

The Ninth IMF-Japan High-Level Tax Conference for Asian Countries

Tax and Digitalization

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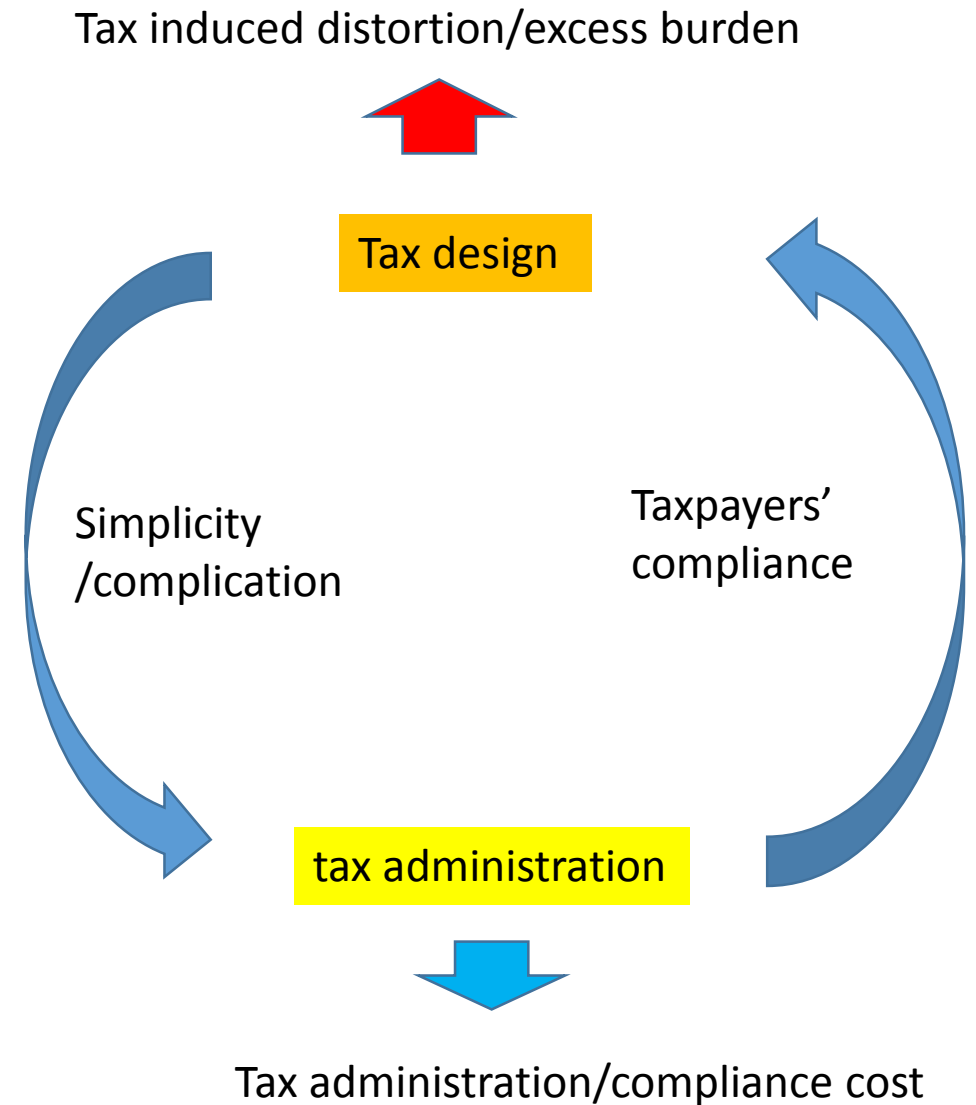
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Challenge and Opportunity

- Digitalization poses both challenge and opportunity on tax administration and policy
- Challenge = Digitalization may make it more difficult for tax authority to identify/trace income/profit generated in own jurisdiction
 - ✓ Risk of tax base erosion (tax avoidance) may be exacerbated with more profit shifting through reallocation of intangible asset, business function and so on for tax purpose. (Ex. BEPS)
 - ✓ Rapidly growing shared economy (ex. ride sharing) with digitalization (development of IT) may turn to be informal/ underground economy in 21 century that is hard to tax.
- Opportunity = Digitalization may allow more efficient tax collection for tax administrators and ease burden of tax compliance for tax payers
 - ✓ Tax administration cost ↓: More effective auditing through the use of digitalized data
 - ✓ Tax compliance ↓ : Easy and simple tax payment by online and better customer tailored/ friendly service such as advice and information

Outline of the presentation

- Tax design and tax administration/compliance interact one another.
- ✓ Tax administration/compliance as constraint or transaction cost on tax design
- Better/effective tax administration/compliance enables government to design tax system better.....more equitable and efficient
- This presentation addresses opportunity of digitalization
 - Digitalization by default
 - Use of big data
 - Linking tax and benefit



Digitalization by default

Information sharing:

- Consider Personal income tax
- Information on tax payers is centralized to ease calculation of tax liability
 - ▣ Provided by companies and financial institutions, healthcare institution regarding statements of healthcare fees, by insurance companies on insurance premium deduction.
- In Japan such information will be managed in individuals' respective accounts at the My Number portal site.
 - ⇒ No need for taxpayers to collect pay stubs and various receipts for themselves
 - ✓ Income tax liability can be easily calculated
- If this system is linked with the e-Tax system, it will become possible to make tax payments without submitting paper tax returns.
 - ⇒ Pre-populated tax return system.

Pre-populated tax return

- Northern European countries have already adopted a pre-populated tax return system, under which the taxation authorities fill in necessary information items, such as income and deduction amounts, in tax return forms and taxpayers check and submit the filled-in forms online.

⇒ Not only to enhance taxation but also to improve convenience for individuals and companies.

- Making tax digital: The United Kingdom is planning to develop a system that in the future will enable individual taxpayers to file tax returns easily by directly communicating online with the taxation authority.

Table 1: Coverage and use of pre-populated tax returns

Country	No. receiving pre-populated return /1 (mln)	Proportion of all personal taxpayers (%)	Media used for personalised returns /2	Must taxpayers respond?	Adjustment rate for returns (%)	Media available for advising adjustments /2
Denmark	4.5	100	P,I	No	22	P, I, Ph
Estonia	0.638	100	I	Yes	35	I
Finland	3.1	66	P	Yes	30	P
Iceland	0.235	100	P,I	Yes	Very high /3	P, I
Norway	3.4	93	P,I	Yes	50	P,I
Sweden	7.1	100	P,I	Yes	50	P,I
Chile	1.65	100	I	Yes	43	I
Spain	7.54	49	P,I	Yes	22 /4	P, I, Ph

Source: Country survey responses

The transformed tax system of 2020 has four foundations.

Tax simplified

Taxpayers should not have to give HMRC information that it already has, or should be able to get from elsewhere – for instance, from employers, banks, building societies and other government departments.

Taxpayers will see the information that HMRC holds through their digital tax accounts, and be able to check at any time that their details are complete and correct. HMRC will use this information to tailor the service it provides, according to each taxpayer's individual circumstances. In 2016, HMRC will consult on how information from more third parties might reduce the reporting burden on taxpayers.

Making tax digital for businesses

Businesses should not have to wait until the end of the tax year or even longer before knowing how much tax they should pay.

HMRC will collect and process information affecting tax in as close to real time as possible, to stop tax due or repayments owed from building-up. From April 2018, businesses, including everyone who is self-employed and those letting out property, will update HMRC at least quarterly where it is their main source of income (or a secondary source of income above £10,000 and their main income is from employment or a pension).

Tax in one place

At the moment, most taxpayers cannot see a single picture of their liabilities and entitlements in one place. HMRC is changing that.

By 2020, taxpayers will be able to see their complete financial picture in their digital account, just like they do in their online banking. And they will be able to set an over-payment of one tax against the under-payment of another: it will feel like paying a single tax.

Making tax digital for individual taxpayers

Individual taxpayers will interact with HMRC digitally, and at any time to suit them.

By April 2016, every individual and small business will have access to a digital tax account. The digital accounts will present individual taxpayers with a personalised picture of their tax affairs, along with prompts, advice and support through webchat and secure messaging.

Digitalization and Nudge

- In Singapore, short messaging service (SMS) notifications have been used to provide enhanced services to customers by improving dissemination of information as well as providing reminders to file and to pay.
- The content and timing of the SMS strategy is designed to “nudge” taxpayers to comply.
 - ✓ Ex. Taxpayers who filed late in the prior year are reminded to file on time to avoid penalties, and property taxpayers are informed by SMS of how much they owe and the payment reference number to complete tax payments without referring to their notice of assessment.
- In 2014, Singapore began using text mining technics to analyze content of emails from taxpayers to identify frequent inquiries and trend that may require response.
 - ✓ Text mining as big data analysis ⇒ Next topics

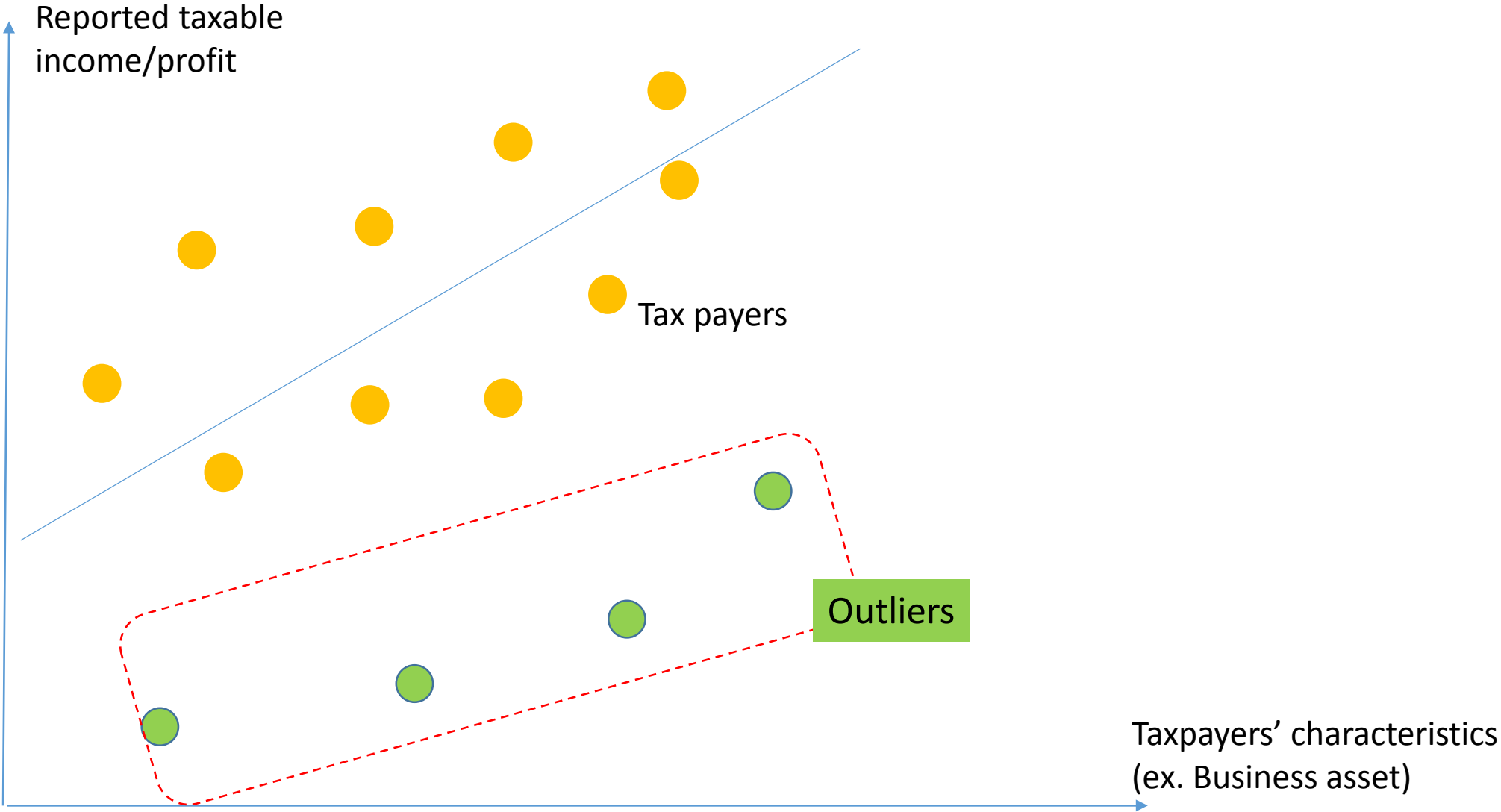
□ Source: OECD

Use of Big Data

From collection to analysis

- Tax administration generates rich/big data that may be used for analysis to make audit effective and then enhance tax compliance
 - Taxpayers – Business and Individuals- may be segmented into different risk classes according to degree of compliance.
 - ▣ Data includes not only tax liability (taxable income and profit) but also tax payers' characteristics such as industry category, business size/location, employment, turnover, cost/deduction structure, age/gender, past tax compliance.
 - Analyzing tax payers' data allow tax authority to
 - (i) identify high risk groups, i.e., those who are not likely to comply
 - (ii) find outliers whose taxable income/profit is extremely low relative to comparable groups
- ⇒ Audit can be intensified to the high risk groups and outliers.
- ✓ Data driven auditing rather than experience based one.

Data analysis



Advanced analytics

- OECD (2016) addresses advanced analytics of taxpayers' data:
- Advanced analytics is “the process of applying statistical and machine learning technics to uncover insights from data
- Supervised model = Risk associated tax compliance and its structure are known (Parametric analysis)
 - Predictive analysis is to find pattern of likely outcome from data, Ex Regression analysis
 - Prescriptive analysis is to identify counter-factual response of taxpayers and assess impact of tax administration, Ex. Randomized controlled trial, discontinuity regression
- Unsupervised model= Risk and behavioral pattern are not known (Non-parametric analysis)
 - ✓ Ex. Cluster analysis = Segregating taxpayers to groups with close characteristics including tax compliance

Tax and Benefit

Information for benefit

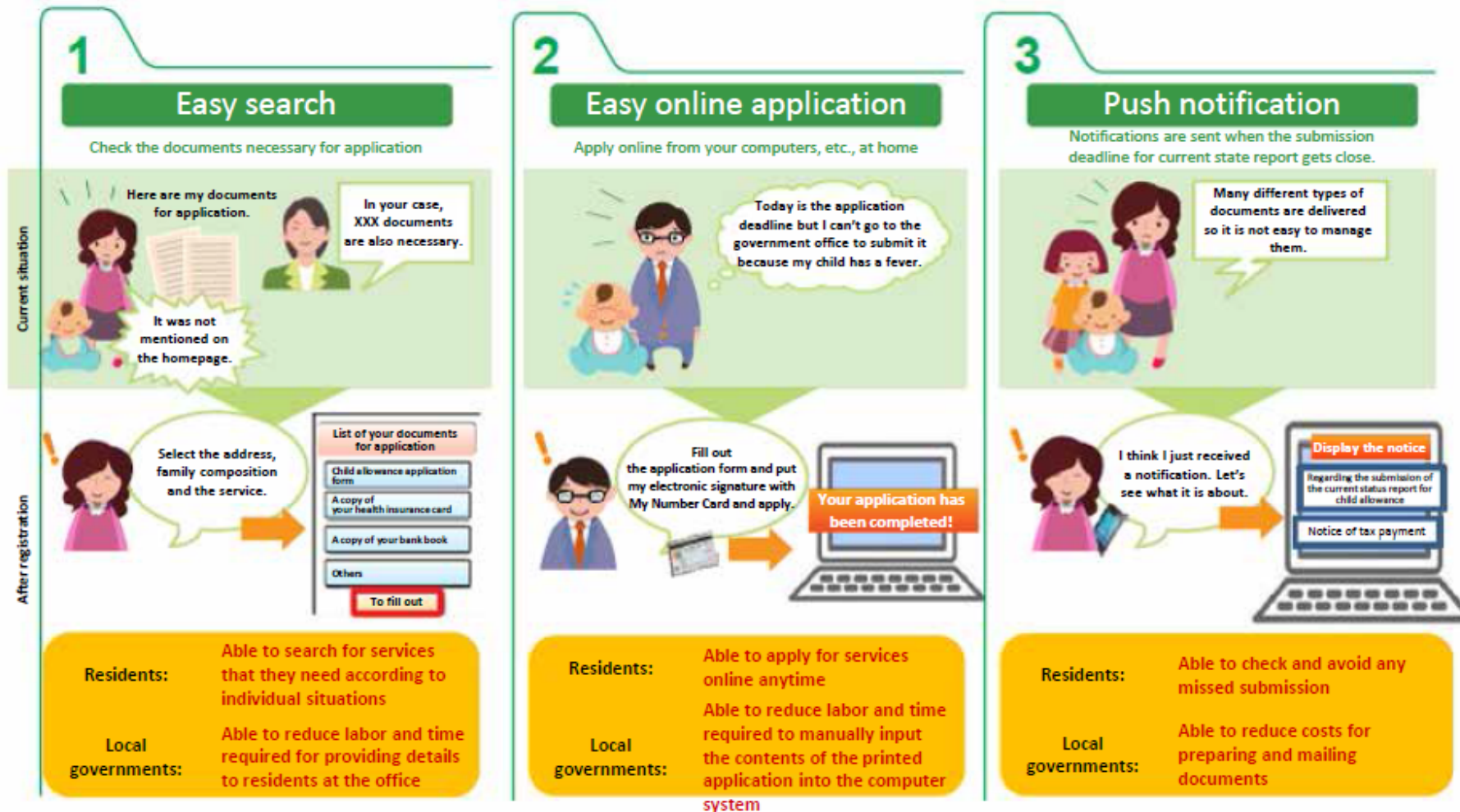
- Income redistribution completes with tax revenue being transferred to low income/needy class
- In Japan, Income information held at the My Number portal site may be used for the purpose of not only tax payments but also benefit provision.
 - ✓ Ex. when individuals apply for childcare allowances, they can use the information held at the portal as a substitute for an income certificate.
- In the United Kingdom, income information submitted by employers to the taxation authority is also used for benefit provision.
 - ✓ There may be concern over possible leakage of personal information, however.
- It is essential to establish a third-party organization responsible for overseeing appropriate operation of the system.
- Ex. in Japan, strengthening the Personal Information Protection Commission is one such option.

Mynaportal “One-stop Service for Childcare”

Users can use the search function to find the service that suits them the most.

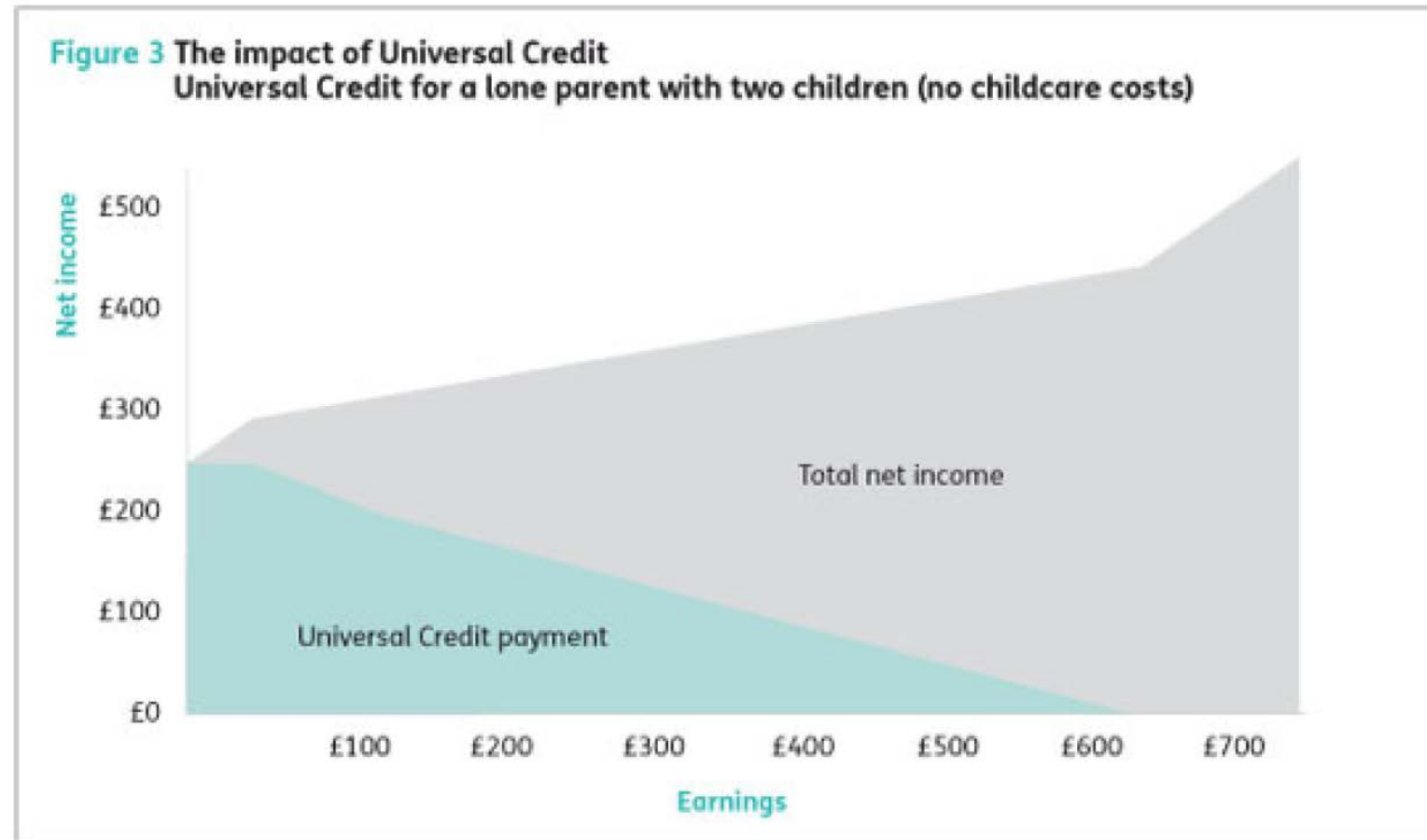
Users can apply for the service online without having to go to the government office.

Procedures that can be easily forgotten are notified to users by a push notification.



Universal credit in UK

- Recipients who have earnings from employment will have those earnings automatically taken into account.
- ✓ Using HM Revenue & Customs proposed real-time information system to identify earnings and to calculate the net Universal Credit payment due
- Those recipients who receive earnings through Pay As You Earn will not need to inform the gov. for payment purposes if the amount of their earnings change.



From administration to design

Tax design fitting digitalization

- Personal and business income taxation may be re-designed by the digitalization of tax administration
- Only digitally documented expenses may be deducted from PIT and CIT.
 - Expenses stated in papers may be deducted in presumptive manner
 - ⇒ Improving accuracy of deduction and promoting digitalization of transactions
- Presumptive tax/deduction can be improved by the use of data analytics
 - Self-employed without transparent accounting may be presumptively taxed
 - ✓ Income is estimated according to tax liability of comparable group
 - ✓ Currently income of self-employed say small restaurant may be assessed by counting the number of chairs/tables.
 - ⇒ Serving to close tax gap among small business and self-employed.