8.7 Measuring individuals' trust in online environments

Why are indicators on individuals' trust needed?

With the Internet and connected devices playing an increasingly important role in individuals' everyday activities, trust has emerged as a key factor underpinning transactions in the digital economy. Governments, businesses and individuals all need to trust and be trusted to reap the full benefits offered by the digital transformation.

The intangible nature of data exchanges makes it harder for individuals' to control the use and reuse of their personal data in different jurisdictions. Personal data are first collected or accessed, then stored, aggregated, processed and finally used and analysed. With the advent of artificial intelligence/deep learning, data can be also machine generated. Each of these steps has special features and involves different stakeholders. In the digital era, trust needs to be built between individuals who own and consent (although not always realising they have done so) to provide their personal data online, without necessarily controlling its use and organisations who analyse and use insights from these data while being bound by the laws and ethics around data collection, storage, analysis and use.

What are the challenges?

The more people, businesses or governments are connected, communicate and transact online, the greater the potential efficiencies. However, many of these communications and transactions are effected among unknown players that may not encounter each other again. Some of these exchanges may be unreliable and some may involve intentionally false or biased information.

Despite the broadly acknowledged importance of trust for the digital transformation, no common definition captures all aspects of this complex phenomenon. Recently, the OECD Guidelines on Measuring Trust (OECD, 2017a) defined trust (p. 42) as "a person's belief that another person or institution will act consistently with their expectations of positive behaviour". The OECD measurement guidelines focus specifically on interpersonal and institutional trust. Interpersonal trust can be generalised (in unknown people or situations) or limited (to known people).

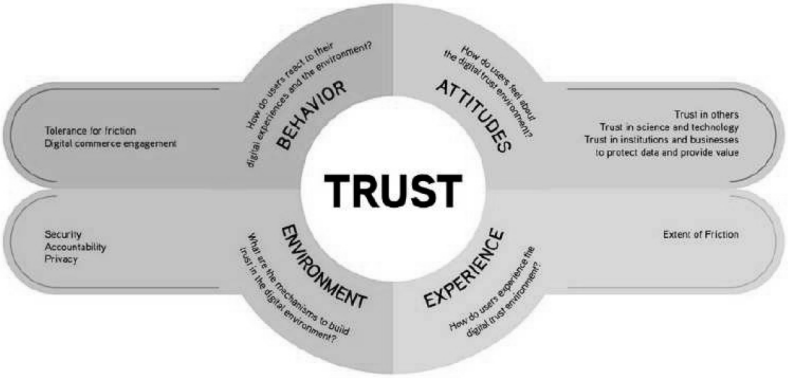
In addition to the difficulty of defining this multidimensional concept, the measurement of trust does not have a long tradition, particularly within official statistics. This partly reflects a paucity of evidence on the validity and reliability of different measures of trust, as well as – until recently – a lack of strong policy demand for such metrics (OECD 2017a). Hence, from a measurement perspective, no unique framework exists under which to classify the different approaches used to measure trust.

Options for international action

The starting point for a measurement roadmap is to define what needs to be measured. There are several possible trust questions/dimensions around the interactions of actors in the digital environment that could be measured and monitored. Often questions are articulated around the drivers of trust and the barriers to trusting.

In 2017, using a large number of official and private data sources[1], Chakravorti and Chaturvedi (2017) provide an update of the Mastercard's Digital Evolution Index 2014 with an analysis of "digital trust" under four pillars: (i) the trustworthiness of the digital environment for each country, (ii) the quality of users' experience, (iii) the attitudes towards key institutions and organisations and (iv) users' behaviour when interacting in the digital world.

Pillars of digital trust



Source: Chakravorti and Chaturvedi (2017).

1. Akamai, BlueTriangle Technologies, PCRI, CIGI-IPSOS, Edelman, Euromonitor, Freedom House, Google, GSMA, ILO, ITU, Numbeo, Web Index, Wikimedia, World Bank, World Economic Forum and the World Values Survey.

Another set of questions relate to consumers' trust. Trust is a particularly distinctive feature for the peer platform markets (PPMs) that have grown massively with the rise of the digital economy. In this regard, the OECD has examined a number of mechanisms that peer platforms have developed to help engender trust in and use of their services (e.g. initiatives such as ratings and reviews). In 2017, the OECD conducted a survey on consumer trust across ten member countries with a focus on customers with experience in using PPMs (OECD, 2017b).

Nowadays connected and wearable devices provide access to large amounts of real-time personal data that can be extremely valuable to those who can exploit them. More recently, the OECD has undertaken two projects to strengthen the evidence base for privacy and personal data protection, a project on improving the comparability of data breach notification reporting by Privacy Enhancement Authorities and a scoping work on measuring individuals' trust in online environments following a personal data breach.

Overall, it is possible to categorise the different approaches to measuring trust into two broad groups: direct or survey based measures and experiments. As detailed in OECD (2017a), at the most basic level, a long tradition of survey questions consists of directly asking individuals questions on their trust in others (e.g. Almond and Verba, 1963) and institutions (e.g. World Value Surveys). On a more sophisticated level, Morrone, Tontoranelli and Ranuzzi (2009) measure trust through individuals' expectations about the behaviour of others (e.g. on the likelihood of returning a lost wallet). Although the use of such expectation-oriented questions, drawing on specific hypothetical scenarios, can be considered as rather limited, they set a distinctly different conceptual task for respondents than direct questions about trust and provide additional information.

In parallel, a wide literature has focused on comparing actual trusting behaviour in experimental settings with survey questions on trust (see the OECD's Trust Lab, https://www.oecd.org/sdd/trustlab.htm). Another measurement approach consists of collecting information through questions on individuals' experiences that can provide indirect information without being directly focused on the subject. The New Zealand General Social Survey is an example of data collection using these types of questions, which in turn allow for elaboration of various metrics on trust by individuals. For instance, interpersonal trust metrics are drawn from questions on individuals' interactions with others via lending or giving various objects, providing emotional or moral support, helping with different tasks and providing information and advice.

Another avenue to explore is the longstanding literature on the public acceptance of science and individuals' perception of new technologies, which contains valuable lessons for the measurement of individuals' digital trust. In addition to surveys, methods for media monitoring, measuring intensities, semantic networks and story types have been used, to grasp trends of public interest in science in various studies. Due to advances in information and communication technologies, automatic systems of continuous media monitoring have become possible.

Policy priorities for measurement in this area will need to be developed together with the relevant policy communities along a common framework. As Castaldo et al. (2010) explain, "We know much better what trust does than what trust is". The measurement of trust in online environments is challenging but needs to be pursued to substantiate the policy debate, as a thriving digital economy is not possible without trust.

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