

Data sharing across government agencies should make better use of information and facilitate the supply of smart services that are customised to meet the service demands of a particular individual or business taxpayer.

Big Data and data analytics

For some revenue bodies, all input data either arrives in a digital form or is digitised by the tax agency for further storage analyses and consumption. Processed and analysed data should be made available both to taxpayers and tax officers in real-time or close to real-time. The OECD report *Right from the Start* (OECD, 2012) contains in-depth analysis of revenue bodies' practices in terms of e-invoicing and other similar instances of data use.

Data analytics is an important tool in assisting revenue bodies target specific needs of individual and business taxpayers. Apart from helping perform tax auditing and assessment functions, data analytics should be able to identify and track changes in taxpayer's life cycles in order to assist them in complying and help inform about how their changes of situations might affect their tax positions or entitlement to other government services. Getting the right data for the right customer at the right time to provide the right customer experience is becoming the focus area for revenue bodies.

Box 2.7. Applying Big Data to tax processes

In Parana State, Brazil, the State Finance Secretariat has implemented electronic invoicing in the VAT transactions that cover wholesale and retail circulation of goods, distribution of energy, interstate transportation as well as telecom services. Sellers of goods or services must issue invoices in the extensible markup language (XML) format, authenticate them with a digital signature and file invoices to the tax authority. The tax authority validates all invoices by crosschecking them with other available information and either authorises, rejects or denies them. The validation process of an invoice on average takes less than 0.1 seconds. After authorisation of an invoice, the seller can proceed with shipment. The buyer is obliged to check if the invoice was authorised. More than 100 crosschecking reports involving invoices and bookkeeping are developed in the form of a business intelligence solution that is used for data discovery (ad hoc queries), reporting and predictive analysis.

Among other things the system reports unregistered invoices, and conducts queries on transactions that are performed by specific taxpayers or with specific goods. It allows visualisation that identifies possible underground economy transactions between companies and isolates problematic nodes for in-depth analysis and targeted auditing action.

Source: Country presentations at FTA workshop – Moscow, 2015.