How Data Helps the Money Flow

Leveraging public sector data to catalyze private sector investment

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Global Partnership
for Sustainable
Development Data

Introduction

Reliable and comprehensive data produced by the public sector can help to catalyze economic growth, with the return on investment estimated at **$32 for every dollar spent.** Harnessing this opportunity could create **$1.4 trillion in additional value over the next eight years**. This briefing, based on new analysis by Dalberg, builds on our [Investment Case](#) to illustrate **the role of public data ecosystems in activating private sector activity.**

Gaps in public sector data create barriers to growth in the private sector, as shown in the figure below. Investment in data systems can overcome these barriers, spurring more and better investment in emerging markets. Realizing the full potential of these investments will require collaborative action by a diverse community of stakeholders. To realize the benefits of data for investments and growth, countries and development partners can join the movement to commit to raising the availability of Sustainable Development Goals (SDGs) data, support new cutting-edge data partnerships, and work together to ensure data financing is transparent and effective.

Public sector data gaps creating barriers to growth in private sector

Lack of data availability	• Increases both **actual and perceived risks** for data-driven companies including insurance, banking, and logistics. • **Conceals market opportunities** for growth and product development by providing an incomplete or inaccessible format for information.
Lack of data reliability and interoperability	• Decreases **trust in data and limits its usefulness** in facilitating business decision-making, including both risk and opportunity assessment. • Makes data less useful as an input to business decision-making.
Weak regulatory an enabling environment	• Creates risk that businesses will inadvertently break rules and **increases liability risk**, making investment less desirable. • Increases the **cost of doing business** as businesses are forced to develop their own standards and later change them.
Limited data infrastructure	• Limits physical **ability to implement business models** that rely on data exchange, cloud-based models, or real-time data usage.
Poor data literacy	• **Limits potential market** for data-based interventions and products. • Limits **ability to expand operations** due to lack of sufficiently skilled labor.

Data is key to attracting finance based on realistic assessments of risk and opportunity

Data is fundamental to all decision making in the private sector, just as it is central to government policy making. Persistent weaknesses in low- and middle-income countries' (LMICs) public sector data are a barrier to growth, as they limit the attractiveness of markets for private sector investment, particularly for foreign investors. For example, foreign investors in Nigeria often cite the absence of contemporary and credible data on the country's demographics as a barrier to investment, preventing them from making intelligence-based decisions on what, where, and when to invest in the country.

Lack of data can lead to inaccurate perceptions of risk, leading to higher interest rates on financial markets, and missed opportunities for investment. A Global Impact Investing Network (GIIN) survey in 2020 found that 82% of emerging market investors looking at infrastructure projects saw moderate to high country risks for their projects, compared to only 41% of investors focused on developed markets. Yet a Moody's report in 2018 found that default rates on project finance loans were only slightly higher in emerging vs. developed markets over a 10-year period, highlighting how risks can be wrongly perceived in the absence of data—to the detriment of emerging markets.

Data reveals and creates new opportunities for investment

Data can reveal new opportunities in emerging sectors. Ten to fifteen years ago, offering off-grid solar products was perceived as high-risk given the lack of data on how affordable they were for different customers and market size. However, when various stakeholders (World Bank, International Finance Corporation, and Lighting Africa) invested in building public datasets on household access to energy and electrification, this helped demystify the nascent market and enabled off-grid solar start-ups to prove their business models and demonstrate their market viability. Sun King (formerly Greenlight Planet) established their headquarters in Kenya raising $260m for the country in 2022, and in the same year, IKEA entered the Indian market with solar products. As a result, the sector transformed into a fast-growing market providing employment opportunities, projected to grow at approximately 30% per annum over 2021 - 2026 in Africa and employing 100,000 people in India.

As well as revealing opportunities in other sectors, data itself can be the basis for new investment opportunities and growth, spurring both domestic and international investment, if the regulatory frameworks are right. For instance, although Mauritius has made huge leaps in digital connectivity since the 1990s, at first the absence of policies or systems to open up government data were a barrier to market opportunities for entrepreneurs. Its 2017 National Open Data Policy opened all government data "by default", and empowered firms to launch data-driven initiatives such as new mobile apps

and innovative products. Mauritius is now thriving as one of the richest technology ecosystems in Africa, with the ICT sector representing 7.4% of its GDP in 2021 and employing 30,000 people.

A similar case occurred in Africa. Lack of clear data privacy regulations and hence the high liability risks have been the main obstacle in securing large cloud computing providers' investments in African hubs. However, when Kenya passed the Data Protection Act in 2019 and South Africa announced its Protection of Personal Information Act (POPIA) in 2021, investments immediately started flowing in. Amazon Web Services (AWS) announced new investments establishing data cloud infrastructure in Nairobi. The POPIA law was instrumental in incentivizing Microsoft, Huawei, AWS, Oracle and Google to establish cloud hubs between 2019 and 2022. As a result of this trust building, the cloud computing market in Africa more than doubled between 2019 and 2021, and the cloud region will contribute over $2.1 billion to South Africa's GDP by 2030.

These examples have demonstrated that to realize such opportunities, investment in both connectivity and skills are critical. The returns are considerable for governments who take action in this area. For instance, recognizing the low digital literacy rates as a demand-side challenge for the 3G & 4G network coverage in Rwanda, the Government launched a $200m Digital Acceleration Project. This holistic approach targeted investments in data management, analytics, legal capacity, and digital innovation. In just nine months up to June 2022, Rwanda saw a 4% rise in broadband penetration, with every 1% projected to increase 1.5% GDP per capita growth in the future.

In contrast, lack of data skills can also limit countries' ability to exploit the opportunities of the new data economy. In Cambodia, one startup in Phnom Penh looked to hire local software developers who could create user interfaces in Khmer, the local language, but had to abandon the project due to lack of local talent. This was a lost opportunity for Cambodia to develop a new industry and create well-paid jobs.

Case study: How a change in data regulations paved the way for the creation of Chile's largest alternative finance sector

| Challenge | Globally, 42% of entities face delays in invoice collection, while also facing high invoice processing and tracking costs. |

| Intervention | The Chilean government released regulations in 2002 which defined standards for e-signatures as well as VAT e-invoice reporting which required companies to register with the Chilean tax authorities to issue invoices. |

| Effect on private sector | The private sector saw an opportunity to develop an entirely new market built off the safety and security of the new government invoicing systems. E-invoices began to be traded as a commodity which increased cash flow opportunities for companies and increased cross-border digital trade. |

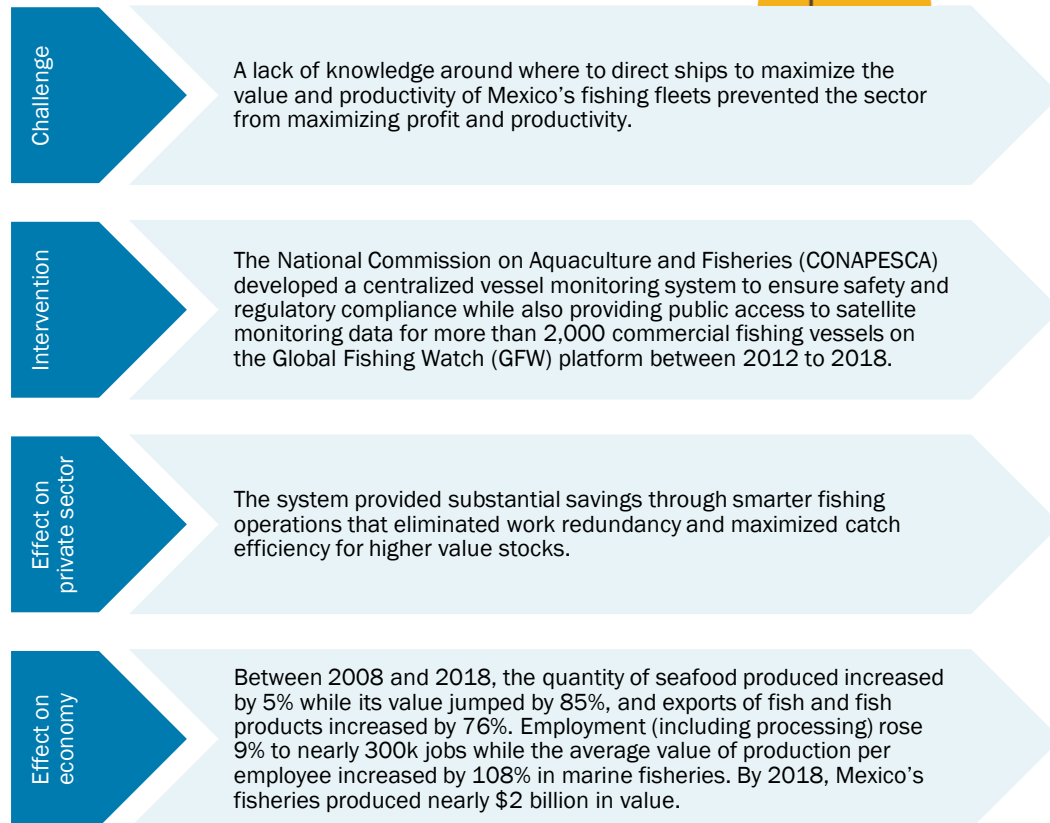| Effect on economy | Invoice trading is now the largest alternative finance sector in Chile. In 2020, the invoice trading sector was worth over $784 million, while the marketplace and peer-to-peer business lending amounted to $16.35 million. |

Source: SERES, "Global trends in electronic invoicing", 2019; Guiterrez et al, "E-Government in Chile and the Adoption of XML as Standard", 2005; eTrade Alliance, "Electronic invoicing to fuel MSME transactions and cash flow - Latin America pioneers", 2021.

Data is critical to strengthen supply chains and meet ESG criteria

A robust public data ecosystem is crucial to growing emerging sustainable sectors, including carbon markets and renewable energy projects which could provide future opportunities for LMICs to attract private sector investment, but which remain unproven. For instance, tackling deforestation risks within organizations' supply chains and sourcing processes requires mapping the products back to production regions. Without adequate data and transparency surrounding long and often complex supply chains, this presents a mammoth task. Public data such as that provided by the Brazilian Government allows the connecting of pre-shipment trade data to subnational sourcing regions, pinpointing areas of deforestation risk exposure for companies. This allows financial institutions, including

investors and banks, to reduce exposure of their investments to deforestation risks, and to assess the sustainability of their portfolios. Evidence finds that stronger environmental and governance performance has a statistically significant positive effect on growth in GDP per capita in emerging markets.

Case study: How a vessel monitoring system unlocked smarter operations in Mexico's fishing sector

Challenge

A lack of knowledge around where to direct ships to maximize the value and productivity of Mexico's fishing fleets prevented the sector from maximizing profit and productivity.

Intervention

The National Commission on Aquaculture and Fisheries (CONAPESCA) developed a centralized vessel monitoring system to ensure safety and regulatory compliance while also providing public access to satellite monitoring data for more than 2,000 commercial fishing vessels on the Global Fishing Watch (GFW) platform between 2012 to 2018.

Effect on private sector

The system provided substantial savings through smarter fishing operations that eliminated work redundancy and maximized catch efficiency for higher value stocks.

Effect on economy

Between 2008 and 2018, the quantity of seafood produced increased by 5% while its value jumped by 85%, and exports of fish and fish products increased by 76%. Employment (including processing) rose 9% to nearly 300k jobs while the average value of production per employee increased by 108% in marine fisheries. By 2018, Mexico's fisheries produced nearly $2 billion in value.

Source: ORBCOMM, "VMS: Providing Safety and Regulatory Compliance for Mexican Fishing Vessels", 2017; OECD, "Fisheries and Aquaculture in Mexico", 2021.
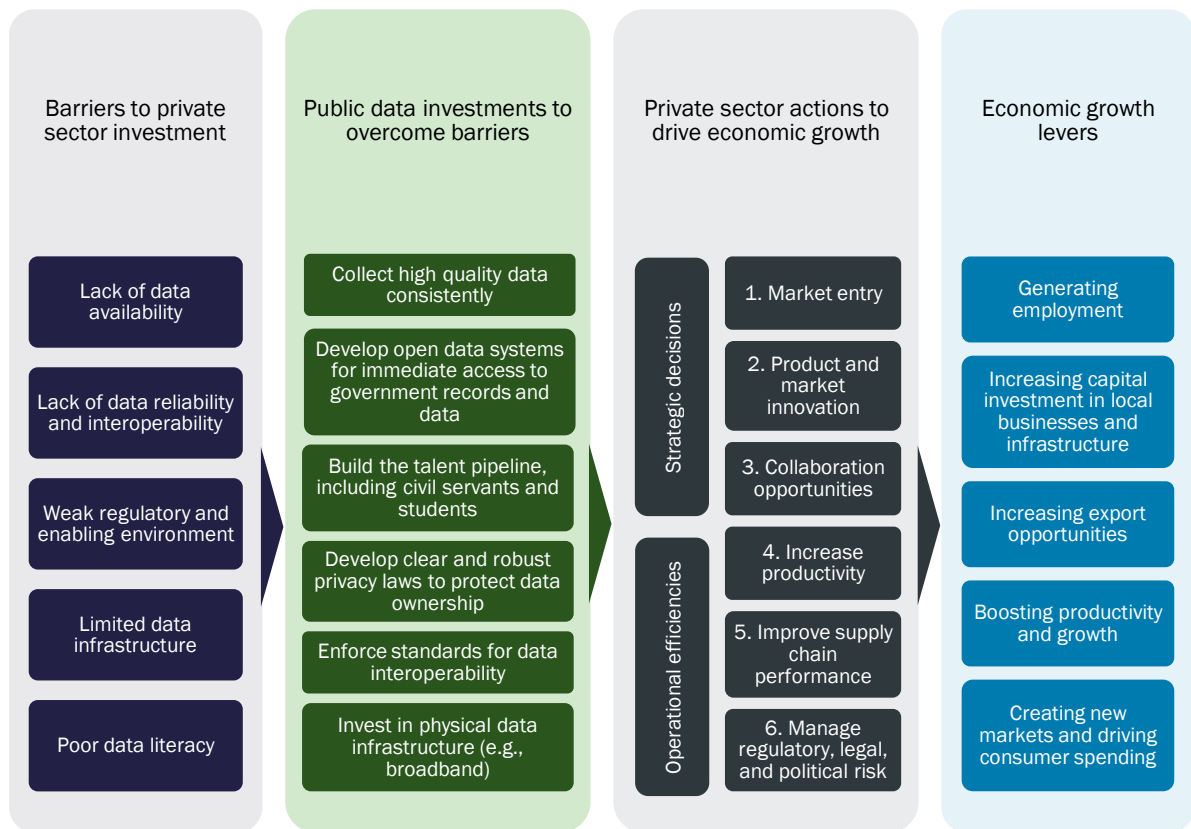
The path to progress

To unlock all the potential of data investment and development, there are six practical, high-impact options for public investment that will launch the path to progress, as detailed in the figure below. All of them aim to support data collection, aggregation, and capacity, as well as building the broader enabling ecosystem.

Six practical high-impact options for public investment

Data collection, aggregation, and capacity	Collect high quality data consistently	• Provides the raw data needed to drive innovation, make business cases, and identify market opportunities by the private sector. • Increases trust in government data to dispel perceptions of risk.
	Develop open data systems for immediate access to government records and data	• Increases usability of data to ensure that it is leveraged effectively by the private sector. • Can be paired with efforts to aggregate private sector data for full industry/sectoral datasets.
	Build the talent pipeline, including civil servants and students	• Ensures that innovations are adopted by consumers, thereby providing demand for additional technological innovation. • Provides companies with a deep talent pool in-country.
Enabling factors	Develop clear and robust privacy laws to protect data ownership	• Provides the scaffolding upon which companies can invest in ICT and data solutions without undue reputational risk; increases consumer trust. • Signals stability and rule of law to markets and MNCs.
	Enforce standards for data interoperability	• Activates data-sharing among private and public companies, equipping the private sector to develop more holistic pictures of business opportunities.
	Invest in physical data infrastructure (e.g. broadband)	• Creates the 'digital roads' along which data travels. • Enables innovation to reach new market segments in previously untapped areas (e.g. rural last mile).

Collectively, these investments can transform the private sector's ability to collect, process, share, analyze, and use public data to grow their business and the wider economy (see figure below). Each country is on its own journey and should identify where the most critical gaps lie within the ecosystem.

Barriers to private sector investment	Public data investments to overcome barriers	Private sector actions to drive economic growth		Economic growth levers
Lack of data availability	Collect high quality data consistently	**Strategic decisions**	1. Market entry	Generating employment
Lack of data reliability and interoperability	Develop open data systems for immediate access to government records and data		2. Product and market innovation	Increasing capital investment in local businesses and infrastructure
Weak regulatory and enabling environment	Build the talent pipeline, including civil servants and students		3. Collaboration opportunities	Increasing export opportunities
Limited data infrastructure	Develop clear and robust privacy laws to protect data ownership	**Operational efficiencies**	4. Increase productivity	Boosting productivity and growth
Poor data literacy	Enforce standards for data interoperability		5. Improve supply chain performance	Creating new markets and driving consumer spending
	Invest in physical data infrastructure (e.g., broadband)		6. Manage regulatory, legal, and political risk	

The call to action

This year, at critical summits from Nairobi to New Delhi to New York, global leaders have a historic opportunity to launch a powerful new Data for Development Initiative, responding to the call from the UN Secretary General for a 'push to reap the data dividend.'

We are calling on global leaders to commit to:

- Raise the percentage of available SDG data, based on SDG progress report recommendations, and to increase investment in data systems;
- Develop cutting edge data partnerships bringing together government actors, donors, multilaterals, civil society and industry to open up the opportunities of new data technologies in safe and ethical ways;
- Fund cutting-edge data partnerships in low- and middle-income countries;
- Develop and implement a set of principles for better investment in data systems from all partners, including tracking aid for data and statistics in OECD DAC sectors.

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