Taxing Earnings from the Platform Economy: An EU Digital Single Window for Income Data?

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ABSTRACT

Income earned through gig platforms, letting platforms, and other digital intermediaries presents new challenges for taxation. This article evaluates the efforts of three European Union Member States – Denmark, Estonia, and France – to obtain data on platform users’ earnings directly from platform companies, including Uber, Airbnb, and domestic platforms. The authors furthermore assess the viability of scaling up the national initiatives into an EU-level “Digital Single Window” that would facilitate the automated reporting of income data by platforms, and the forwarding of that data to national tax and social security agencies for taxation and collection according to national rules.

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I. Introduction

Digital transaction platforms, such as Uber, Airbnb, Deliveroo, and Upwork, have emerged as a new source of income for private individuals. It is difficult to estimate the size of the platform economy for various reasons including the fact that it is often a source of secondary income and the income earned is not consistently reported to tax authorities.¹ According to some estimates, the gig economy² in the European Union alone generated €3.6 billion in revenue in 2015 while the online outsourcing was projected to grow to \$4.8 billion in 2016.³ Some platforms offer work in exchange for income, while others allow people to provide services or rent out property. These new income sources present new challenges for tax and social security systems. This is especially the case for so-called gig economy or labour platforms.

Platform work refers to “all labour provided through, on, or mediated by platforms, and which features a wide array of standard and non-standard working arrangements/relationships.”⁴ It is typically “a way of working that is based on people having temporary jobs or doing separate pieces of work, each paid separately, rather than working for an employer.”⁵ Platform work includes both localized gig work such as taxi and food delivery services provided through

¹ Otto Kässi and Vili Lehdonvirta, ‘Online Labour Index: Measuring the Online Gig Economy for Policy and Research’ (2018) 137 *Technological Forecasting and Social Change* 241, 242.

² Comprising crowd funding, asset sharing, transport, on-demand household services, and on-demand professional services.

³ See Abigail Hunt and Emma Samman, ‘Gender and the Gig Economy’ (2019) ODI Working paper 546 10 <<https://www.odi.org/sites/odi.org.uk/files/resource-documents/12586.pdf>> and Siou Chew Kuek and others, ‘The Global Opportunity in Online Outsourcing’ (World Bank 2015) Report No ACS14228 3 <<http://documents.worldbank.org/curated/en/138371468000900555/pdf/ACS14228-ESW-white-cover-P149016-Box391478B-PUBLIC-World-Bank-Global-OO-Study-WB-Rpt-FinalS.pdf>> accessed 9 January 2020.

⁴ Sacha Garben, ‘Protecting Workers in the Online Platform Economy: An Overview of Regulatory and Policy Developments in the EU - Safety and Health at Work - EU-OSHA’ (European Agency for Safety and Health at Work (EU-OSHA) 2017) European Risk Observatory Discussion paper ISSN: 1831-9343 13 <<https://osha.europa.eu/en/publications/protecting-workers-online-platform-economy-overview-regulatory-and-policy-developments/view>> accessed 23 December 2019.

⁵ <https://dictionary.cambridge.org/dictionary/english/gig-economy>

platforms like Uber and Deliveroo, as well as web-based platform work such as graphic design and data entry through platforms like Fiverr and Upwork.

While it is not a main source of employment, platform work is growing rapidly. According to one study, platform work is the main source of income for approximately two percent of adults across 14 EU member states, while up to eight percent earn occasional income from it.⁶ Platform work has thus gained a foothold in European labour markets.

II. Taxation and Social Security Protection of Platform Workers

The rapid development of platforms presents policymakers with new challenges; these novel ways of organising work are challenging how we collect taxes and social security contributions. Consequently, there is a risk that a significant amount of platform work is not fully taxed, and that platform workers are not adequately covered by social security systems, with future adverse consequences to individuals and public finances.⁷

Part of the difficulty of taxing and extending social security coverage to platform workers stems from their complicated employment status. In most, but not all, instances, platform workers are classified as self-employed contractors.⁸ The self-employed tend to be significantly less tax compliant than employees whose salaries and wages are subject to employer withholding scheme, a fact that is well-documented in tax evasion literature.⁹ Non-compliance by the self-

⁶ Annarosa Pesole and others, 'Platform Workers in Europe' (Publications Office of the European Union 2018) EUR 29275 EN 3 <ISBN 978-92-79-87996-8, doi:10.2760/742789, JRC112157> accessed 23 December 2019.

⁷ High-Level Expert Group on the Impact of the Digital Transformation on EU Labour Markets, 'The Impact of the Digital Transformation on EU Labour Markets' (2019) Report Commissioned by the European Commission ISBN 978-92-76-02072-1 doi: 10.2759/586795 KK-01-19-339-EN-N 43 <<https://ec.europa.eu/digital-single-market/en/news/final-report-high-level-expert-group-impact-digital-transformation-eu-labour-markets>> accessed 23 December 2019.

⁸ For purposes of this paper, we assume that the vast majority of platform workers are regarded as self-employed under the law. However, we acknowledge the limits of this assumption because of the diversity of employment categories in various countries.

⁹ Milka Casanegra de Jantscher and Vito Tanzi, *Presumptive Income Taxation; Administrative, Efficiency, and Equity Aspects* (International Monetary Fund 1987); Benno Torgler, 'The Importance of Faith: Tax Morale and Religiosity' (2006) 61 *Journal of Economic Behavior & Organization* 81; Joel Slemrod, 'Cheating Ourselves: The Economics of Tax Evasion' (2007) 21 *Journal of Economic Perspectives* 25; Benno Torgler and Neven T Valev, 'Gender and Public Attitudes Toward Corruption and Tax Evasion' (2010) 28 *Contemporary Economic Policy*

employed is often a result of a combination of factors including high compliance costs and inadvertent underreporting. The self-employed often have little tax knowledge, struggle to navigate complex compliance rules, and cannot afford high compliance costs such as the cost of a qualified accountant or tax advisor. They also have an increased opportunity for outright evasion because they can more easily under-declare their income, exaggerate their deductible expenses, or operate wholly in the shadow economy.

In addition to these general challenges, tax and social security compliance by platform workers is complicated by the fact that they are often involved in multiple simultaneous engagements, possibly on different terms, and therefore may have different employment statuses even within one country. Platform workers can, moreover, provide labour in multiple jurisdictions thereby earning income that may be taxable in more than one state, and subject to different rules on deductibility of expenses in those jurisdictions. A further complication arises when one attempts to apply a progressive income tax to platform income earners, even within a jurisdiction, and more so across borders. Finally, in the EU, these complexities are compounded by the fact that companies operating the platforms are often based outside the Union.

Thus, proliferation of platform work and other types of platform income pose significant revenue mobilisation challenges for tax and social contribution agencies and, if improperly managed, could contribute to an increase in the shadow economy. Non-compliance could also result in an unfair competitive advantage for firms utilizing platform work and platform-based

554; Henrik Jacobsen Kleven and others, 'Unwilling or Unable to Cheat? Evidence from a Tax Audit Experiment in Denmark' (2011) 79 *Econometrica* 651; Christoph Kogler, Stephan Muehlbacher and Erich Kirchler, 'Testing the "Slippery Slope Framework" among Self-Employed Taxpayers' (2015) 16 *Economics of Governance* 125; Ana Cinta G Cabral, Christos Kotsogiannis and Gareth Myles, 'Self-Employment Income Gap in Great Britain: How Much and Who?' CESifo Economic Studies <<https://academic.oup.com/cesifo/advance-article/doi/10.1093/cesifo/ify015/5032456>> accessed 12 October 2018; Arun Advani, William Elming and Jonathan Shaw, 'The Dynamic Effects of Tax Audits' [2017] IFS Working Paper W17/24 39; Daisy Ogumbo, 'Are Presumptive Taxes a Good Option for Taxing Self-Employed Professionals in Low and Middle-Income Countries?' (2019) 5 *Journal of Tax Administration* <<http://jota.website/index.php/JoTA/article/view/233>> accessed 25 August 2019.

models of providing accommodation and other services. Moreover, “[i]f a sizeable segment of the population does not pay social contributions or insurance and underpays on tax and pensions, this will eventually negatively impact the ability of national social protection systems to provide public goods and social benefits, while the demand for those benefits will increase.”¹⁰

To address these challenges, some EU member states have embarked on initiatives to obtain data on platform users’ earnings directly from the platform companies. The objective of the authors in this paper is to construct case studies depicting the efforts by three Member States’ to obtain income data from platforms and then assess the viability of upscaling those national initiatives by developing an EU-level “Digital Single Window” that would facilitate the automated reporting of income data by platforms, and the forwarding of that data to national tax and social security agencies for taxation and collection according to national rules.

III. Methodology

To achieve the objectives of this study, the authors used a case study approach. The authors began by selecting three member states that have initiated efforts to gain income data directly from platform companies. The authors then used qualitative data from desktop research and a small number of unstructured interviews with key experts from each country to construct a case study of each country’s efforts in this area (informants are listed in Table 2 at the end of this article). The case studies aim to highlight the most salient aspects of each case and identify the history, motivation, objectives, design characteristics, and functionalities of the data reporting systems, as well as the relevant stakeholders, administrative and infrastructure requirements, costs, and any evaluation results. Cross-case analysis was then conducted to identify potential gains that could be achieved and difficulties or risks that would be encountered if the individual

¹⁰ R Florisson and I Mandl, ‘Platform Work: Types and Implications for Work and Employment – Literature Review’ (2018) Working paper WPEF18004 Eurofound 100.

national efforts were replaced with an EU-level approach. Based on the findings, the authors put forward two alternative models of an EU Digital Single Window.

The three countries selected for case studies were Denmark, Estonia, and France. These countries were selected for study because of the unilateral initiatives that they had taken to set up reporting systems for obtaining income data from platforms for the purposes of taxation and social security contributions. Other EU member states have also taken steps in this direction; for instance, there are plans in the United Kingdom for a potential “system equivalent to PAYE for self-employed platform workers (without affecting their employment status)”.¹¹ However, the three selected cases are among the most advanced in this respect.

Denmark is an interesting case because of its commitment to developing a technologically sophisticated mandatory automated income reporting system, the technology of which could be later shared with other member states. Denmark’s Ministry of Taxation (SKAT)¹² is developing an application programming interface (API) through which platforms can report data directly into its systems. Although the Danish reporting system is not yet operational, the API is at an advanced design stage and is going through technical pilots. Estonia provides a good comparison to the Danish case because it operates a voluntary semi-automated system whereby platforms share income data with the tax agency (ECTB) digitally via email. Unlike the Danish fully automated system that has only been tested in pilot projects, the Estonian semi-automated system has been operational since 2017. In France, the data reporting system has only just been legislated for, and the case study does not include details of its technical implementation. The authors nevertheless include France as a concise case study that focuses

¹¹ Office of Tax Simplification, ‘Platforms, the Platform Economy and Tax Simplification’ (2018) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729322/OTS_platform_paper.pdf> accessed 7 January 2020.

¹² Denmark has a Ministry of Taxation that consists of nine specialised agencies. One of the agencies, the IT and Development Agency, is developing the data reporting system in collaboration with other agencies. For simplicity, we will refer to the whole and its parts as SKAT.

more on the legislative history and details because the aims of its new legislation appear ambitious and cover taxation as well as social security coverage of platform workers. The differences in the social security systems of the three countries are also notable and have implications for their data reporting systems.

The platform economy consists of many types of platforms, from gig economy and web-based labour platforms to property letting and services. The national systems have diverse foci in terms of what kinds of platforms they target. In the case of Denmark, the data reporting system will initially apply only to letting platforms¹³, with labour platforms intended to follow later. In Estonia, the voluntary system is currently used only by gig economy and letting platforms, even though, in principle, web-based labour platforms could also use it. In France, the system is intended to apply to all kinds of labour platforms. Regardless of the specific foci of these national initiatives, many of their experiences are likely to be applicable to obtaining user income data from all kinds of platform companies.

IV. The Platform Income Reporting System in Denmark

“There are approximately 140 multi-sided platforms, including the peer-to-peer online platforms, operating in Denmark... with around 4 % of the population involved in supplying such services.”¹⁴ At the same time, there has been very little regulatory response to the platform economy in Denmark.¹⁵ The number of platforms operating in Denmark is a testament to the fact that the government is not necessarily averse to innovative businesses; however, like other

¹³ In order to crack down on underdeclared income earned from casual sub-lets through platforms such as Airbnb.

¹⁴ OECD, *The Sharing and Gig Economy: Effective Taxation of Platform Sellers: Forum on Tax Administration* (OECD Publishing 2019) 18 <https://www.oecd-ilibrary.org/taxation/the-sharing-and-gig-economy-effective-taxation-of-platform-sellers_574b61f8-en> accessed 29 August 2019.

¹⁵ Anna Ilsoe and Louise Weber Madsen, ‘Industrial Relations and Social Dialogue in the Age of Collaborative Economy (IRSDACE): National Report Denmark’ (2018) FAOS Research Paper 163 4.

member states, Denmark has struggled to reconcile its traditional regulations with the business models of platforms such as Uber.¹⁶

In collecting income data from platforms, the Danish Ministry of Taxation (SKAT) has adopted two approaches: conducting ordinary targeted tax audits in order to get income data for previous tax years and setting up an automated income reporting system for future use with potentially all platforms. The idea of an automated income reporting system was driven by demand from Danish platforms, citizens, politicians, and various government departments, who desired a solution to address the lack of automatic reporting of income earned through platforms.¹⁷ Today, the solution is at an advanced stage of development, with a technical pilot involving several platforms ongoing. The purpose of the technical pilot is to investigate the technical feasibility of having an automated reporting scheme and technology to support platforms and taxation.

The technical pilot, together with other initiatives by SKAT, led to the recognition that new legislation was needed for collection of income data for tax purposes, with a new law being passed on 20 December 2018 stating that digital platforms that facilitate letting of property (homes, cars, etc) should report all income earned by users of the platforms to the Danish tax authorities.¹⁸ Gig work platforms were also considered but excluded from the scope of this initial legislation because of Denmark's complex social security legislation.¹⁹

Indeed, it has turned out to be challenging to secure gig economy workers within Denmark's comprehensive but complex social security system. The social security system relies on assumptions that are not in tune with the realities of gig work as it is practiced in Denmark

¹⁶ *ibid* 10–11.

¹⁷ Interview with Martin Christian Buur, Officer in the Danish Agency for Development and Simplification, part of the tax administration (Telephone Interview, 7 October 2019).

¹⁸ *ibid*.

¹⁹ *ibid*.

today. Determining social contributions due from income earned from letting is less complex, and therefore the initial data reporting legislation focused on letting.²⁰ There is no technical or data related barrier to including labour platforms in the automatic data reporting system; rather, the challenge is in determining how social security ought to work for gig workers in the first place.²¹

Several non-letting platforms have also sought to join the automatic income reporting initiative to lessen the compliance burden on their users, but they have had to be turned away because of these legislative and administrative limitations.²² These Danish service or web-based platforms are demanding to be included in the legislation and want to be part of the group that benefits from the new API system, but at this time the law does not facilitate their involvement. However, the Danish government is looking at how to urgently address this challenge.

Technical Implementation

SKAT is building an API that is similar to what platform companies are used to using when interfacing with external systems,²³ so that there are minimal additional compliance obligations for the platforms.²⁴ SKAT's key priority is to make compliance as easy as possible so as not to disadvantage Danish platforms, since large international platforms are more likely to easily navigate complex compliance obligations than domestic ones. Under Danish law, if a company or other entity is required to report income to SKAT, the citizen is obligated to facilitate this;²⁵

²⁰ *ibid.*

²¹ According to Martin Christian Buur (n 17), due to the tax-positive attitude in Denmark, several non-letting platforms have sought to join the automated income reporting initiative, but they have had to be turned away because of these legislative and administrative limitations. However, the Danish government is urgently working to address this challenge.

²² Interview with Martin Christian Buur (n 17).

²³ In technical terms, the API is made available to platform companies as a RESTful web service.

²⁴ SKAT's intention is to have the system operating in July 2020, spend six months educating platform operators and internal staff, and then receive the first official income data in 2021.

²⁵ Interview with Martin Christian Buur (n 17).

thus, there are no legal barriers to automatic income data reporting even without express consent from the taxpayer.

SKAT consulted platforms regarding whether they preferred annual or transaction-based reporting; based on the feedback they received, the preferences were equally split between the two options. SKAT has therefore built a system that can be utilised for both types of reports; all platforms must report income earned by their users by the 20th of January, but can opt to do so in one go or throughout the year on a per-transaction basis.²⁶ As per SKAT's existing practice, they will make the income data available to other government authorities for purposes such as calculating social security contributions.

Figure 1: Design of the Danish tax authority's (SKAT) system for receiving automated income data from platforms.

The type of data expected to be collected through the API is quite simple; SKAT will not know who the users let their property to, but they will know the income year, taxpayer identity, address, and the amount of money that the user received. SKAT has built a system where users first verify their identity through a portal maintained by SKAT when signing up for or logging in to the platform, after which the portal sends the platform a token number, which the platform can use to identify the user to SKAT. The token number that the platform receives is meaningless in the hands of anyone else, but it is a stable identity number that SKAT can link

²⁶ *ibid.*

to the user's social security number.²⁷ The overall design of the system is illustrated in Figure 1.

The 2018 legislation allows letting platforms that do not have a registered presence or a permanent establishment in Denmark to operate as if they did, for purposes of submitting their users' income data. Since SKAT would find it extremely difficult to enforce the legislation if such platforms chose not to comply, the legislation incentivises these platforms by providing that the users whose platforms report their income directly enjoy a higher income threshold before they become liable for tax on their earnings.²⁸ This approach seems to have been successful: in 2018 a letter of intent was signed between the Danish Ministry of Taxation and Airbnb (which lacks a registered presence or permanent establishment in Denmark), where Airbnb consented to using this system, stating that they were keen to support any initiative that would enhance transparency in the platform economy.²⁹

The start-up costs of the API system is significant; the Danish government has invested approximately 40 million Danish kroner (€6.8m) to develop the system. A large part of the investment has gone into developing technology to convert data generated by platforms into formats compatible with the old information systems in the tax agency. However, this investment is comparable in size to other development projects within the tax administration. Regarding running costs, at this time SKAT does not expect a lot of manual work to be necessary on the data, but this all depends on the quality of the data that they ultimately receive from platforms. Thus, it is difficult to estimate the running costs until the system is adopted by all platforms.

²⁷ *ibid.*

²⁸ Ilsøe and Madsen (n 15) 19.

²⁹ Interviews with Anna Ilsøe, Associate Professor at the Employment Relations Research Centre (FAOS) University of Copenhagen (Telephone Interview, 10 September 2019) and Martin Christian Buur (n 14).

V. The Platform Income Reporting System in Estonia

In 2014, fee-paying transport services between private individuals through platforms such as Uber, Lyft and Bolt (Taxify) were banned in France, and some other European countries quickly followed the precedent. Uber, perhaps keen to create at least one success story in Europe and demonstrate that Uber could partner with European governments to craft a positive relationship, worked closely with the Estonian government to develop a more permissive regulatory framework. The Estonian government had been cultivating a reputation for embracing technology and being solution-oriented and forward-looking when it comes to technology. Thus, the two parties had a common interest to “promote the Government’s e-Estonia action plan [and] Uber’s innovative technology platform.”³⁰

Against this background, on 9 October 2015, the Estonian Tax and Customs Board (ETCB) and Uber announced that they were “setting up a working group to analyse collaboration points between Uber’s global cash-free service and the ETCB’s contactless reporting scheme in order to offer new ways of paying tax liabilities in the transport sector.”³¹ The primary objective of this joint effort was to develop an income data reporting system that would simplify the tax declaration process for Uber drivers, in line with the Estonian government’s priority to minimise bureaucracy and facilitate automatic tax reporting for businesses and entrepreneurs.

The voluntary income reporting system has been operational since the 2017 tax year. It is not limited to the ride sharing sector; all platform operators can use the system if they wish. For instance, Airbnb has adopted the system. However, so far, there has been no up-take by international web-based labour platforms. This disparity means that income earned by

³⁰ Mailin Aasmäe and Estonian Tax and Customs Board, ‘ETCB and Uber Collaborate in Seeking Solutions for the Development of the Sharing Economy’ (9 October 2015) <<https://www.emta.ee/eng/etcb-and-uber-collaborate-seeking-solutions-development-sharing-economy>> accessed 7 January 2020.

³¹ *ibid.*

Estonians working through web-based platforms such as Upwork and Fiverr is still invisible to ETCB, unless the workers choose to report it themselves.

Right from the start, ETCB was keen to build trust-based relationships with platform owners and to encourage voluntary trust-motivated compliance rather than mandatory fear-based compliance. Indeed, ETCB opted for a voluntary system based on the belief that introducing a new system and making it mandatory would result in resistance and backlash.³² ETCB was keen to assess the tax morale of platform users and to determine whether people genuinely want to pay tax and are simply inhibited by complex administrative processes.³³ The Estonian tax administration system is motivated by a service ethos and this ethos greatly influenced the decision to present the system as a voluntary one before slowly transitioning to a mandatory system.

Technical Implementation

The Estonian reporting system is a *voluntary semi-automated* system.³⁴ ETCB has partnered with participating platforms to create an inbuilt feature in the platform's user interface that allows the platform user to select the option to have their annual income, earned through the platform, reported directly to ETCB.

For instance, in the Bolt ride hailing app, drivers can choose to push a button inside the app every January to automatically report their income earned through the app to the tax authority. The income will then appear on the driver's pre-filled e-tax return in February. In the case of Airbnb, the platform sends out a communication to users every December, inquiring whether they wish to opt in to have their income for the previous year reported to the tax agency.³⁵

³² Interview with Evelyn Liivamägi, Head of the Tax Department at the Estonian Tax and Customs (Skype Interview, 27 September 2019).

³³ *ibid.*

³⁴ *ibid.*

³⁵ *Ibid.*

Figure 2. Design of the Estonian tax authority's (ETCB) system for receiving automated income data from platforms, as it was piloted with Uber.³⁶

Ensuring that the system is straightforward, and the requirements are not onerous, was a key priority for ETCB. Thus, the income reporting requirement is designed to involve just one reporting event a year, and the information that platforms are asked to report is kept at a minimum, i.e., ETCB only requires the personal identification code and income earned. The data held by the platform is encrypted and sent to ETCB via email.³⁷ The email is manually opened, and the data entered in bulk to ETCB's information system. From there onwards the data flows into ETCB's existing automated process for producing pre-filled tax returns. Overall the process is thus semi-automated. An illustration of the existing arrangement is set out in Figure 2 above.

The introduction of a special business account and presumptive tax regime³⁸, which covers social and pension contributions, for natural persons who earn income through platforms has

³⁶ Märt Loite, 'E-Stonian Look at: Collaborative Economy' (eCommerce Experts Group, 13 October 2016) <<https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=26192&no=8>> accessed 7 January 2020.

³⁷ *ibid.*

³⁸ Note that, eligibility for the simplified tax regime is not limited to platform workers. It is designed for individuals who earn income only through the special business account to ensure that as long as the minimum social contribution is made, one also has social security that is equal to workers with regular labour contracts.

further lowered the tax burden for these taxpayers and enhanced the uptake and effectiveness of the income reporting system.³⁹ Thus, drivers providing services through ride sharing platforms have three taxation options described in Box 4:

Box 1: Taxation of Drivers Providing Services through Platforms in Estonia⁴⁰

- OPTION 1: Platform drivers who offer *occasional driving services*, can choose to report their income from such services as “other income” on their annual income tax return, and be taxed according to the ordinary tax rules. The user would not be allowed to deduct any expenses, including but not limited to, platform service fees, car repair charges and fuel.
- OPTION 2: Alternatively, platform drivers who earn up to €40,000 a year can choose to have their income taxed under the presumptive tax regime. Under this regime, platform users pay 20% on gross income for amounts up to €25,000 per year and 40% on gross income for amounts exceeding €25,000 per year. These taxpayers open a special business account and the tax is paid via this account; the bank automatically reserves a fixed percentage of the income to cover taxes and transfers it to the tax agency. This tax covers social tax and contributions to mandatory funded pension; in addition, the platform user is not expected to keep books of accounts or deduct expenses, keeping the compliance requirements simple.
- OPTION 3: Platform drivers providing *regular services* should register as sole proprietors or private limited companies. Their income would be taxed as ordinary business income, subject to relevant deductions. They would also be liable for VAT, labour taxes, social tax, unemployment insurance, and mandatory pension deductions.

The Estonian reporting system has been very cost effective. The development cost was low as the system connects to existing semi-automated processes at ETCB for receiving data from institutions for the purposes of pre-filling tax forms. In addition, because the system is

³⁹ Note that this business account and presumptive tax regime applies only to natural persons earning up to €40,000 a year. Platform workers who provide regular services and earn income above the €40,000 threshold are considered to earn business income and are expected to register with the Commercial Register as a sole proprietor or establish a private limited company. Sole proprietors are permitted to deduct business-related expenses from their business income, and are expected to pay income tax, social tax, and if they have joined the mandatory funded pension system, contribute to a mandatory funded pension scheme.

⁴⁰ Estonian Tax and Customs Board, ‘Taxation of the Income of Drivers Providing Taxi Service through a Ride-Sharing Service Platform’ (13 November 2017) <<https://www.emta.ee/eng/private-client/declaration-income/business-income/taxation-income-drivers-providing-taxi-service>> accessed 7 January 2020.

specifically designed not to be burdensome to the reporting party, the compliance costs for the platform operators is kept low, although they did have to implement changes to their user experience. The low compliance and running costs are partly a consequence of the fact that government and institutional databases in Estonia are well integrated and therefore the additional data required from platform users and owners is minimal.

Overall, ETCB views the outcomes of the income reporting system very positively.⁴¹ In 2016, before the system was operational, only 69 taxpayers reported income earned from Uber and Bolt (Taxify), representing a total value of €67,800. In 2017, after the reporting system became operational, the number of taxpayers reporting income through the Uber and Bolt (Taxify) platforms increased to 319, and the total amount declared was approximately €450,000, or almost seven times greater than in the previous year.⁴²

That said, these numbers are still clearly quite small compared to the size of these platforms' operations; Bolt alone has thousands of drivers in Estonia. In part, this discrepancy can be explained by the fact that many drivers who earn significant income through the platform declare their income through a legal entity rather than as individual taxpayers. Bolt suggests that as many as three quarters of the drivers in Estonia, even though most are only part-time drivers, declare their income through companies, presumably to be able to make tax deductions;⁴³ this would leave only a quarter in the target group for the app-based income reporting system.

Still, even considering these numbers, ETCB has concluded that based on their analysis of the numbers, the voluntary participation rate has reached its limit.⁴⁴ To enhance compliance, ETCB

⁴¹ *ibid.*

⁴² Mailin Aasmäe and Estonian Tax and Customs Board, 'Income Declared through Uber and Taxify Has Overwhelmingly Increased' (1 June 2017) <<https://www.emta.ee/eng/income-declared-through-uber-and-taxify-has-overwhelmingly-increased>> accessed 7 January 2020.

⁴³ Email discussion with Martin Villig, Co-founder, Bolt (Taxify) (17 September 2019).

⁴⁴ Interview with Evelyn Liivamägi (n 32).

now wants to move towards a mandatory fully automated reporting system by 2021. A mandatory reporting system would require amendment of the legislation in Estonia because of data protection and privacy rules.

VI. The Platform Income Reporting System in France

“In France, between 200 and 300 peer-to-peer online platforms provide services...The total turnover of these platforms is estimated between EUR 3 and 4 billion.”⁴⁵ Presently, there are no special rules in France that govern the taxation of income earned through platform work; the ordinary tax rules apply. Thus, income earned through platform work is treated in the same manner as “profits and capital gains from self-employed workers which generally fall in the category of industrial and commercial profits (Bénéfices Industriels et Commerciaux – BIC), non-commercial profits (Bénéfices Non-Commerciaux – BNC) or real estate income, whether or not they derive from professional activities within the meaning of the Social Security Code...”.⁴⁶ Income falling under these categories may be taxed under the ordinary tax rules, or—if their income falls below a certain threshold, and they are eligible for the “micro-tax system”—under a simplified tax regime known as the “micro-entrepreneur system”.

*Box 2: Features of the Micro-Tax System in France*⁴⁷

Taxpayers who are eligible for the micro-tax system may opt for:

1. Reporting their gross income in a simplified form.
2. “...benefit from a proportional tax-free allowance on their gross income, which takes into account, in a simplified way, expenses incurred from the activity.”
3. micro-entrepreneur tax system and pay “flat tax in discharge of income tax instead of progressive scale taxation after application of a tax allowance.”
4. ordinary tax rules and tax authority applies the proportional tax-free allowance and thereafter calculates how much tax is due.

⁴⁵ OECD (n 14) 18.

⁴⁶ *ibid* 22. There are some notable exceptions to this: income derived from online platforms for cost-sharing and second-hand sales is subject to different provisions.

⁴⁷ *ibid* 23–24.

A new draft law—the *loi d’orientation des mobilités*—on the special status of platform workers was reintroduced by the government in 2018 and worked its way through the French National Assembly.⁴⁸ The intention is to create a special category for platform workers, an intermediary status between “employee” and “self-employed”.⁴⁹ The French income reporting system is designed around several pillars, outlined below.

Sharing Information with Users

French law requires platforms to inform their users about their tax and social contribution obligations.⁵⁰ In complying with this provision, platforms:

- “are required to provide, each time a transaction is concluded, fair, clear and transparent information about the tax and social contribution obligations of the persons who carry out commercial transactions through them”, and to
- “communicate to their users, in January of each year, a document summarising the gross amount of all known transactions received through them in the previous year.”⁵¹

Complying with the requirements of the system to share information with users is reasonably straightforward for labour platforms such as Upwork and Uber, as well as letting platforms such as Airbnb. But it is much less straightforward for platforms such as YouTube, where users are paid per “click” or per “view”.⁵² Strictly interpreted, the platform may end up sending the user thousands of reports an hour if the user’s content attracts thousands of views in that period. The statutory provision also does not explicitly exempt platforms that are exempt from

⁴⁸ *ibid.*

⁴⁹ Éric Bocquet and others, ‘Taxation and the Collaborative Economy: The Need for a Fair, Simple and Unified Regime’ (Finance Committee 2017) Senate Information Report No. 481 (2016–2017) 22 <<http://www.senat.fr/rap/r16-481-2/r16-481-2.html>> accessed 7 January 2020.

⁵⁰ Article 87 of Finance Act No. 2015-1758 of December 29, 2015, codified in Article 242 *bis* of the General Tax Code.

⁵¹ Article 242 *bis* of the General Tax Code.

⁵² Bocquet and others (n 49) 52.

taxation—such as cost-sharing⁵³ and second-hand sales platforms—from the obligation to send an annual summary of transactions to users. It is arguable that such a statement sends a confusing signal to users and could cause them to think that they ought to pay tax on the gross income, while a wholesale exemption from compliance with the provision may result in inadvertent or deliberate breaches.⁵⁴ Overall, compliance with the fairly detailed provisions of the French reporting system may create challenges for some platforms.

Automatic Reporting under the Social Security Financing Act, 2017

Article 18 of the Social Security Financing Act, 2017⁵⁵ creates three systems in relation to the social security system: automatic affiliation, automatic reporting, and collection of social contributions. The article provides that:

- All self-employed workers engaged in work via an online platform may voluntarily elect to automatically affiliate with the social security system and direct the platform to make the necessary reports on their behalf;
- In respect of micro-entrepreneurs, online platforms shall automatically report “to the “Union de recouvrement des cotisations de sécurité sociale et d’allocations familiales” (URSSAF)” and deduct social contributions at source.

The initial challenges arising from the implementation of this reporting requirement are centred on “the voluntary nature of the proposed mechanism, its operational complexity, and ...the absence of a financial incentive”.⁵⁶ For instance, due to the complexity of the underlying social security system and its incompatibility with the innovative nature of platform work, it is

⁵³ Cost-sharing in this context refers to “co-consumption” which is “the provision of a service which also benefits the private individual who offers it, and not only the persons with whom the costs are shared”; an example is the French carpooling platform BlaBlaCar *ibid* 28.

⁵⁴ *ibid*.

⁵⁵ Article 18 of Act No. 2016-1827 of December 23, 2016, on Social Security Financing for 2017.

⁵⁶ Bocquet and others (n 49) 56.

difficult for platform operators to ascertain when platform workers have crossed the threshold for affiliation with the social security system, that is, exited the micro-social system threshold; and the correct rate of social contributions to then apply.⁵⁷ These hurdles have severely limited the automatic collection of social security contributions.

Mandatory Reporting under the General Tax Code

The original language of the legislation proposed by the Senate required automatic income reporting by platforms, but the language was watered down by the National Assembly, at the insistence of the French government, and reduced the obligation from reporting user's income to the tax agency to merely informing users of their compliance responsibilities. However, vide a subsequent amendment under Article 24 of the Amending Finance Act for 2016, platforms must automatically report the income earned on the platforms by online platform users to the tax authority. With effect from 2019, online platform operators are required to submit user reports to the French tax authorities, and these reports ought to include “data on the users as provided by article 242 bis of the EU VAT Directive 2006/112/EC that will enter into force in 2020.”⁵⁸

Box 3: Features of the Provision on Mandatory Reporting under the General Tax Code

1. The mandatory reporting provision binds all online platforms regardless of where they are established or situated.
2. The platforms are only bound by these obligations when their users reside in France or make sales or services in France pursuant to the VAT regulation.
3. The platforms are required to ascertain the French VAT taxable turnover in respect of their users' transactions.

⁵⁷ *ibid.*

⁵⁸ KPMG, ‘Online Platforms: Major Extension of the French Reporting Obligation’ (29 August 2019) <<https://home.kpmg/content/dam/kpmg/us/pdf/2019/08/tnf-france-aug29-2019.pdf>> accessed 7 January 2020.

The income reporting rules for tax purposes have only recently come into force. It is perhaps too early to determine the challenges in this system's daily operations. However, tax experts are already expressing some concerns regarding increased compliance costs for platform operators. For instance, the new legislation requires platforms to report to French tax authorities "the amount of taxable turnover related to its users' transactions subject to French VAT."⁵⁹ This requirement incorporates platforms as active allies in the fight against tax fraud, but it poses a significant "administrative and technical burden in order to determine the territoriality of each of the operations carried out on the platform".⁶⁰

While an increase in compliance costs may not pose a significant problem for large multinational platforms, these costs may stifle the growth of small start-ups in France. It is also entirely possible that platform operators may begin to pass on the increased compliance costs to platform workers, thus reducing the amount of income these workers earn through platform work.

VII. Summary of Case Study Findings

Table 1. Comparison of platform income data reporting systems across three case countries

Dimensions	Estonia	Denmark	France
Motivation for creating reporting system	<ul style="list-style-type: none"> Facilitating platform work Simplifying tax and social contribution compliance Business friendly environment Open government 	<ul style="list-style-type: none"> Facilitating platform work Simplifying tax compliance Not disadvantaging Danish platforms Developing a technologically sophisticated system that can be used by all member states and types of platforms 	<ul style="list-style-type: none"> Reducing tax evasion Facilitating entrepreneurship Ensuring collection of social contributions

⁵⁹ *ibid.*

⁶⁰ *ibid.*

Dimensions	Estonia	Denmark	France
Reporting system launched	2017	2020	?
Automated semi-automated	Semi-automated	Automated	?
Mandatory Voluntary	Voluntary	Mandatory	Voluntary for social contributions and mandatory for tax purposes
Scope	All platforms	Letting platforms	All platforms
Legislative limits on data	Require legislative amendment for mandatory collection	Mandatory collection permitted by law. No need for user consent.	New legislation introduced for mandatory collection
Data points collected	<ul style="list-style-type: none"> Universal personal identification code Income amount 	<ul style="list-style-type: none"> Income year Taxpayer identity Letting location Income amount 	?
Stakeholders	<ul style="list-style-type: none"> Platform owners Platform users 	<ul style="list-style-type: none"> Platform owners Platform users 	?
Initial investment	Low; semi-automated, integrated easily with existing systems	40 million Danish kroner, comparable to other tax authority development projects	?
Running cost	Low; but could increase if take-up among platforms increases, since it requires some manual labour	Expected to be low, but depends on quality of data submitted by platforms	?
Hurdles	<ul style="list-style-type: none"> Voluntary system reaching saturation; need to move to mandatory Securing participation of international web-based labour platforms without a registered presence in Estonia 	<ul style="list-style-type: none"> Legislation limited to letting platforms How to arrange social security for platform workers Securing participation of international web-based labour platforms without a registered presence in Denmark 	<ul style="list-style-type: none"> Automatic voluntary reporting for social contributions not working as it should: voluntary, complex, no financial incentive Detailed provisions create complexity in compliance for some platforms

* Where the “?” symbol is used in this table, it denotes the fact that the authors do not have sufficient data to make an accurate statement.

Dimensions	Estonia	Denmark	France
Benefits	<ul style="list-style-type: none"> Increased tax and social security compliance, though still far less than perfect Reduced compliance cost for taxpayers already willing to report Positive relationships between tax authority and platforms 	<ul style="list-style-type: none"> Much increased tax and social security compliance expected Reduced compliance cost for taxpayers expected Positive relationships between tax authority and platforms Technological foundation for automatic data reporting from a broader range of platforms in the future 	<ul style="list-style-type: none"> Increased tax and social security compliance expected
Tax regime(s) for platform workers	<ul style="list-style-type: none"> Ordinary tax regime Presumptive tax regime Business income taxation 	<ul style="list-style-type: none"> Higher deduction for users whose income data is sent to SKAT via API 	<ul style="list-style-type: none"> Ordinary tax regime Micro-tax system
Social Security System	<ul style="list-style-type: none"> Straightforward Lean Compatible with platform work (via presumptive regime) 	<ul style="list-style-type: none"> Comprehensive Complex Incompatible with platform work 	<ul style="list-style-type: none"> Comprehensive Complex Incompatible with platform work

Findings from the country case studies are summarised in Table 1. Some notable similarities and differences are apparent between the cases. First, Estonia, with its new and advanced administrative systems, has been able to move much faster in implementing its data reporting system. The reporting system has been up and running since 2017, and ETCB has had ample opportunity to pick up weaknesses and improve on the original set-up. Countries with older and more complex legacy systems like France and Denmark are having to move more slowly.

Second, the countries differ in their basic design choices. Estonia opted for a semi-automated voluntary system, Denmark went for an automated mandatory system, while France appears to have opted for a hybrid model. Estonia's choices were influenced by the government's service-oriented ethos and desire to build relationships of trust with taxpayers. ETCB's expectation was that if the system was simple and fair, taxpayers would voluntarily elect to report their income. In the end, there has been some voluntary uptake but ETCB now recognizes that they have to move towards a mandatory system. Denmark's options were motivated by the tax-

positive attitude in the country—existing legislation requiring and allowing mandatory reporting by platforms without users’ consent—and the desire to design a world-class automated system whose technology could eventually benefit other EU member states.

Third, the three countries have all found that web-based labour platforms that do not have a registered presence in the country pose a challenge for compliance. It may well be possible to secure voluntary participation from many platforms, as the case of Airbnb in both Denmark and Estonia shows. However, in case a platform declines to comply, it is difficult to enforce the law in such circumstances. This is one area where it appears that EU member states would benefit from pooling their power and clout.

Fourth, the utilization of income data for social and pension contribution purposes remains a significant challenge. While the successful reporting of the data would solve one problem, social security institutions in countries with comprehensive, complex, and traditional social security systems would still find it difficult to utilize this data to determine the contributions and benefits due to platform workers. Denmark’s laws and systems for income reporting for the platform economy are currently limited to letting platforms for this reason, while France’s voluntary automatic income reporting system for social security purposes has not been as successful as anticipated. Assumptions based on regular employment in the service of a single employer, which underpin much of social security legislation, are incompatible with the reality of gig work as it is practiced today. Estonia has managed to cut through the complexity, but much work may be needed in most other member states to either reform social security or regulate platform work so that it conforms to existing systems. Deeper consideration of this issue is beyond the scope of this paper, but we note that there is emerging work on “Digital

Social Security”⁶¹ as well as ways of making social security more compatible with self-employment in general.⁶²

Fifth, in terms of outcomes, the Estonian case demonstrates that it is possible to improve compliance by using an income reporting system; however, it also demonstrates that the effectiveness of a voluntary system is limited, and a mandatory system as envisaged by Denmark is more promising in the long run. The Danish system is yet to be publicly launched and it is too early to assess its impacts; however, since it is an improvement on Estonia’s semi-automated voluntary system, which realised a modest success, it is entirely possible that it will generate very positive results in the near future for both increasing compliance and lowering taxpayers’ compliance costs. The French law has just come into force and it is too early to assess its impacts in any further detail.

Finally, it is worthwhile to consider the incentives created by a data reporting scheme. In Estonia, there is an apparent tendency for gig workers to incorporate. A mandatory data reporting scheme covering only unincorporated workers could provide a further incentive for labour to incorporate, which could be an undesirable outcome from both labour and tax law perspectives. In France, the mandatory data reporting scheme for platform workers could balance the incentives between platform workers and traditional self-employed people, by improving the formers’ tax compliance. However, if taken too far, automated reporting of data on platform workers but not on traditional self-employed workers could arguably start to disadvantage platform workers compared to the traditionally self-employed. At the same time, the Danish case suggests that self-employed people can benefit from the reduced compliance cost brought about by automated reporting, providing an incentive to work via platforms rather

⁶¹ Enzo Weber, ‘Digital Social Security: Outline of a Concept for the 21st Century’ (2019) Hans-Böckler-Stiftung Working Paper No 138 of 2019 <https://www.boeckler.de/pdf/p_fofoe_WP_138_2019.pdf> accessed 7 January 2020.

⁶² High-Level Expert Group on the Impact of the Digital Transformation on EU Labour Markets (n 7).

than independently. The strength and direction of these incentives mostly hinge on member state level decisions concerning what data is used and how.

VIII. Implications for an EU-Level Reporting System

First, it is evident that it is often even more complicated to collect income data for social contribution purposes than it is for tax purposes. Existing social contribution rules were not designed with the platform economy in mind and are not sufficiently flexible to dovetail seamlessly with the way income is earned and reported in the platform economy. Even in Nordic countries like Denmark, with generous but complex social security nets, it has proven hard to provide adequate social protection to platform workers. Thus, assuming that member states were able to agree on a single income reporting mechanism for tax purposes, much work would be required to determine how such income data could be utilised by domestic agencies dealing with social insurance and pension contributions.

Second, while it is fairly easy to obtain data from platforms with a local registered presence, each case country appeared crippled when it came to obtaining data from international web-based platforms. These web-based platforms typically do not have permanent establishments in the case countries, and without a local presence it is impossible to compel them to comply with domestic legislation. This is an issue where an EU-level approach could deliver better results than a national approach. Obtaining compliance from web-based platforms operating from outside the EU could still present a challenge, but they could at least be pursued collectively with pooled resources.

One solution may be to have a “network model” where member states collect data from web-based platforms having a permanent establishment or registered office in their jurisdiction and share that data with other member states whose taxpayers use the platforms but do not have such a permanent establishment or registered office. However, it is possible that this solution

may require an amendment to existing GDPR rules which limit the data that a country can collect; tax agencies may face challenges in justifying the need to collect data regarding users who are not tax resident in their countries. Further, since the income reporting systems currently in existence in the case countries are largely limited to local gig platforms and letting platforms, local tax agencies know the data that they need and can ask for what is relevant for their purposes. Additional information would be required for the multilateral EU-wide reporting system to work; Member States' tax agencies would have to agree on and define the minimum data required for the taxation of platform workers. A recent initiative by Member States tax agencies (FPG/097 initiated under TADEUS⁶³) has identified the minimum information that would be required as:

- Identification information: Who received the payment?
- Transaction information:
 - How much money they received?
 - What supply of service or good generated the payment?
- Platform information: What platform facilitated the transaction and therefore will have the reporting obligation?
- Additional tax relevant data, for example if the income is from accommodation services.

The nature and quality of data is only one consideration. The timing of the data reporting is also important. Tax agencies would require the data before the deadline for taxpayers to remit their returns so that the tax agencies have an opportunity to prepopulate taxpayers' tax returns.

⁶³ 'Tax ADministration European Union Summit (TADEUS) 2019 Outcomes Statement: 1st Plenary Meeting, Helsinki, Finland' (17 September 2019) <https://ec.europa.eu/taxation_customs/sites/taxation/files/tadeus_2019_outcomes_statement_-_1st_plenary_meeting_helsinki_finland.pdf> accessed 7 January 2020. Note that this initiative included only 18 Member States and the future inclusion of other Member States may significantly expand the list and nature of data listed here.

For this reason, Denmark is unsure about the feasibility of a network model. SKAT's primary concern is that it would require income data by January 20th each year in order to prepopulate tax returns, and that there is no guarantee that tax agencies in Member States with manual systems would be in a position to meet such strict timelines. Thus, since the timing and quality of data required in each country is different, and there is significant disparity in technology adoption, much work would be needed to ensure that the data shared is fit for purpose. Data protection and privacy rules also come into play. If income reporting is voluntary, these rules do not pose much of a challenge. However, as the Estonian case demonstrates, voluntary compliance quickly reaches its saturation point and a mandatory system is required to keep the system effective. Data protection restrictions pose a hurdle for mandatory reporting, and member states "may not have the rights to collect information about non-residents from the platforms resident in that Member State."⁶⁴

Some of the limitations of a network model could be avoided by adopting a "hub and spoke" style Digital Single Window for income data reporting, so termed because its topology resembles a cartwheel. In this set-up, member states would nominate a central agency (the "hub") to receive income data from all the platforms with users in the member states and forward it to national tax and social security agencies (the "spokes"), in whatever form they require. Such a model is currently unprecedented in the EU when it comes to taxation.

The main strength of such a model would be that it would address both the issue of sharing data with member states as well as obtaining data from platforms in the first place, in particular, from international web-based platforms based outside the EU. But it also presents various challenges that bring its viability at the present time into question. The chief among them is that it would require a central organization that is efficient, effective, well-funded and

⁶⁴ *ibid.*

perceived as legitimate by the member states. It would be challenging to develop such an organisation in light of the fact that income taxation is not harmonised in the Union. Another challenge is the legal basis of the data collection. Would national tax authorities be able to legally delegate their powers to a hub, or could some other legal basis be found or legislated for on the EU level? Also, while a hub and spoke model would be simpler than creating 28 different systems in the member states, it still introduces an additional level of bureaucracy and organizational complexity.

Finally, the legal status of platforms appears to still be in flux. For instance, in December 2017, the Court of Justice of the European Union (CJEU) ruled that Uber is a taxi firm and not simply an “information society service”.⁶⁵ However, two years later, in December 2019, the CJEU ruled that, unlike Uber, Airbnb is an “information society service” and not a property broker.⁶⁶ The court relied heavily on the fact that Airbnb has much less control over transactions on its service than Uber, in distinguishing its analysis of the two platforms.⁶⁷ It is likely that we will continue to witness changes in the way courts analyse the services provided by platforms and these analyses are likely to have significant consequences for how much governments can regulate the platforms and even collect income data from them.

IX. Conclusion

Based on the case studies, the authors take the view that there are several benefits of developing an EU-wide income reporting system. First, collecting income data from foreign platforms without a registered presence or permanent establishment in the country is a challenge for all three case countries, and is likely to be a significant hurdle for all the member states. With a

⁶⁵ Court of Justice of the European Union, ‘Press Release No 136/17: Judgment in Case C-434/15 Asociación Profesional Elite Taxi v Uber Systems Spain SL’ (20 December 2017) <<https://curia.europa.eu/jcms/upload/docs/application/pdf/2017-12/cp170136en.pdf>>.

⁶⁶ Court of Justice of the European Union, ‘Press Release No 162/19: Judgment in Case C-390/18 Airbnb Ireland’ (19 December 2019) <<https://curia.europa.eu/jcms/upload/docs/application/pdf/2019-12/cp190162en.pdf>>.

⁶⁷ *ibid.*

Digital Single Window, member states can pool their power and clout to exert pressure on foreign platforms to comply with an EU-wide requirement.

Second, developing a sophisticated automated API-based reporting solution that presents low compliance and maintenance costs is an expensive venture. While the cost and technology may be within the reach of higher income-earning member states like Denmark, it may not be easily affordable or accessible for some other member states. A Digital Single Window would allow member states to pool their financial and technical resources for a more cost-effective system.

Third, it is evident that the case countries are already at advanced stages of designing different income reporting systems and it is likely that other member states will begin similar initiatives. While this approach may not pose a challenge for platforms that operate only domestically, a Digital Single Window would benefit platforms that operate cross-jurisdictionally by saving them from having to use and comply with 28 different reporting systems. Further, a lower compliance cost could encourage the growth of smaller domestic platforms and nudge them towards expanding to other member states without experiencing higher compliance costs. This growth and expansion would benefit innovation in Europe.

However, the authors are also cognisant of the significant barriers to achieving such an ambitious system. The most significant barrier remains the lack of harmonisation of income taxation and social security systems in the Union and the fact that income taxation is not an EU competence. Further, if taxpayers' data are being shared more widely or stored more centrally, there is a risk of more frequent or more serious data breaches.

The most workable avenue for the time being may be for each member state to continue developing its own solutions. In time, some data sharing resembling the network model is likely to develop spontaneously between competent authorities under the auspices of existing data sharing arrangements, such as the mandatory Automatic Exchange of Information scheme. The

FP/097 Working Group's efforts to develop standard data schema will help drive this forward. While a hub-and-spoke Digital Single Window would allow the pooling of resources and clout and could simplify compliance, it would require the creation of a new legal basis in EU law, a more distant prospect. It may also be that the network model would eventually lead to a member state serving as a hub, a scenario that may only require amendments to existing tax co-operation and information sharing arrangements rather than new EU legislation.

Table 2. Expert Interview Participants

Martin Buur	Product Owner, IT and Development Agency of the Danish Ministry of Taxation (SKAT)
Antonio Casilli	Associate Professor, Paris School of Telecommunications (Telecom Paris)
Kirsi Haapakoski	Tax Policy Officer, DG Taxation and Customs Union, European Commission
Anna Ilsøe	Associate Professor, Employment Relations Research Centre (FAOS), University of Copenhagen
Evelyn Liivamägi	Head of the Tax Department, Estonian Tax and Customs Board (ETCB)
Arto Lanamäki	Postdoctoral researcher in the Interact Research Unit, University of Oulu
Martin Villig (informant via email)	Co-founder, Bolt (previously known as Taxify)