indirect benefits such as savings in time (17 billion), fuel (5 billion), or education (13 billion).³¹ In Canada, open geospatial and Earth observation data create additional economic value of USD 700 million annually³²; in Denmark, open geodata is valued at DKK 3.5 billion,³³ and opening address data from the Building and Dwelling Register led to overall societal benefits—including both private and public sector benefits—of DKK 471 million for the period from 2005 to 2009.³⁴

2. Employment impact: sound, but not transformational

Estimates for open data-induced job growth closely track the variations in value estimates, given the underlying diversity of scope, attributable impact, and methodologies deployed. For the EU28 countries, up to 75,000 additional jobs are believed to have been created by 2016, and this number is projected to grow to up to 100,000 by 2020. These new jobs are directly linked to the re-use of open data in the private sector and exclude staff at statistical offices and other public employers.³⁵ This represents a sound accumulated growth rate of 30% in direct open data jobs over five years that would, however, account for a rather modest 0.044 % of the overall working population across the region in 2020. The picture looks somewhat different when factoring in indirect job creation through open data in the private sector, which is estimated to amount to a cumulative 377,000 jobs by 2020.

Similarly, for the US, the lower-bound estimate is that there are 90,000 open-data jobs in 2013 based on a short and incomplete list of firms that directly rely on government data, while upper-bound estimates of total jobs in a more broadly defined sector that are regarded as *government-data-intensive* would suggest around 900,000 jobs under the assumption that employment tracks revenues.³⁶

3. Open data and innovation: a close relationship in the making

The long-standing claim that open data spurs innovation is being gradually corroborated by evidence. Finnish companies that use open and big data have been found to be significantly more likely to produce new-to-market innovations than their peers who do not yet use open data.³⁷ Interviews with companies in Finland further suggest that open data is particularly beneficial for smaller firms.³⁸ In the UK, high-growth firms were much more likely to report that they collect and analyze open data than their more slowly-growing peers.³⁹ A survey on the impact of open geodata in Denmark also demonstrated the innovative dynamic of openness; a third of companies reported using the data to enhance existing products, 30% have new products in development or already launched, while a quarter changed internal business processes on basis of the data.⁴⁰

4. Value for money and return on investment (RoI): an impressive proof of concept

Even studies carried out before open data gathered momentum already noted very beneficial cost-to-benefit ratios. A study in 2000 found a seven-fold economic return on the estimated 10 billion costs of making public sector information available for the EU15 countries, while also estimating a more than 30-fold RoI in the US on investments of EUR 19 billion annually.⁴¹ Similarly, governments across the EU 28+ are, on average, forecasted to save EUR 1.7 billion through open data by 2020, a figure that is not a big surprise, given that the public sector is one of the most important re-users of its own data.⁴² Returns are even great for opening specific types of dataset. The open address register in Denmark, for



example, has been assessed to produce economic benefits that are 70 times greater than the applicable maintenance costs.⁴³ Weather data in the US is more than six times more valuable (USD 31 billion) than its production costs.⁴⁴ A notable performer in this regard is geospatial reference data. Opening up the UK's Ordnance survey is believed to turn a GBP 100 million investment into a 1000-fold economic value return of GBP 100 billion.⁴⁵

Summary, state of evidence: the business case for open data

Although estimates of the economic opportunities around open data vary widely depending on varying definitions and scope, they consistently point to:

- an already *sizeable current direct impact* of open data on economic value generation even for lower bound estimates; evidence is primarily concentrated for some blockbuster data classes, such as weather, geo-information, company and address registries, while evidence for economic impact of core public accountability information is rather limited;
- *significant multiplier effects* when factoring in indirect and second order economic impacts and a growing appreciation for the deeper penetration of data across all sectors of the economy and thus a persistent, widening discrepancy between the business-as-usual scenario and a more ambitious openness regime that would add considerably more value; and,
- a very positive forecast for an accelerated growth trajectory that has consistently been shifting even higher upwards over time and thus projects an ever more promising future for open data as economic stimulant for the years ahead, driven by new opportunities for data economies that were barely on the horizon even just ten years ago.

B. Opening government: nurturing a better investment climate

The following sections will unpack the relationship between open government and investment climate. The strategy is to break the inquiry down into smaller components, and then trace how opening up government relates to some plausible drivers or components of a good business environment. The selected categories are not clear-cut and somewhat overlap, but taken together provide a good sense of overall impacts and relevant dynamics in this area.

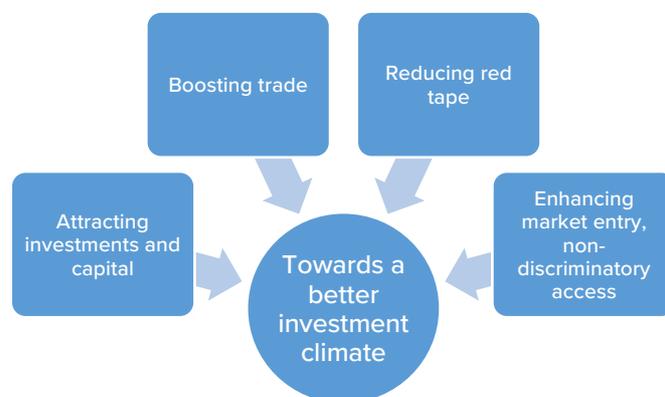


Exhibit 3: Open government for a better investment and business climate



1. Attracting investments and capital: proxies for investment climate

Indeed, the big picture looks promising. Taking foreign direct investment (FDI) as a proxy for investment climate, there are several studies that confirm a positive association. A cross-sectional analysis for 52 countries finds that a composite transparency index that also includes quality of governance attributes is significantly and positively associated with FDI inflows.¹ Similarly, another study on 40 countries traces a positive link between the level of transparency in a host country as perceived by business executives and FDI inflows.⁴⁶ More policy transparency measured by a composite index is also found to be positively related to higher levels of portfolio investments in emerging markets and to a lower inclination of such investments to be withdrawn in the case of crisis events.⁴⁷ Transparency in the form of more accurate and frequent disclosure of macro-economic data has been found to enable countries to borrow at lower costs, reducing credit spreads by an average of 11%, when such higher levels of transparency were instituted.⁴⁸ Likewise, open budgets are closely and positively associated with FDI inflows,⁴⁹ and the extent of fiscal transparency in a country is positively correlated with its credit ratings, both for developing countries by reducing overall uncertainty and for advanced economies where the transmission mechanism is more indirect, via better fiscal outcomes.⁵⁰

2. Boosting trade via transparency

Similarly, trade agreements that set out ambitious provisions for transparency in trade relations and enhance the public visibility and predictability of applicable terms for all trading partners are found to promote trade more strongly than agreements that embrace transparency with less commitment. As an analysis of more than 100 of such agreements shows, each additional transparency clause is associated with a 1% higher flow in bilateral trade.⁵¹ Evidence also suggests that regional economic integration is helped by more transparency in the overall trade and business environment. Improving trade-related transparency throughout the Asia-Pacific Economic Cooperation (APEC) region, for example, is believed to have the potential to add USD 138 billion—an increase of more than 7%—to regional trade.⁵²

3. Reducing red tape

Red tape—excessive, burdensome rules and regulations that make doing business more costly and difficult—has been found to play a central role for business and investment climate, negatively affecting, for example, access to venture capital,⁵³ individual entrepreneurship and firm performance,⁵⁴ control of corruption,⁵⁵ or new firm entry.⁵⁶

In turn, how does opening government impact red tape? Empirical evidence for a set of 181 countries confirmed a general positive relationship; more and better online information presence is positively associated with the ease of doing business and reduced red tape.⁵⁷ Digging further into the transparency specifics and using another dataset, a recent study on 185 countries found that better disclosure of regulatory fee structures in four key areas (starting a business, obtaining construction permits, getting electricity, and registering property) is associated with higher quality of regulations and reduced corruption.⁵⁸

¹ Drabek, Z., & Payne, W. (2002). The Impact of Transparency on Foreign Direct Investment. *Journal of Economic Integration*, 17(4), 777–810 (transparency as composite index on various dimensions of bureaucratic quality/ law and order, measured by Political Risk Services. *International Country Risk Guide*



4. Enhancing market entry, non-discriminatory access

Introducing electronic elements to public procurement accounts for close to 5% of OGP commitments and given its long-standing and widespread popularity beyond OGP as one of the central areas for electronic government reforms, it is also an area where the evidence base is relatively advanced. However, most studies focus on assessing price and efficiency effects on the procurement process, but do not directly investigate impacts on the broader market environment.

There are two major exceptions, where a strong empirical consensus has emerged with regard to a positive business-side impact of electronically-aided procurement openness.

First, a growing body of literature convincingly shows that electronic procurement in conjunction with good disclosure practices offers excellent opportunities to spot manipulated bidding processes and collusion, thus constituting a first, essential step towards a public procurement market that is more accessible and offers fair competition. An analysis of 3 million disclosed procurement contracts in Russia, for example, helped detect that close to 10% of sealed-bid auctions are affected by bid leakage.⁵⁹ A better supplier database as part of e-procurement reforms in South Africa enabled auditors to spot false conflict-of-interest declarations by suppliers in 21% of audits.⁶⁰

Second, electronic procurement with more elements of public accessibility and openness are found to raise the number of bidders, and thus suggest a benign effect on enhanced market access. The introduction of electronic procurement in Slovakian municipalities,⁶¹ electronic bidding for road projects in India and Indonesia,⁶² more publicity for local government tenders in Italy,⁶³ or more transparency in World Bank-financed government contracting⁶⁴ were all empirically found to increase the average number of bidders. In South Korea, establishing electronic and open-procurement has even tripled the number of bidders.⁶⁵ In Slovakia, the introduction of a progressive incentive system that declares government contracts only when forced to be publicly disclosed has led to the publication of more than 700,000 contracts between 2010 and 2014, and the average number of bidders per contract has sharply risen from 1.6 to 3.7 firms in the same period.⁶⁶ A sweeping big-picture analysis of 88 countries suggests that countries with more transparent procurement procedures make firms more likely to partake.⁶⁷

C. Opening government: driving “good growth” and “opportunity for all”

As mentioned at the outset, “good growth” is operationalized for the purpose of this synthesis as economic growth that is a) inclusive and also improves the economic livelihoods and opportunities for the poor; b) that tackles some of the major side-effects (externalities) of economic growth; and c) that enables good corporate citizenship, particularly compliance with laws and regulations. Exhibit 4 illustrates this approach for the following sections.



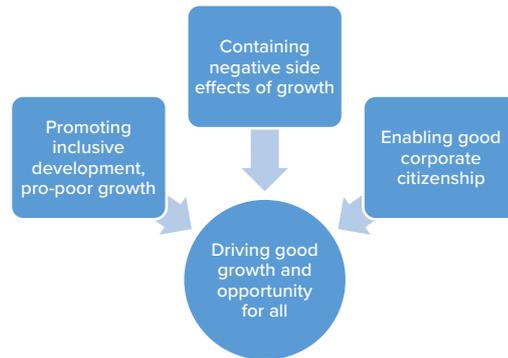


Exhibit 4: From opening government to good growth

1. Promoting inclusive economic development: pro-poor growth

Economic growth alone does not lift all boats. Rising intra-country inequality and a persistent challenge with multi-dimensional poverty, relative deprivation, and economic precariousness are defining societal issues for countries of all income levels. Does open government help promote inclusive growth strategies and enable economic policies that seek to improve the economic conditions of the poor and marginalized? The evidence for direct interlinkages with and impacts upon economic parameters² is rather limited and the results are mixed, yet there are also some encouraging positive results worth noting.

Open procurement: more inclusive, but not more equitable

Opening up public procurement systems would be one promising impact area. Yet, there is no significant evidence that the demonstrated impact of lower-entry barriers and increase in participating firms, as identified in the previous section on market entry, also translates into more favourable conditions for Small and Medium-Sized Enterprises (SMEs) or local vendors. So far, the evidence suggests that the new entrants are primarily international⁶⁸ or out-of-state companies⁶⁹ that benefit from more transparent systems, to break into local procurement markets.

Empowering voters and citizens to power up pro-poor economic policies and spending

Political engagement, from voting to civic activism, is often skewed towards the more affluent, educated, and connected. Yet, when properly designed and aided by open government mechanisms, evidence shows it can help pull in disenfranchised groups to make markets and economic policies work better for them:

- Mandatory village assemblies in India to validate the allocation of subsidies and other entitlement to poor households have significantly enhanced the targeting of these economic-support schemes.⁷⁰
- A shift to electronic voting with interfaces designed to help semi-illiterate citizens re-enfranchised millions of previously non-participating voters in Brazilian cities, and thus paved the way for a more than 30% bump in pro-poor public health spending in the early 2000s with sizeable effects on child health.⁷¹
- Participatory budgeting is one of the most popular and most studied community engagement mechanisms. There is solid evidence that, if properly designed, it can help increase public spending on pro-poor policies in health, education, sanitation, or poverty reductions, and it has been directly linked to reducing infant mortality in Brazil⁷² and more effective agricultural policies in Peru.⁷³ However the role of business in or the

² A broader look at positive impacts via social or educational systems is beyond the scope of this analysis.



broader *economic* impact of participatory budgeting, as well as other participatory mechanisms, has not been thoroughly studied yet.⁷⁴

Making the implementation of economic benefits schemes more effective

Moving from setting pro-poor economic policy priorities to their implementation, a number of initiatives that blend transparency with public participation/monitoring have been found to demonstrably reduce leakage rates and fraud.

- A decentralized rural development program, the Kecamatan Development Program (KDP) in Indonesia that emphasized community-level engagement and openness, moved significantly more people out of poverty and led to higher-quality projects with significant economic impacts than was the case through conventional disbursement schemes. The KDP enabled communities to select projects for support, posted related budgets and project information on public notice boards, and established village-level monitoring committees.⁷⁵ Similarly, disclosure of beneficiary lists of socio-economic support programs from unemployment benefits to gas or grain subsidies helped curb fraud and inconsistencies in India.⁷⁶
- In the Indian state of Bihar, an e-government program focussed on Information and Communications Technology (ICT)-enabled financial management reforms, better public and administrative tracking of funds, and more direct disbursement mechanisms helped to significantly reduce leakages of resources, ghost claimants, and personal enrichment by involved officials, all in relation to one of the most important public employment schemes.⁷⁷
- Introducing public monitoring of agricultural subsidies in San Miguel, Philippines was found to increase rice production and improve government-farmer interactions,⁷⁸ while social audits in Andhra Pradesh, India, reduced wage theft in large-scale public employment schemes.⁷⁹

Empirical studies also show how *project or program-related* openness initiatives can benefit from broader transparency and disclosure regimes. Using Right to Information requests to expedite the issuing of food ration cards in India has proven more effective than standard procedures or enlisting non-governmental organization (NGO) support.⁸⁰ Meanwhile in Mexico, NGOs filed Freedom of Information requests to uncover the distribution of benefits from the country's largest farm subsidy program, a move that made transparent a significant, pro-rich skew in disbursement.⁸¹

2. Containing negative side effects of growth (externalities)

Economic activity and economic growth still cause and often even thrive on a considerable amount of side effects that are poorly reflected in related price mechanisms, which go unchecked by regulatory interventions and policies, and often impose the heaviest cost in terms of adverse health effects and the degradation of livelihoods on the poor and marginalized.⁸² Air pollution alone, much of it attributable to economic activity, is estimated to incur global welfare losses of more than USD 5 trillion in 2013, more than the combined GDP of Canada, India, and Mexico.⁸³

Opening up regulatory processes and data about the environmental footprint of economic activities have been an area of advocacy and action for several decades. Environmental transparency has evolved into an increasingly popular supplement to conventional command and control approaches for containing environmental side-effects of economic growth.⁸⁴ As such, environmental transparency significantly predates the current wave of open



government efforts. For example, it found its way into national legislation in many countries around the turn of the millennium,⁸⁵ in some instances, such as Argentina⁸⁶ or Germany,⁸⁷ even before the national Freedom of Information laws were enacted. Public access to environmental information is also prominently enshrined in landmark international agreements from the 1992 Rio Declaration (Article 10) to the 1998 Aarhus Convention, which laid out a particularly ambitious and detailed agenda for environmental access, all the way to the recent 2015 Paris Agreement with its enhanced transparency framework for reporting and monitoring climate mitigation efforts. As a result, expanding the collection of and access to environmental information continues to serve as a learning and action frontier for opening up government on the way to ensuring good growth. In 2017, for example, environmental data was the largest category of open government information across the EU, with more than 160,000 datasets publicly available.⁸⁸

A robust body of empirical evidence confirms the impact of environmental transparency and converges on a set of key insights:

- Success is *not necessarily tied to a specific governance regime* type, as long as it is embedded in an enabling environment that offers some engagement opportunities for media and/or civil society. Transparency of industrial pollution at its source has been documented to go hand-in-hand with reduced emissions in countries as different as the US,⁸⁹ Indonesia,⁹⁰ and China.⁹¹
- There are *interesting synergistic effects* a) *between governmental and business transparency* with more pollution data published by the government precipitating more reporting by corporations⁹² and b) *between broader freedom of information frameworks and environmental transparency/performance*. For example, better deforestation control in Brazilian states being associated with better Freedom of Information frameworks and compliance.⁹³
- *Environmental transparency works through several transmission mechanisms*. It is not confined to end-of-pipe emission reductions, but can support longer-term shifts towards better growth trajectories: Disclosing fuel sources in the US electricity industry is associated with a relative decrease in fossil fuel consumption.⁹⁴ Corporate disclosure of environmental performance shores up legitimacy and company predictability.⁹⁵ Publishing data on pollution footprints of companies steers investors away from bad performers⁹⁶ and towards good performers.⁹⁷ Slow-downs in rainforest deforestation—another critical externality challenge—have also been linked to various transparency mechanisms. In Brazil, for example, expanding public access to and use of satellite data to map and monitor deforestation is estimated to have saved close to 60,000 square kilometres of rainforest between 2007 and 2011,⁹⁸ and helped solve collective action problems in enforcement in local deforestation hotspots.⁹⁹

This robust empirical success story of environmental transparency in the service of addressing some of the major externalities of economic growth should not detract from the fact that the literature also contains case studies of initiatives that failed to achieve impact. This is in line with a broader empirical message that highlights the general contingency of effective transparency interventions.

3. Open government makes good corporate citizenship easier and cheaper

Good growth cannot be unilaterally achieved through government action, but also requires good corporate citizens—businesses that follow the spirit, not just the letter of the law. And



although most related efforts are in their infancy and proof of impact is still in the making, there are several empirical pointers that suggest a sizeable role for open government to make good corporate citizenship and effective compliance easier and cheaper.

First, it is important to note that exercising responsible business behaviour and ensuring compliance across far-flung operations is often a complex endeavour with sizeable costs. Survey data suggests that multinational companies spend on average USD 220 per employee per year on compliance issues.¹⁰⁰ The burden is even greater for financial institutions and the anti-money laundering regimes they are subject to. Here, compliance costs are estimated to total more than USD 1.5 billion for six major Asian economies along with big firms typically employing more than 100 staff in their compliance departments,¹⁰¹ while overall global spend on compliance¹⁰² and anti-money laundering is anticipated to continue rising sharply,¹⁰³ and is believed to reach USD 8 billion in 2017.¹⁰⁴

Second, current practice is not fully satisfying. Vetting business partners and clients are some of the most critical activities and main cost centres in compliance, yet despite all these efforts and resources spent, fully effective compliance is still elusive. Close to three-quarters of foreign bribery cases in a 15-year time period up to 2014 involved illicit payments by intermediaries, with which the indicted companies had business relationships.¹⁰⁵ Moreover, 70% of the more than 200 biggest corruption cases between 1980 and 2010 involved anonymous shell companies,¹⁰⁶ and the accumulated costs of misconduct by banks related to the most recent financial crisis alone are put at more than USD 320 billion.¹⁰⁷

Third, some open government activities speak directly to some of the shortcomings of the current system. Companies typically do it alone and rely on a small band of proprietary, expensive intelligence services for vetting businesses partners and clients, while sharing of relevant information is limited, and concerns about data quality and credibility are widespread.¹⁰⁸ 60% of company compliance officers, for example, indicated in a global survey that information credibility is the major obstacle to confidence in due diligence, while more than half reported that their company had delayed or called off a project because of a lack of information for assessing related corruption risks.¹⁰⁹ Similarly, banking professionals in emerging markets rated know-your-customer requirements and related costs as one of the top burdens on their growth prospects, while identifying lack of client information as one of the main reasons for this.¹¹⁰ Opening government can play a critical role in reducing these information costs, help enhance data quality, and even pave the way towards a public good like shared information architecture for vetting customers and clients.

Two types of datasets are of particular importance in this regard:

- Asset, income, and interest disclosures of senior government officials and politicians, so called political exposed persons (PEPs);¹¹¹ and
- company registries that include information on the beneficial owner of corporate entities.

Advancing the scope, timeliness, granularity, usability, institutional anchoring, and first and foremost, openness of these two data clusters is the subject of several government and civil society policy initiatives¹¹² and is already featured in a number of OGP commitments.¹¹³

Empirical data on business use of already-existing open datasets in this area is still limited, yet early indicators look promising. According to focus groups and usage statistics, company registries are already one of the most-coveted and used open data categories,¹¹⁴ while a global survey of compliance officers indicates that determining the beneficial ownership of companies is the issue most researched by companies in their regular due diligence updates.¹¹⁵ Regulatory impact assessments for beneficial ownership disclosure emphasize



that benefits greatly outweigh costs, even under very pessimistic scenarios, and that smaller companies are expected to benefit disproportionately.¹¹⁶ Asset, income, and interest disclosures regimes have a growing track-record in supporting the detection of conflicts-of-interest and corruption,¹¹⁷ while an NGO-run Politically Exposed Person (PEP) database for Ukraine has, in its first year of existence, been used by more than 30 local and international banks, according to self-reported data.¹¹⁸



Conclusion and outlook

Opening government is good for business and good for investment climate. The empirical evidence firmly establishes that many ambitions and activities linked to the open government agenda generate economic opportunities, and to some lesser extent, jobs. What's more, opening government—through various transmission mechanisms—fosters a business climate that is both innovative and dynamic and yields benefits that outstrip its costs.

Beyond the business case, there is a wide array of empirical markers that suggest several aspects of open government are conducive to, but more likely even necessary for, responsible economic stewardship. There are good reasons to believe that opening government is essential (albeit not sufficient by itself) to ensure that economic growth and dynamism translate into opportunities for all and leave no one behind. It is indispensable for setting economies on sustainable development pathways that respect planetary boundaries, unlock entrepreneurship, unleash market forces for the common good and a common future, and make it easier for all participants to live up to their responsibilities. Opening government thereby constitutes an important step towards stemming the erosion of public trust in both government and business that corrodes the very foundations on which both our societies and economies are built.

Despite these upbeat findings, it is also worth noting that research on the business and economic dimension of opening government is still in its early stages, and there are many blind spots and potentially promising segments of open government activities that await deeper investigation.

A rather expansive conceptual literature on promise, potential, and possible pitfalls of opening government stands in stark contrast to a much slimmer body of empirical investigations. Where available these empirical studies are primarily focused on macro-level regressions, for example, the relation between country-level indices on transparency and credit ratings, or they explore the value of certain bands of open data (e.g. geo-information), or they address the containment of negative effects of growth, such as the robust literature on environmental information access and its impacts.

In contrast, an expansive body of social accountability research that covers a lot of mechanisms related to opening government from participatory budgeting to social audits pays little attention to the role of business and the broader impact on economic growth. The policy literature tends to dwell on a small set of (partially-outdated) poster-book case studies referenced ubiquitously, such as Zillow or the Weather Corporation. More in-depth, longer-term observational studies that follow particular firm-level or sector-level developments vis-à-vis a broad range of activities related to opening government are clearly needed. Yet, unfortunately, the current research pipeline in this area does not bode well for an imminent deeper engagement with some of these issues. This literature scan made a particular effort to cover forthcoming research by examining working paper archives and related major conference proceedings without, however, being able to discern a sizeable pipeline of ongoing academic work on open government or open data in the core related disciplines of management studies, political science, sociology, and information science or technology studies.

However, the future opportunities for much-needed research in this area are growing. There is a promising pool of potential future case studies, generated by recent efforts of mapping



related markets and market players (e.g. Govlab's Open Data 500¹¹⁹, or the large number of companies and initiatives referenced in the economic impact section of the Web Foundation's Open Data Barometer¹²⁰). Given the innovative dynamism of the open government community coupled with rapidly-evolving technological opportunities, it is fair to expect an accelerating impetus for experimenting with new modes of collaboration and co-creation at the business-government nexus that will offer exciting opportunities for and urgently require more empirical research.



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- ¹¹² Beneficial ownership disclosure, for example, is being advanced in various policy fora with regard to extractive industries, banks and real estate.
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- ¹¹⁷ See for example Djankov, S., Porta, R. et al. (2009). *Disclosure by politicians*, NBER working paper no. w14703. National Bureau of Economic Research. Aside from supporting business compliance these financial disclosures are also indirectly associated with higher income growth via a selection of more suitable candidates for public office (see Fisman, R. et al. (2017). Financial disclosure and political selection: Evidence from India, working paper).
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