19 November 2018

Committee of Experts on Public Administration
Eighteenth session, 8-12 April 2019
Item 4 of the provisional agenda
Governance and public administration aspects of empowering people to build equal and inclusive societies for the twenty-first century

The use of tax records for the achievement of the SDGs

This conference room paper, prepared by Committee member Lamia Moubayed Bissat, analyzes the potential use of tax records and related data in policy formulation and implementation geared towards the achievement of the 2030 Agenda. It capitalizes on existing academic research and case studies that have explored the linkages between tax data on one hand, and the achievement of the SDGs on the other. Its findings conclude that tax data can serve as an efficient tool for the measuring of socioeconomic indicators, hence directly contributing to improvements in policymaking performance and capacity.

I. Introduction

1. The 2030 Agenda calls upon both public and private entities to work and collaborate for the achievement of the Sustainable Development Goals (SDGs) and their related targets. Consequently, public administrations, and more particularly, public policies, are considered as catalysts for the success of this global initiative. This Conference Room Paper (CRP) seeks to underline how data retrieved from tax authorities can support the achievement of the Agenda of hope by serving as input for policy formulation. Although several articles and reports have underlined how tax policies can support economic growth and contribute to the achievement of the SDGs, the extent to which tax data or tax records can contribute to.

2. The past few years have witnessed the increased use of technology, analytics, automation and digital data in the everyday processes of governments. Consequently, the boundaries of tax data collection have expanded, and governments now own a voluminous database concerning taxpayers, which allows the tracking of tax evasion and improvements in tax compliance. Nevertheless, such data can also be used in analyses and statistical research in order to measure SDG-related socioeconomic indicators, hence providing valuable insight for improved policymaking.

3. This CRP also seeks to encourage governments around the world to consider tax data collected by tax authorities as an efficient tool for the implementation of the SDGs and for the monitoring of progress.

II. Data and Sustainable Development

4. **Achieving the SDGs requires the use of vast amounts of data.** Countries need information and evidence to be able to track the progress and to identify the outcomes of their policies and strategies to implement the 17 Global Goals.[1] Data gives real-time insight on progress towards the SDGs and is central for measuring the post-2015 232 agreed-upon indictors. Collecting data is hence a major concern for all actors, both public, private and international. Many sources of data can be used to that effect, including municipality data, medical records, household surveys, and so on.

5. **Valid and reliable data is the bedrock of efficient policymaking and is central in matters of accountability and the monitoring of progress towards the achievement of the SDGs.** Accurate data and statistics will be central for the successful implementation of the 2030 Agenda, and all countries need improvement in data collection.

   Technological leaps and the move towards e-governments have improved potentials for data collection and storage. New sources of data and approaches to analytics are currently being applied in support of the Agenda of Hope. In fact, a voluminous amount of data has already been created in the past two years, one which is expected to increase of approx. 40% every year.[2]

[1] OECD, *Measuring Distance To The SDG Targets An Assessment of Where OECD Countries Stand*, report (2017), 4-5, URL: http://www.oecd.org/sdd/OECD-Measuring-Distance-to-SDG-Targets.pdf

[2] "90% of the data in the world has been created in the last two years", Source: United Nations, "Big Data for Suitable Development", (2017), URL: http://www.un.org/en/sections/issues-depth/big-data-sustainable-development.html

III. Data and Tax Administrations

6. **Technology has increasingly altered the landscape of tax administrations.** In order to optimize revenue collection, authorities are increasingly relying on recent leaps in technology including Artificial Intelligence (AI), Big Data, digitalization, automation systems, analytics, mobility, cloud computing, etc. The most common tax system reform feature was the emergence and implementation of electronic services such as e-invoicing, e-accounting, e-reporting, e-payment, and e-auditing. Such services have allowed the fulfillment of tax obligations electronically and in real-time, consequently reducing costs in terms of both time and money.

7. **These trends have empowered tax authorities, increased taxpayers' satisfaction and extended the boundaries of data collection through the modernization of services and the optimization of tax collection operations.** Tax authorities and taxpayers have both benefited from e-services as the latter has minimized compliance-related costs. Simultaneously, tax authorities are able to collect large amounts of data in or near real-time, to analyze it, and to use such analyses in order to inform policy formulation.

8. **The effectiveness of tax records is hence not limited to tax collection and tax policies**. Tax records collected daily by tax authorities are processed and kept in databases, and can therefore be used in predictive modeling, regressive analyses, and other statistical methods that enhance the quality of national statistics systems (NSS) and contribute to more effective policymaking processes that are not necessarily tax-

IV. The Input of Tax Data

Types of data retrieved from tax systems

9. **A wide range of information concerning each taxpayer is being collected by tax authorities and include:**
   i. Financial information including balance sheets, financial statements, net business profit information, and charitable contributions made by organization or individuals.
   ii. Demographic information including addresses, names, marital statuses, names and number of children, unemployment statuses, education expenditures, disability statuses, retirement statuses, physical relocation, medical expenses, and military statuses etc.
   iii. VAT information related to sales, purchases, new businesses, imports and exports.

Tax authorities capitalize on such information to inform tax policies and to analyze their impact.

Tax Data and the SDGs

10. Tax data could give empirical insight concerning taxpayers and could help identify trends that characterize different patterns and behaviors. Consequently, **tax data can be used as input for the measuring of several indicators that are directly or indirectly related to the SDGs or their related targets.** Tax records provide researchers with input that can be considered as essential for the formulation and analysis of policies geared towards the achievement of the 2030 Agenda.

11. Six examples retrieved from several case studies showcase how tax data can serve as raw material for measuring socioeconomic indicators, as per the below table:

Goals	*Case Study*
SDG 3: Ensure healthy lives and promote well-being for all at all ages	• Several data categories were collected from tax databases, including social security numbers (SSN), number of children in each family, parents' insurances, incomes of young adults, parental incomes, gender, marital statuses, and other, in order to examine the impact of insurance policy on childbearing. The analysis of the data allowed public authorities to assess the impact of the healthcare system in place and to evaluate the efficiency of alternative solutions. Such assessment can serve as input towards the achievement of SDG-3.[3]
SDG 5: Achieve gender equality and empower all women and girls	• In another study, tax records such as parents' incomes, marital statuses, addresses, as well as employment data, have contributed to a more thorough empirical assessment of the root causes of the gender gap, and have even allowed for rather unexpected and unconventional conclusions, which could serve as inputs for policies geared towards the achievement of Gender Equality (Goal-5). Among the conclusions figured the assertion that gender gaps in adulthood are rooted in childhood and have more negative long-term effects on boys than on girls, particularly in disadvantaged families. Indeed, gender gaps were correlated with the regions and the commuting zones in which the children were brought up.[4]
SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	• A recent study used information provided by tax records, and more particularly yearly earnings (wages and self-employment) and tax payments datasets to highlight the effect of childcare on parental labor supply. Nonetheless, tax records were combined with other databases such as municipality records for increased accuracy. The analyses have shown that childcare affected the labor supply from the mothers' side but did not seem to affect the labor supply of fathers or grandparents. The results also point out the value of the labor supply and employment rates, which are considered as indicators related directly to economic growth, hence to the 8th Global Goal. [5]
SDG 10: Reduce inequality within and among countries	• In 2015, the OECD published a study on income inequality and mobility whereas tax records allowed for a more effective understanding of the distribution and mobility of incomes, which can in turn help inform better policies that promote equity and stimulate economic growth, hence directly contributing to the achievement of Goal 10. The records contained tax information declared by both employers and taxpayers, which helped assess the size of the labor market and the concentration of market income at both ends of income distribution as well as trends during the crisis. Policymakers can hence capitalize on tax data to inform policies geared towards reducing

[3] Bradley Heim, Kosali I Simon, and Ithai Lurie, "The Impact of the Affordable Care Act Young Adult Provision on Childbearing, Marriage, and Tax Filing Behavior: Evidence from Tax Data," NBER Working Paper, no. 23092 (January 2017). URL: http://www.nber.org/papers/w23092.pdf

[4] Chetty, Raj, Nathaniel Hendren, Frina Lin, Jeremy Majerovitz, and Benjamin Scuderi. "Childhood Environment and Gender Gaps in Adulthood," NBER WORKING PAPER SERIES (January 2016), URL:http://www.nber.org/papers/w21936.pdf

[5] Martin Eckhoff Andresen, and Havnes Tarjei. "Child Care, Parental Labor Supply and Tax Revenue." Discussion Paper Series, no. 11576 (May 2018). URL: http://ftp.iza.org/dp11576.pdf

	inequality in the country.[6]
	• Analyzing a panel based on tax data including demographic information (gender, addresses, marital status, number of children, employment status, retirement status, etc.) and income information (gross income, taxable income, pension contributions, gross and net tax liabilities, tax deductions, tax credits, etc.), allows the assessment of regional income disparities and underlines the large scale of unequal pay between men and women. The results underlined the existence of significant inequalities in income distribution, both at the geographical level and at the level of gender inequality, hence presenting input for SDG-10 as well as SDG-5 policies.[7]
SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable	• Tax records can also allow the study of the impact of natural disasters (e.g. hurricanes) on victims in terms of unemployment rates, savings, participation in the labor market, inclusion in social safety nets, and so on. The input of such analyses can contribute to policies geared towards the achievement of SDG-11, since it presents a demographic and economic assessment of the disaster's impact, which could inform policies geared towards the protection of poor and vulnerable populations all while contributing to the development of safe, resilient and sustainable environments. Such data could also inform policies related to SDG-8, since it would also present input related to economic performance.[8]

12. In light of the above, it is highly recommended that governments begin considering tax data for what it is: an opportunity to inform analyses on a wide range of social and economic issues, hence serving as input for policies geared towards addressing such issues and achieving sustainable development

V. Shortcomings of Tax Data

13. **The use of tax data as an efficient and low-cost source of information in policy formulation faces several limitations. firstly, tax records do not cover the entire population and hence cannot yield fully accurate results.** The information retrieved from tax databases is limited to taxpayers who actually declare their taxes, which hence excludes those entirely reliant on untaxed benefits or undeclared income, a large portion of the workforce in many developing countries.

14. **Tax data may be unavailable or difficult to reach.** National legislation and tax authorities may restrict access to tax data on grounds of confidentiality and privacy. Indeed, according to the OECD, the voluminous amount of information being exchanged in the past few years raise

[6] Seán Kennedy, "Taxes, Income and Economic Mobility in Ireland," OECD Economics Department Working Papers, no. 1269 (2015): 1-9, https://www.oecd-ilibrary.org/docserver/5jrqc6zlgq31-en.pdf?expires=1537802327&id=id&accname=guest&checksum=923360B15EC95F9B07ACCEFBF301605D

[7] Paolo Di Caro, "The contribution of tax statistics for analyzing regional income disparities in Italy", Department of Finance, Ministry of Economy and Finance Italy, Portsmouth Business School, University of Portsmouth U.K. 2017, URL: http://www.glendon.yorku.ca/repec/uploads/repec/jid/articles/40327.pdf

[8] Tatyana Deryugina, Laura Kawano, and Steven Levitt. "The Economic Impact of Hurricane Katrina on Its Victims: Evidence from Individual Tax Returns." American Economic Journal: Applied Economics, 10, no. 2 (April 2018): 202–233, https://pubs.aeaweb.org/doi/pdfplus/10.1257/app.20160307

the question of confidentiality and privacy. Using tax records for official research requires data disclosure. According to the IMF, some tax authorities share data on taxpayers without identifying the latter in order to address concerns of confidentiality. However, despite this strategy, some information remains will remain easily identified, such as the name of the biggest bank or the richest person in the country.[9] The greatest challenge remains bridging the need for data for the achievement of the SDGs on one hand, and the need to respect privacy and confidentiality on the other.

VI. Conclusion

15. **Accurate and efficient data is at the core of policy-making and accountability**. It allows tracking progress on the 2030 Agenda and can serve as a base for new strategies for the achievement of the SDGs. With the implementation of modern tools such as e-Government, data collection has increased and authorities currently own a wide database concerning individuals, companies, organizations etc.

16. **E-services extended the boundaries of data collection.** The volume of data annually collected has greatly increased and is increasingly managed and analyzed by tax authorities as input for tax policies, which could lead to sustainable increases in tax revenues. However, the ability to provide input for tax policies is not the only advantage of tax records. Tax data is valuable for analytics and official statistical reports as well since it contains vast sets of information about taxpayers (demographic, financial, etc.). Studying tax records can provide input for the elaboration of policies targeting the achievement of the SDGs. Therefore, governments should consider tax data as a source of information to inform analyses on a wide range of social and economic issues, hence serving as input for policies geared towards addressing such issues and achieving sustainable development.

17. **Governments are expected to invest in technical expertise, training and capacity building.** The following recommendations can serve as a roadmap for the promotion of the use of tax data in policy formulation for the achievement of the SDGs:

    a- **Enhancing technical capacity of authorities and providing the right technical tools to enhance tax data collection.** Reforming tax systems is therefore crucial for the collection of valid and reliable data. All authorities should focus on digitalizing the structure of their taxation systems and automate their processes in order to collect tax data. Establishing such mechanisms within tax authorities and offering electronic services is therefore necessary for the creation of resourceful tax database.

    b- **Such reforms require investments.** Finding the financial resources to improve capacities and develop policymaking is one of the major challenges that governments have to deal with. Authorities need to fund national statistics agencies and data collection mechanisms. They could consider several funding options including World Bank funds (SRF-CF and ECOSTAT) or they could dedicate a part of ODA to statistical capacity-building activities.

    c- **Building Human Capacities is essential in public administrations.** Such investments cannot improve tax collection, increase revenue and widen data collection without the

[9] Lisabeth Rivas and Joe Crowley, *IMF Working Paper Using Administrative Data to Enhance Policymaking in Developing Countries: Tax Data and the National Accounts*, report (Internal Monetary Fund), 6-7, URL: https://www.imf.org/en/Publications/WP/Issues/2018/08/02/Using-Administrative-Data-to-Enhance-Policymaking-in-Developing-Countries-Tax-Data-and-the-46054

competencies, expertise and skills of civil servants. Capacity building for civil servants, particularly the staff of tax authorities, should be prioritized. In light of the above, national and international institutes and training schools can intervene among side public administrations such as Ministries of Finance in order to provide them with technical assistance and capacity building. Among these institutes figure UNESCO (Institute for Research and Development in Informatics), the IMF institute for capacity development, the ISI (International Statistical Institute), the Arab Institute for Training and Research in Statistics, and UNTCAD.

d- Quality data requires the combination of multiple records. Tax records are limited to taxpayers and exclude individuals that depend on untaxed benefits or undeclared incomes. In addition, tax evasion and tax gaps remain problematic. Tax data should be therefore combined with other types of data such as municipality records, heath records, household surveys, etc. The integration of tax data with other data could generate valid and reliable, timely and relevant information.

18. **CEPA can have a major role in assisting governments in realizing the above recommendations.** CEPA is also concerned with human capital development, participatory governance and public administration innovation. It can hence promote the expansion, analysis, and use of collected data through capacity building, technical assistance, training, financial support. Key focus on countries with a serious lack of data ought to be granted.

19. Assisting countries, more particular LDC's, in building institutional capacities in order to be able to collect, analyze and use data retrieved from e-government services can provide countries with smart investments in ICT infrastructure (Information Communication Technology) and can offer the required technical assistance and political advice for the effective implementation of e-government services.

20. While there is no doubt that all the solutions underlined can be beneficial for the implementation of SDG-focused policies, the critical obstacle that remains to be considered is the need to protect the privacy and confidentiality of taxpayers.

References:

Deryugina,Tatyana, Kawano, Laura, and Levitt, Steven. "The Economic Impact of Hurricane Katrina on Its Victims: Evidence from Individual Tax Returns." American Economic Journal: Applied Economics, 10, no. 2 (April 2018): 202–233, https://pubs.aeaweb.org/doi/pdfplus/10.1257/app.20160307

Di Caro, Paolo, "The contribution of tax statistics for analyzing regional income disparities in Italy", Department of Finance, Ministry of Economy and Finance Italy, Portsmouth Business School, University of Portsmouth U.K. 2017, URL: http://www.glendon.yorku.ca/repec/uploads/repec/jid/articles/40327.pdf

Eckhoff Andresen, Martin, and Tarjei, Havnes. "Child Care, Parental Labor Supply and Tax Revenue." Discussion Paper Series, no. 11576 (May 2018). URL: http://ftp.iza.org/dp11576.pdf

Hammer, Cornelia, Kostroch, Diane C, and Quiros, Gabriel, "Big Data : Potential, Challenges and Statistical Implications," September 13, 2017, URL: https://books.google.com.lb/books?hl=en&lr=&id=irhADwAAQBAJ&oi=fnd&pg=PP1&dq=Big+Data+:+Potential,+Challenges+and+Statistical+Implications,&ots=FnVDqHo_ZK&sig=lG3PE3PmfywJvLKAvwWTCoO16Kc&redir_esc=y#v=onepage&q=Big%20Data%20%3A%20Potential%2C%20Challenges%20and%20Statistical%20Implications%2C&f=false

Heim, Bradley, Simon, Kosali I, and Ithai Lurie, "The Impact of the Affordable Care Act Young Adult Provision on Childbearing, Marriage, and Tax Filing Behavior: Evidence from Tax Data," NBER Working Paper, no. 23092 (January 2017). URL: http://www.nber.org/papers/w23092.pdf

Kennedy, Seán, "Taxes, Income and Economic Mobility in Ireland," OECD Economics Department Working Papers, no. 1269 (2015): 1-9, https://www.oecd-ilibrary.org/docserver/5jrqc6zlgq31-en.pdf?expires=1537802327&id=id&accname=guest&checksum=923360B15EC95F9B07ACCEFBF301605D

OECD. *Measuring Distance To The SDG Targets An Assessment of Where OECD Countries Stand*. Report. 2017. URL: http://www.oecd.org/sdd/OECD-Measuring-Distance-to-SDG-Targets.pdf

Public Institutions and Digital Government Department of Economic and Social Affairs. URL: https://publicadministration.un.org/en/projects

Raj, Chetty, Hendren, Nathaniel, Lin, Frina, Majerovitz, Jeremy, and Scuderi, Benjamin. "Childhood Environment and Gender Gaps in Adulthood," NBER working paper series (January 2016), URL:http://www.nber.org/papers/w21936.pdf

Rivas, Lisabeth, and Joe Crowley. *IMF Working Paper Using Administrative Data to Enhance Policymaking in Developing Countries: Tax Data and the National Accounts*. Report. Internal Monetary Fund. URL: https://www.imf.org/en/Publications/WP/Issues/2018/08/02/Using-Administrative-Data-to-Enhance-Policymaking-in-Developing-Countries-Tax-Data-and-the-46054