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SWEET & MAXWELL

The impact of digitalisation on personal income taxes

The societal changes brought about by the digitalisation of the economy are such that they affect all areas of the tax system. Not only will digitalisation affect tax policy in relation to all taxes—from personal income taxes (PIT) and social security contributions (SSC), to corporate income taxes (CIT) and value added tax (VAT)—but equally it could have a very significant impact on tax administration, and the enforcement of tax law. In so far as tax policy is concerned,

until now most of the attention has been on CIT¹ and, to a lesser extent, VAT.² Very little attention has so far been paid to PIT and SSC, except to the extent that digitalisation relates to the gig economy, and the concept of “worker” for tax purposes.³ The acceleration of the process of digitalisation brought about by the pandemic together with the changes that this process entails for the labour market have, however, posed very significant challenges to PIT worldwide.

Traditionally, businesses have hired their staff and based their operations in the same jurisdiction. Generally, therefore, employees resided—and paid PIT and SSC—in the same jurisdiction as the business paid CIT (Figure 1). This reality is, however, set to change as remote working quickly spreads.⁴ Remote working raises the possibility of cases where the jurisdiction in which employees reside and pay PIT, and the jurisdiction in which the business pays CIT are no longer one and the same (Figure 2).

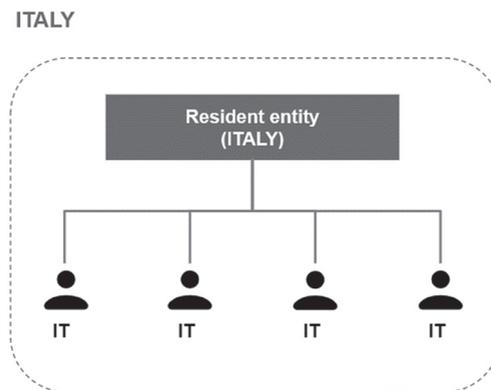


Figure 1: PIT and CIT levied in the same country

¹ OECD, *Addressing the Tax Challenges Arising from the Digitalisation of the Economy*, OECD/G20 Inclusive Framework on BEPS (Paris: OECD Publishing, 2020), <https://www.oecd.org/tax/beps/tax-challenges-arising-from-digitalisation-economic-impact-assessment-0e3cc2d4-en.htm> [Accessed 13 May 2021].

² OECD, *The Role of Digital Platforms in the Collection of VAT/GST on Online Sales* (Paris: OECD Publishing, 2019), https://www.oecd-ilibrary.org/taxation/the-role-of-digital-platforms-in-the-collection-of-vat-gst-on-online-sales_e0e2dd2d-en [Accessed 13 May 2021].

³ J. Freedman, “Employment Status, Tax and the Gig Economy—Improving the Fit or Making the Break?” (2020) 31(2) *Kings Law Journal* 194.

⁴ The “Third Great Unbundling” as predicted by R. Baldwin in *The Great Convergence: Information Technology and the New Globalization* (Harvard University Press, 2016).

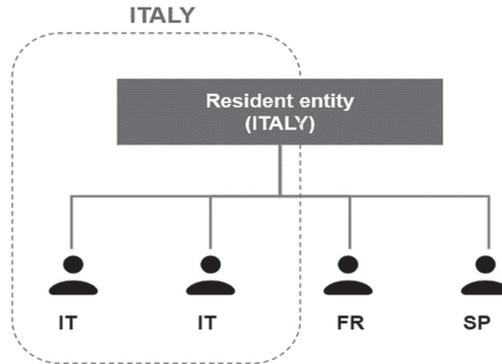


Figure 2: PIT and CIT levied in different countries

Such fundamental change in the labour market is bound to have significant consequences for tax systems, particularly PIT. Whilst there was already some evidence of emerging tax competition in PIT from 1994 onwards, the significance of such competition is still relatively small.⁵ Now digitalisation is set to change this reality, and the coming years are likely to bring increased PIT competition as more employees are able to choose where to reside, regardless of employer location. With remote working more likely to affect employees at the top of the income distribution, residence changes have the potential to induce significant displacement effects on tax revenues. Such displacement can have far reaching consequences, not least PIT competition—indeed, there is early anecdotal evidence that, faced with these challenges, countries will respond by competing for the same base, with characteristics similar to the race that has been taking place for many years in relation to CIT, but with potentially more significant economic and societal consequences, not least because of the significance of PIT for national budgets.

Whilst on average CIT accounts for about 10 per cent of total tax revenues in the OECD countries, PIT accounted for about 23.5 per cent of total tax revenues in 2018.⁶ In the same year, the combination of PIT, SSC and Payroll taxes amounted to approximately 50 per cent of total tax revenues in the OECD countries (Figure 3). Within Europe the numbers are even more striking: in 2019 the combination of PIT and SSC amounted to 58 per cent of total tax revenues in the EU (27), and 59 per cent in the Euro area; whilst in the same period CIT amounted only to 6.5 per cent and 6.4 per cent in the EU (27) and the Euro area, respectively (Figure 4).⁷

⁵ P. Egger, S. Nigai and N. Strecker, “The Taxing Deed of Globalization” (2019) 109(2) *American Economic Review* 353; and U. Akcigit, S. Baslandze and S. Stantcheva, “Taxation and the International Mobility of Inventors” (2016) 106(10) *American Economic Review* 2930.

⁶ OECD, *OECD Global Revenue Statistics Database*, <https://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm> [Accessed 13 May 2021], data extracted 10 April 2021. Here the writers use the terms CIT and PIT revenues loosely for simplification purposes. More specifically, CIT revenues refer to taxes on profits and gains of corporations (item number 1200) and PIT revenues refer to taxes on income, profits and capital gains of individuals (item number 1100).

⁷ Eurostat, *Tax Revenue Statistics* (October 2020), https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tax_revenue_statistics [Accessed 13 May 2021]. PIT refers to taxes on individual or household income (D51a) and CIT refers to taxes on the income or profits of corporation (D51b). The classification methodology used by the OECD and the EU may differ and, hence, there could be some discrepancies between the figures shown in Figure 3 and Figure 4.

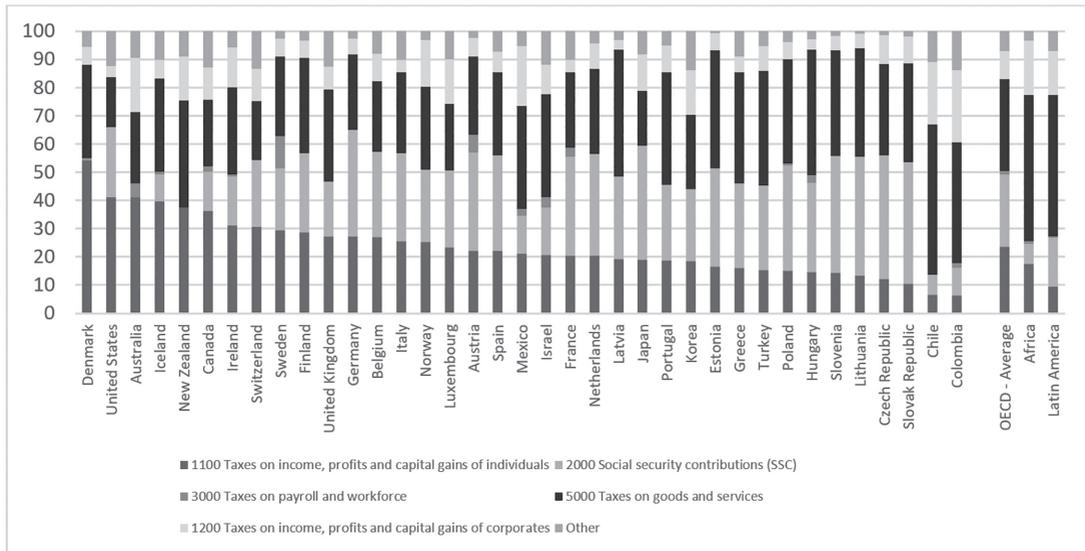


Figure 3: revenue composition (% total revenue), OECD countries, 2018⁸

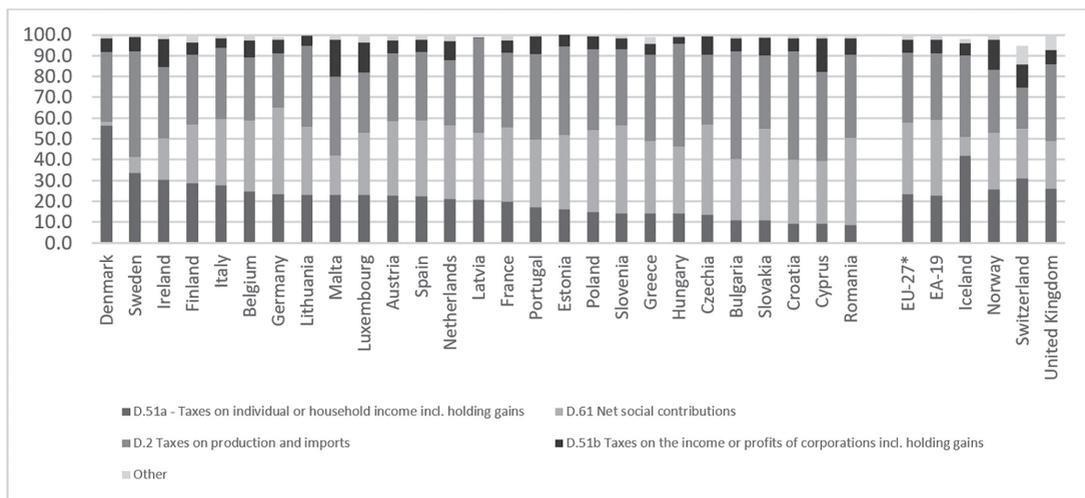


Figure 4: revenue composition (% total revenue), EU countries, 2019⁹

In the first section below the writers analyse the early signs and characteristics of the ongoing changes in the labour market; and in the following section the writers consider the tax policy consequences of these changes, particularly as regards PIT. The final section provides a computation of possible effects for the UK.

⁸ OECD, *OECD Global Revenue Statistics Database*, <https://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm> [Accessed 13 May 2021], data extracted 10 April 2021.

⁹ Eurostat, *Tax Revenue Statistics* (October 2020), https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tax_revenue_statistics [Accessed 13 May 2021], data updated October 2020.

The ongoing changes in the labour market

The process of digitalisation of the economy has been significantly accelerated by the pandemic. Whilst a significant portion of consumption was already taking place online, and some businesses were already offering an “all-remote, geographically flexible”,¹⁰ or a “hybrid-remote” working policy,¹¹ labour was still primarily carried out in person. The pandemic has resulted in many behavioural shifts that could have a tax impact—amongst these are perceptions as to the need to carry out work in person. Traditionally, it was thought that the main benefits of in-person work were better co-ordination and the creating of key synergies for productivity—namely knowledge exchanges, relationships and trust, teamwork, as well as the ability to monitor work more effectively.¹² However, in-person work also carries substantial costs.

For workers it has several consequences that affect productivity—including reducing commuting, time inefficiencies (such as excessive or longer meetings), and noise—as well as having negative effects on quality-of-life criteria, such as work-life balance. For businesses, beyond having a potential effect on employees’ productivity costs, in-person work also carries other costs, including those relating to office rentals, utility bills and other office maintenance, food, and travel (for example, to meet clients). The pandemic has pushed businesses to consider these trade-offs further. Whilst the costs are still present, the benefits of in-person work are less clear or obvious: co-ordination, synergies and monitoring that were once perceived as attaching exclusively to in-person contact, are now established online, through remote working.

Whether or not this behavioural shift and change in perceptions will become a sustainable trend in the long run, will depend on a new cost-benefit assessment, in light of the digital gains achieved during the pandemic: namely whether or not the costs of remote work—for example, co-ordination failures, some decrease in synergies or monitoring—will be regarded as less than the benefits of such work. In addition, it is noteworthy that this cost-benefit assessment is also likely to depend on the actual implementation of the various working policies.¹³ Whilst it is too early to know for sure, and aggregate data will only become available in a few years, there are

¹⁰ Choudhury et al use the example of GitLab, a software company based in San Francisco, see Prithwiraj Choudhury et al, “GitLab: work where you want, when you want” (2020) 9 *Journal of Organisational Design* 23. GitLab has no physical headquarters or offices for its 1000+ employees, so even managers and the C-suite can work from anywhere across the globe; GitLab’s employees are scattered across 60+ countries, see, “GitLab CEO weighing options for going public after employee share sale valued company at \$6 billion” (15 January 2021) *CNBC.com*, <https://www.cnbc.com/2021/01/15/gitlab-ceo-eyes-public-market-after-secondary-valued-it-at-6-billion-.html> [Accessed 13 May 2021]. Recently, Spotify announced their employees can work from anywhere, see Jessica Bursztynsky, “Spotify will let employees work from anywhere after the pandemic” (12 February 2021) *CNBC.com*, <https://www.cnbc.com/2021/02/12/spotify-will-let-employees-work-from-anywhere-after-the-pandemic.html> [Accessed 13 May 2021].

¹¹ Bloom et al studied the Chinese multinational Trip.com Group, an online travel agent which allowed some employees to work from home with an overall “hybrid remote” policy, see Nicholas Bloom et al, “Does working from home work? Evidence from a Chinese experiment” (2015) 130(1) *Quarterly Journal of Economics* 165.

¹² Bloom et al, “Does working from home work? Evidence from a Chinese experiment” (2015) 130(1) *Quarterly Journal of Economics* 165; Choudhry et al, “GitLab: work where you want, when you want” (2020) 9 *Journal of Organisational Design* 23; P. Choudhury, C. Foroughi and B. Larson, “Work-from-anywhere: The productivity effects of geographic flexibility” (2021) 42 *Strategic Management Journal* 6553; and J. Dingel and B. Neiman, “How Many Jobs Can be Done at Home?” (2020) 189 *Journal of Public Economics* 104235.

¹³ Choudhry et al highlight how in the case of GitLab, the working from anywhere policy has been successful because the company has implemented systems and processes—such as shared code and document repositories, archived chat tools—specifically targeting possible co-ordination failures that may arise from remote working, see Choudhry et al, “GitLab: work where you want, when you want” (2020) 9 *Journal of Organisational Design* 23.

early indications that incentives are changing and hence there is a high likelihood that these changes in the labour market will become a sustainable trend.

Studies of individual firms and institutions indicate that “hybrid-remote” and “all-remote” work can increase productivity. In a 2015 study it was reported that remote working led to a 13 per cent performance increase in a Chinese multinational, split between a 9 per cent increase in working more minutes per shift—fewer breaks and sick days—and a 4 per cent increase from more tasks completed per minute—as a result of a quieter and more convenient working environment; remote workers also described greater work satisfaction.¹⁴ In another more recent study, employees’ output at the United States Patent and Trademark Office (USPTO) increased by 4.4 per cent when workers moved from a work-from-home to a work-from-anywhere regime; it also reported increased employee effort and real estate savings for the USPTO.¹⁵

Larger business surveys increasingly show that remote work is regarded as a great success for both employees and managers.¹⁶ A PwC remote working survey of the US market shows strong—and, critically, growing—support for remote working, and highlights significant gains¹⁷:

- 83 per cent of executives say switching to remote work has been successful for their company (up from 73 per cent in the June 2020 survey), and 71 per cent of employees agree;
- 34 per cent of employees say they are more productive with remote work (compared with 28 per cent in June 2020); and executives agree, with 52 per cent saying that average employee productivity has improved with remote work (compared with 44 per cent of executives in June 2020).

In relation to several critical elements for business productivity, such as product innovation, remote working is perceived as faring equally or better than face-to-face with 41 per cent of interviewed managers reporting better outcomes for product and services innovation during remote working (another 41 per cent reported similar outcomes in remote and in-person work); interestingly this is also the case for elements that are either synergy dependent—collaboration on new projects (44 per cent and 30 per cent of managers reported better or similar outcomes on collaboration on new projects, respectively)—or growth related—finding new clients (43 per cent and 39 per cent of managers reported better or equal outcomes, respectively).

There is also substantial anecdotal evidence to indicate that not only will the shift to remote working become a sustainable trend, but also that this shift will have a fiscally significant impact on employees’ tax residence status—and thus PIT and SSC revenues. Even without a specific overall policy in place, as demonstrated in Figure 5, businesses are now hiring for positions

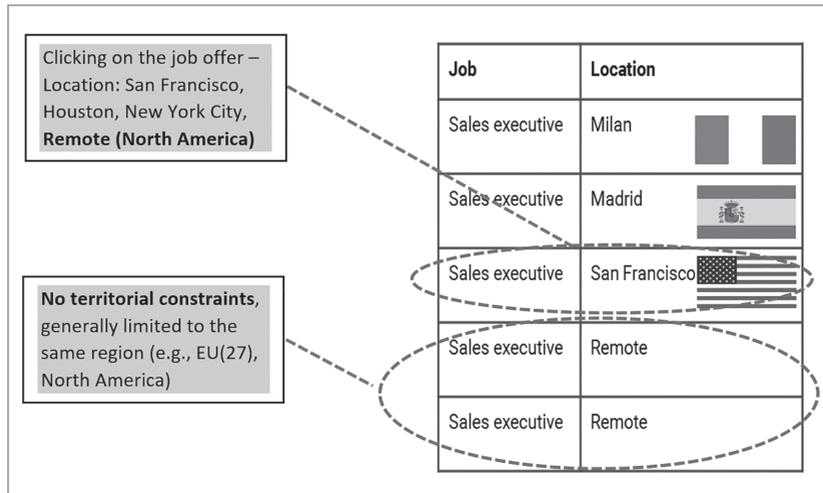
¹⁴ Bloom et al, “Does working from home work? Evidence from a Chinese experiment” (2015) 130(1) *Quarterly Journal of Economics* 165.

¹⁵ Choudhry et al, “GitLab: work where you want, when you want” (2020) 9 *Journal of Organisational Design* 23.

¹⁶ For an overview of the advantages and limitations of business surveys see S. Barrios, D. D’Andria and M. Gesualdo, “Reducing tax compliance costs through corporate tax base harmonization in the European Union” (2020) 41 *Journal of International Accounting, Auditing and Taxation* 100355.

¹⁷ PwC US, “It’s time to reimagine where and how work will get done: PwC’s US Remote Work Survey - January 12, 2021” (January 2021) PwC, <https://www.pwc.com/us/en/library/covid-19/us-remote-work-survey.html> [Accessed 24 May 2021]. PwC surveyed 133 executives and 1,200 office workers in the US between 24 November and 5 December 2020 on the effectiveness of remote working. Employees interviewed either had to work from home due to the pandemic or did so regularly; essential workers were excluded.

which are fully “remote” and thus not subject to any territorial constraints. Moreover, even when the position is initially linked to a territory, it is now common to observe that discussions concerning location are included in the bargaining during the hiring process: potential employees are bargaining for remote working in a jurisdiction that is different from that of the employer.



*Figure 5: example of job vacancies as seen in EU multinationals*¹⁸

Clear empirical evidence concerning these ongoing changes in the labour market is unlikely to emerge until the pandemic allows a return to full mobility, and no social restrictions. In the absence of this empirical evidence, however, the writers can still make some educated predictions. For example, the writers do not yet have precise data on the work that can be done remotely *and* in a country other than the one where the employer is located. Whilst remote working may be popular, remote work from a different jurisdiction will necessarily generate additional frictions, including legal ones—such as residence requirements, risk of creating a permanent establishment for CIT purposes and additional compliance—as well as practical ones—such as time differences or language barriers. Yet, the number of jobs that can be done remotely can be used as a rough proxy, even though it is known that only a part of that number will be able to be worked remotely from another country. In this regard, although the numbers will vary from country to country, European data indicates that up to one-third of all jobs can potentially be done remotely (Figure 6). For the US the figure is higher: 37 per cent of jobs can be performed remotely, representing up to 45 per cent of total wages (Figure 7)—a discrepancy that can be explained by the fact that jobs that can be done remotely, tend to be higher paid jobs.¹⁹

¹⁸ The example on Figure 5 is a combination of various real-life cases retrieved from the websites of various EU multinationals, on 26 March 2021; for anonymisation purposes exact locations have been changed.

¹⁹ Dingel and Neiman, “How Many Jobs Can be Done at Home?” (2020) 189 *Journal of Public Economics* 104235.

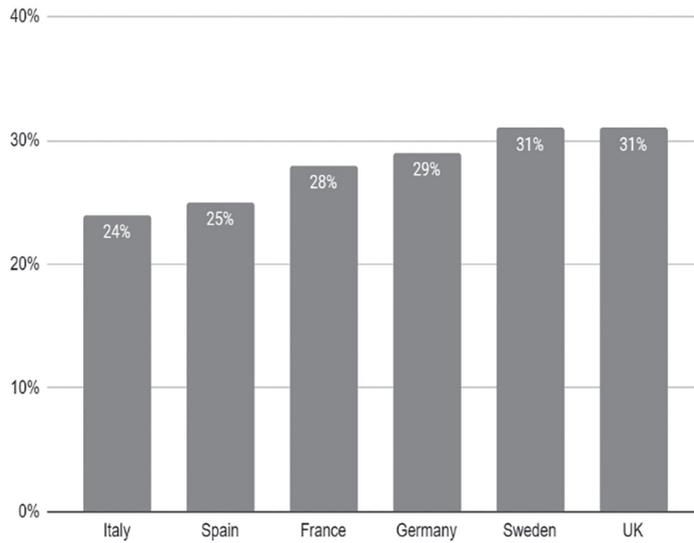


Figure 6: % jobs that can potentially be done remotely (Europe)²⁰

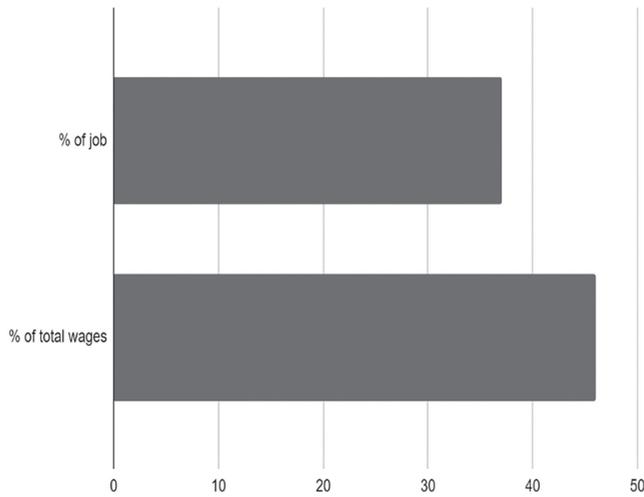


Figure 7: % jobs that can potentially be done remotely (US)²¹

²⁰T. Boeri, A. Caiumi and M. Paccagnella, “Mitigating the work-safety trade-off” [2020] (2) *Covid Economics*, Centre for Economic Policy Research 60.

²¹Dingel and Neiman, “How Many Jobs Can be Done at Home?” (2020) 189 *Journal of Public Economics* 104235.

Characteristics of the labour shift

This shift in the labour market is not homogenous, rather it is largely concentrated on specific types of businesses (depending on size and sector) and on specific types of employees. The shift is mostly evident in large multinationals, as well as in smaller but fast-growing multinationals, which are on the frontier of innovation and productivity—and therefore tend to pay higher wages²²; the trend also has the potential to spread to the most innovative domestic companies, at least in so far as they have the necessary infrastructure and language skills. In terms of sectors, whilst the trend began in the technology sector—given the immediate availability of a suitable infrastructure—many examples can now be found in other sectors, such as the pharmaceutical, consumer goods, marketing, and financial sectors. The shift is less relevant for those sectors where physical presence is necessary for performing the work, namely the construction, transport, healthcare, tourism, food preparation, and manufacturing sectors.

In terms of the type of employees, the shift is most evident in relation to those with high-level education and high salaries (Figures 8 and 9),²³ but it is likely to spread, at least partially, to secretarial and administrative work. The trend is, of course, less relevant for employees in sectors that require in-person work, which are also the sectors that tend to have lower wages.²⁴

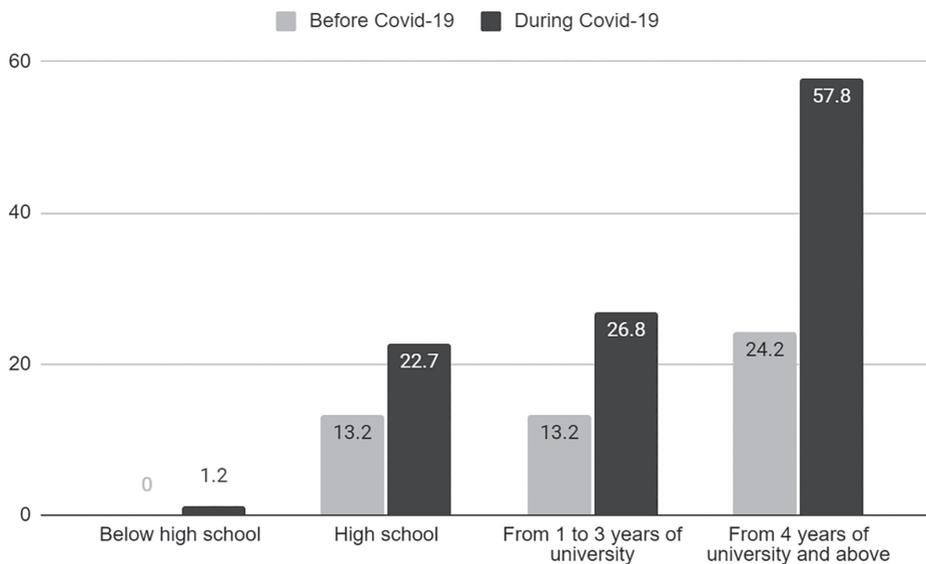


Figure 8: % employees working remotely by education group²⁵

²²Dingel and Neiman, “How Many Jobs Can be Done at Home?” (2020) 189 *Journal of Public Economics* 104235; J. Hines, *Testimony before the US Committee on Finance* (US Senate Statement, March 2021).

²³Based on a survey on 2,500 US employees, age 20–64, in full-time employment in 2019, see N. Bloom, “How working from home works out” (Policy Brief, Stanford Institute for Economic Policy Research, 2020) (SIEPR).

²⁴Dingel and Neiman, “How Many Jobs Can be Done at Home?” (2020) 189 *Journal of Public Economics* 104235; B. Avdiu and G. Nayyar, “When Face-to-Face Interactions Become an Occupational Hazard” (2020) World Bank Policy Research Working Paper No 9240.

²⁵Bloom, “How working from home works out” (Policy Brief, Stanford Institute for Economic Policy Research, 2020) (SIEPR).

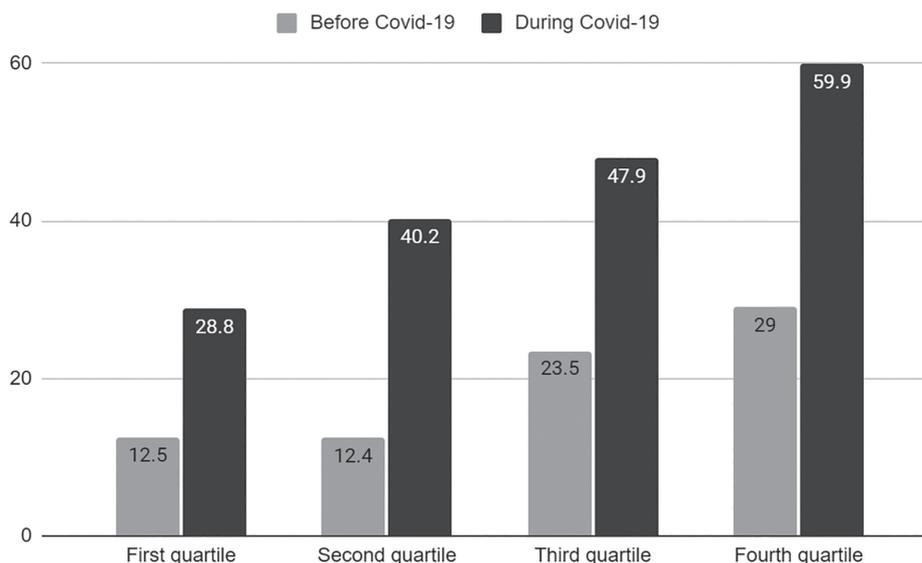


Figure 9: % employees working remotely by income group²⁶

The implications for personal income taxes and social security contributions

The changes to labour patterns discussed above could have very significant consequences for tax systems, particularly in relation to PIT and SSC. Traditionally, the PIT tax base had been regarded as relatively immobile, but there have been early signs in recent years that increased mobility of individuals was starting to have an effect on the PIT base.²⁷ The spread of beneficial PIT regimes designed to attract high-skilled mobile workers, such as the Danish scheme for inbound expatriates introduced back in 1991, known in Denmark as the Researchers' Tax Scheme,²⁸ the Portuguese Non-Habitual Residents scheme,²⁹ the Italian regimes to attract foreign

²⁶ Bloom, "How working from home works out" (Policy Brief, Stanford Institute for Economic Policy Research, 2020) (SIEPR).

²⁷ Egger, Nigai and Strecker, "The Taxing Deed of Globalization" (2019) 109(2) *American Economic Review* 353; and Akgigit, Baslandze and Stantcheva, "Taxation and the International Mobility of Inventors" (2016) 106(10) *American Economic Review* 2930.

²⁸ H.J. Kleven et al, "Migration and Wage Effects of Taxing Top Earners: Evidence from the Foreigners' Tax Scheme in Denmark" (2014) 129(1) *The Quarterly Journal of Economics* 333.

²⁹ F. Castro Silva and T. Cassiano Neves, "Portugal: Golden visa and non-habitual tax regime: Competing for the best sunny place in Europe" (2013) *ITR.com*, <https://www.internationaltaxreview.com/article/b1fbswm4789r43/portugal-golden-visa-and-non-habitual-tax-regime-competing-for-the-best-sunny-place-in-europe> [Accessed 13 May 2021]; and PwC Portugal, "Tax Regime for non-habitual residents" (2021) *PwC.pt*, <https://www.pwc.pt/pt/servicos/fiscalidade/individuals-taxation/europe-best-kept-secret/tax-regime-for-non-habitual-residents.html> [Accessed 13 May 2021]. The Portuguese Investment Tax Code (Código Fiscal do Investimento) was approved by Decree-Law No.249/2009 of 23 September 2009.

residents,³⁰ or the French Brexit scheme for financial services workers,³¹ are the most obvious manifestations of growing tax competition in PIT.

However, there was also increasing awareness amongst policymakers that foreign direct investment (FDI) was sensitive to PIT, particularly fixed-term investment that involves the relocation of highly specialised expatriate workers.³² Until now, this mobility and consequent tax competition, was restricted to a small portion of individuals, and thus to a small portion of the tax base. Such individuals were, in particular, high net worth individuals, highly skilled non-office workers—such as scientists—and short-term expatriates.³³ The ongoing developments in the labour market resulting from digitalisation signal a substantial increase in mobility, and with increased mobility comes more significant change to the tax base—as has clearly been seen in CIT over the last 40 years.

These changes in the labour market will mean that, increasingly, businesses will be able to choose from among workers resident throughout the world—although, given practical limitations, such businesses may be limited in their choice to a specific region or geographical area—selecting the best workers at the lowest labour costs, including in terms of taxation. On the other hand, increasingly workers will be able to choose where to reside, regardless of where their employer is located. Both factors may result in significant shifts in the PIT tax base—made all the more worrying given the characteristics of the labour shift. Digitalisation not only brings a significant increase in the mobility of workers, but that increase is likely to happen at the top of the income distribution, amongst those that currently pay the biggest proportion of PIT revenues (Figure 9). Moreover, a mobile high-skilled workforce has important spillovers, not only knowledge ones that are crucial for growth—such as those relating to technical content and efficient management practices—³⁴ but also tax spillovers—particularly for CIT—through impact on transfer pricing calculations—and for consumption taxes—given the natural link between high incomes and higher consumption propensity.

From a tax administration perspective, this mobility also carries significant challenges. When employers and employees are based in the same jurisdiction, employers act as withholding agents, responsible for remitting PIT and SSC on behalf of their employees. The role of businesses as withholding agents is substantial: in 2014, PIT and employee SSC remitted by business were estimated to account for 25.1 per cent of total tax revenues on average; in the UK alone business remitted about £184 billion in PIT and SSC on behalf of their employees, amounting to a

³⁰ PwC, *Worldwide Tax Summaries—Italy* (2021), <https://taxsummaries.pwc.com/italy> [Accessed 13 May 2021], and Italian Budget Law for 2017 (Law No.232/2016).

³¹ Reuters, “France to ease finance, tax rules to attract Brexit bankers” (11 July 2018) *Reuters*, <https://www.reuters.com/article/uk-france-financing-markets/france-to-ease-finance-tax-rules-to-attract-brexit-bankers-idUKKBN1K12SZ> [Accessed 13 May 2021]. The 16 December 2020 Ordonnance n° 2020-1595 on the withdrawal of the United Kingdom from the European Union in the field of financial services published on the 7 February 2019 in the Official Journal (the “French Brexit Ordinance”).

³² As demonstrated by recent reports of pressure on Ireland to decrease its PIT rates: Brian Hutton, “What is the truth about paying tax in Ireland?” *The Irish Times*, 3 December 2019.

³³ Kleven et al, “Migration and Wage Effects of Taxing Top Earners: Evidence from the Foreigners’ Tax Scheme in Denmark” (2014) 129(1) *The Quarterly Journal of Economics* 333; Egger, Nigai and Strecker, “The Taxing Deed of Globalization” (2019) 109(2) *American Economic Review* 353; and Akcigit, Baslandze and Stantcheva, “Taxation and the International Mobility of Inventors” (2016) 106(10) *American Economic Review* 2930.

³⁴ E. Moretti, “Workers’ Education, Spillovers, and Productivity: Evidence from Plant-Level Production Functions” (2004) 94(3) *American Economic Review* 656.

staggering 32 per cent of total tax revenue.³⁵ Beyond other likely societal impacts, therefore, and solely from the perspective of tax systems, shifts in how employees work have the potential to create not only significant PIT revenue losses, but also to produce significant administrative/compliance challenges. A decrease in withholding taxation, and an increase of self-employment assessments, for example, has the potential not only to increase administrative costs and create cash-flow costs, but also, and perhaps more importantly, it may affect levels of non-compliance; there is now a strong and established literature on the fundamental role of third-party reporting for tax compliance,³⁶ and therefore a decrease in employers' remittance, and an increase in self-reporting is likely to increase the opportunities for non-compliance.

Similarly to the impact of mobility on the CIT tax base, these shifts in the PIT tax base—and the corresponding PIT competition pressure—are also unlikely to be uniform across countries. Having attractive characteristics increases bargaining power, and thus decreases the competitive pressure. Countries that offer high quality of life, as measured by a variety of factors, such as geographical conditions, infrastructure levels (in this case, likely to be focused on digital infrastructure, as well as accessibility to international travel), standard of public services (healthcare, education, etc.), or favourable governance structures (human rights, democratic accountability), are less likely to feel a downward shift in the PIT tax base. For other countries, the pressure to keep the existing PIT base intact is likely to be significant, not only because of immediate revenue needs, but also because of the important spillovers of a high-skilled labour workforce.

As countries focus on keeping their PIT base, in the first instance it is likely there will be a focus on re-definition of employment income,³⁷ withholding mechanisms and the possible introduction of anti-avoidance rules to prevent erosion of the PIT base. However, as countries continue to struggle to keep their PIT base—or decide to use the opportunity that increased mobility offers to expand it—it is likely there will be a pressure to apply average *and* top PIT rates that are not too high, primarily when compared to other countries in the same region. Whilst in theory the average rate is the most significant element for a mobile tax base, a simple comparison between top marginal rates is likely to have higher salience, and act as an important signalling effect for many individuals, so that both elements are likely to play a role in PIT competition. As demonstrated by the recent announcement of a new Greek PIT scheme targeted specifically at remote workers,³⁸ the allure of applying preferential PIT regimes exclusively to mobile individuals is likely to intensify, despite the significant risks inherent in such regimes. In particular, such regimes often present significant political challenges, especially in the aftermath of an economic crisis, because by nature they reduce the progressivity of the PIT schedule and

³⁵ A. Milanez, *Legal tax liability, legal remittance responsibility and tax incidence: Three dimensions of business taxation* (Paris: OECD Publishing, 2017), OECD Taxation Working Papers, No 32.

³⁶ H.J. Kleven et al, "Unwilling or Unable to Cheat? Evidence from a Tax Audit Experiment in Denmark" (2011) 79 *Econometrica* 651, 653; J. Slemrod, "Cheating Ourselves: The Economics of Tax Evasion" (2007) 21 *Economic Perspectives* 25, 37; and L. Lederman and J. Dugan, "Information Matters in Tax Enforcement" [2020] *Brigham Young University Law Review* 145.

³⁷ Such as the rules in the OECD Model Convention 2017 arts 15 and following, and the UN Model Convention 2017 art.15.

³⁸ K. Tagaris, "Sun, sea and cybernauts: the long road for Greece's digital nomads" (7 April 2021) *Reuters*, <https://www.reuters.com/article/us-health-coronavirus-greece-digitalnoma-idUSKBN2BU19T> [Accessed 13 May 2021].

violate the fundamental principle of horizontal equity, with potential spillover effects on tax morale and rates of non-compliance.³⁹

As with CIT, co-ordination of some elements of the PIT regimes, at least within homogeneous geographical areas, could significantly minimise the scope for tax competition. Yet, as the experience with CIT over the last forty years demonstrates, reaching agreement on co-ordinating initiatives has proved extremely challenging at international level, even amongst comparable countries. Nonetheless, recent developments in international negotiations regarding the adoption of a minimum rate for CIT show that co-ordination in tax policy is theoretically and politically possible,⁴⁰ depending on political economy conditions and global power dynamics, such as the position of and public finance needs of larger countries with strong bargaining power, and general public perceptions.

Possible implications for UK revenues

In the UK, the total PIT liability in 2018–19 was £187 billion with 35 per cent deriving from higher rate taxpayers (4.2 million taxpayers) and 31 per cent from additional rate taxpayers (399,000 taxpayers).⁴¹ Boeri et al estimate that approximately 31 per cent of UK jobs can be carried out remotely⁴²—whilst, this average figure is likely to be higher for higher paid jobs, in the absence of information by type of taxpayer, the writers assume the same share of higher paid jobs can be carried out remotely. Of these jobs, only an as yet unknown share will be internationally mobile. Conservatively assuming that jobs are only mobile for higher and additional rate taxpayers—and thus that basic rate taxpayers are immobile—a high, medium and low scenario can be developed: half, one-quarter and only one-tenth respectively of remote jobs for those taxpayers are internationally mobile.

On the basis of these assumptions, 712,845 (high-end scenario), 356,422 (medium scenario), and 142,569 (low scenario) current UK taxpayers would be internationally mobile (Figure 10). In these scenarios, the potential PIT revenue loss would be £19 billion, £9.6 billion or £3.8 billion respectively per annum, that is, 10 per cent, 5 per cent and 2 per cent of total PIT revenue respectively (Figure 11). To put this into perspective, the recently announced freeze of the personal allowance and higher rate threshold at 2021–22 levels is forecasted to raise £1.5 to £8 billion per annum between 2022–23 and 2025–26.⁴³ To these numbers SSC should also be added.

³⁹ R. de la Feria, “Tax Fraud and Selective Law Enforcement” (2020) 47(2) *Journal of Law and Society* 193.

⁴⁰ Chris Giles, Guy Chazan and David Keohane, “Global corporate tax deal edges closer after US backs minimum rate” *Financial Times*, 6 April 2021.

⁴¹ HMRC, *Income Tax Statistics for the Year 2018 to 2019* (March 2021), <https://www.gov.uk/government/statistics/percentile-points-for-total-income-before-and-after-tax-1992-to-2011> [Accessed 13 May 2021].

⁴² Boeri, Caiumi and Paccagnella, “Mitigating the work-safety trade-off” [2020] (2) *Covid Economics*, Centre for Economic Policy Research 60.

⁴³ HM Treasury, *Budget 2021: Protecting the Jobs and Livelihoods of the British People* (3 March 2021), HC 1226.

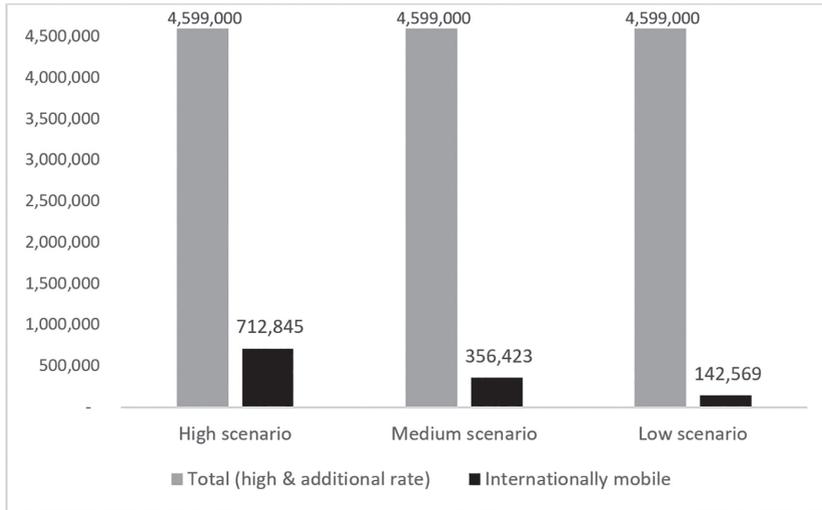


Figure 10: mobile taxpayers' scenarios (number of taxpayers)⁴⁴

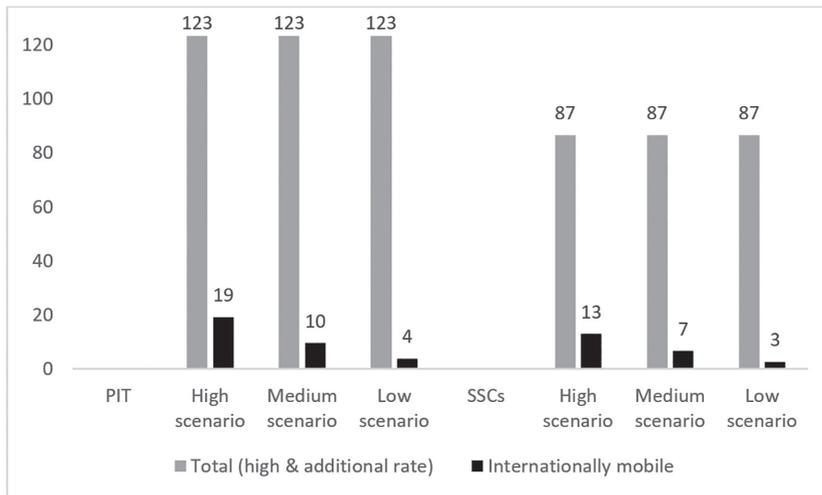


Figure 11: mobile taxpayers' scenarios (tax revenues, £ bn)⁴⁵

⁴⁴The writers' calculations using HMRC, *Personal Income Tax Statistics, Tax year 2018 to 2019* (March 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974540/SPI_National_Statistics_Commentary_tables_3_1_to_3.17_1819.pdf [Accessed 24 May 2021].

⁴⁵The writers' calculations using HMRC, *Personal Income Tax Statistics, Tax year 2018 to 2019* (March 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974540/SPI_National_Statistics_Commentary_tables_3_1_to_3.17_1819.pdf [Accessed 24 May 2021].

In 2018, the UK raised about £131 billion from employees' and employers' SSC.⁴⁶ In the absence of data with regard to the share of SSC paid by high and additional rate taxpayers, the writers use the same percentages as used for the PIT calculations: the writers assume high rate and additional rate taxpayers pay 31 per cent and 35 per cent respectively of total employees' and employers' SSC. As above, the writers assume that 31 per cent of these taxpayers can work remotely. Under the writers' three main scenarios, the lost SSC would amount to £13 billion, £6.7 billion and £2.7 billion respectively per annum (Figure 11).

Under the writers' three scenarios, the overall PIT revenue loss—that is, combined strict PIT and SSC revenues—would amount to between £6.5 billion and £32.5 billion. Putting these numbers into context, the recently announced changes in the rate and structure of the CIT are estimated to raise between £11.9 and £17.2 billion per annum between 2023–24 and 2025–26⁴⁷—even if CIT performs above these estimates as a result of pre-tax income increases due to lower employment costs, it is unlikely that such increases would cover the worst scenario in PIT revenue losses.

Conclusion

In recent years, resolving the challenges to CIT posed by the digitalisation of the economy has been the main focus of global tax discussions. Whilst our attention has been on CIT, however, beneath the surface a bigger crisis may be brewing in PIT. How big that crisis will be is not yet known, but one thing is certain: it has the potential for much wider economic and societal ramifications than the challenges to CIT. Difficulties will be particularly significant for PIT systems, like that in the UK, which rely heavily on a relatively small number of high-income—and now potentially mobile—taxpayers. The challenges of adapting our tax systems to a digital economy are far from over; indeed, they have just started.

Rita de la Feria* and Giorgia Maffini**

⁴⁶ OECD, *OECD Revenue Statistics Database*, <https://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm> [Accessed 13 May 2021].

⁴⁷ HM Treasury, *Budget 2021: Protecting the Jobs and Livelihoods of the British People* (3 March 2021), HC 1226.

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