

Introduction: What does the future promise for work, employment and society?

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Abstract. *In introducing this double Special Issue, the authors draw on the articles contained therein to highlight the main areas for consideration in research on the future of work. They present the fast-paced changes affecting the world of work as offering an opportunity to move towards equality-inducing growth, while warning of the dangers posed by mismanaged technological change, inequalities (highlighting the persistent and intersectional nature of gender inequality), global supply chains and opportunities for social dialogue. In this light, they also propose policy recommendations focusing on strengthening worker protection and representative institutions, rethinking regulatory frameworks and taxation systems, and ensuring just transitions.*

The world of work is changing rapidly and is increasingly shaped by technological advancements, globalization, changing demographics and climate change. While the future of work presents a number of economic opportunities, there are also serious challenges such as rising inequalities, high unemployment rates, job polarization and environmental degradation. As the contributors to this double Special Issue show, some of these trends raise questions about the current growth or development paradigm and the need to shift towards an “equality-inducing growth” model that promotes a more equitable distribution of resources and wealth.

This double Special Issue adopts a multidisciplinary socio-economic and legal perspective on the future of work. It includes articles that address the specific economic impacts of technological advancements on the labour market, but also seeks to widen and enrich this debate. This means questioning the character of the current techno-economic paradigm to understand how and why income and wealth has become concentrated among a select group of elites and “superstar” firms. It also means widening the future of work lens

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to encompass the inter-related issues of the changing international division of labour, gender inequalities, social dialogue and the need for a shift in our approach towards human-centred growth and development. In terms of policy, the 12 articles draw particular attention to the problematic lag in institutional development to support and regulate the emerging techno-economic paradigm, the need for distributive mechanisms (including social dialogue) to ensure that the risks and benefits of disruptive changes are shared more equitably, and the need for a new commitment to extend adequate protections to workers not currently covered by labour regulations.¹

Technological advancements and labour markets

A major question for future of work research and policy debates concerns the impacts of technological developments on labour markets. Technological change and innovations are not new, but the pace and speed at which innovations are taking place are unprecedented. Recent innovations, such as automation, artificial intelligence and robotics, are changing the employment landscape and forms of workplace organization, bringing about transformative changes in the economy and creating ripple effects across society, worker behaviour and interactions with family life. These technological changes raise policy questions about how to ensure job quality and full employment, how to promote skill development to mitigate the risk of job destruction and job polarization, and how to promote a fair distribution of productivity gains.

There is an ongoing debate on the extent to which occupations and tasks may be automated and the impact that this would have on labour markets. Frey and Osborne (2017) estimate that almost half the workforce in the United States is at risk of automation in the next one to two decades, and similar analyses for member countries of the Association of South-East Asian Nations (ASEAN) set the risk at around 56 per cent (Chang and Huynh, 2016). On the other hand, critics have argued that not all occupations are at high risk or will be automated and that only a handful of tasks within particular occupations will be automated. This focus on tasks finds a lower risk of job losses, varying from 6 to 15 per cent depending on the country (e.g. Arntz, Gregory and Zierahn, 2016; Nedelkoska and Quintini, 2018; Dengler and Matthes, 2018).

The fear that technological change threatens to create unemployment is not new. Miriam Cherry describes similar sentiments in the 1960s and re-opens a past dialogue about work and technology to draw lessons that are relevant to today's challenges. One important lesson is that there is no automatic equation that links an expected wave of automation with a predicted volume of job loss. On the contrary, Arntz, Gregory and Zierahn (2019) describe several contingencies. First, the speed of diffusion may be lower than

¹ In addition to the six articles contained in this first part of the double Special Issue, this introduction also refers to the articles in the second part by Miriam Cherry, Hannah Johnston, Antonio Aloisi and Valerio de Stefano, Günseli Berik, Samuel Jubé, and Alain Supiot. These articles will be published in *International Labour Review*, Vol. 159, No. 1 (2020).

expected since decisions on automation are firm specific and depend, among other factors, on whether it is technically feasible and also provides economic benefits (UNCTAD, 2017; Acemoglu and Restrepo, 2018; Kucera and de Mattos, forthcoming). Furthermore, in developing countries, where the informal sector is predominant, diffusion of technology will depend on the resource capacity of specific sectors to adopt such technologies.

A second contingent factor concerns the resultant heterogeneity of change in the nature of work arising from the adoption of new technologies. Workers may be required to adjust to a new bundle of tasks (Arntz, Gregory and Zierahn, 2019), but the composition of tasks and the management of the adjustment processes will vary, involving differences in the social organization of workplaces (Manyika et al., 2017) and in re-training policies offered by companies and governments.

Third, automation may generate productivity and capital accumulation effects that could unleash further opportunities for job growth (Acemoglu and Restrepo, 2018). For example, new digital technologies, such as labour platforms, may create new work opportunities for workers displaced by automation, offsetting net job losses. In fact, studies suggest that the overall net effects (positive or negative) are small (European Commission, 2019), leaving questions unanswered about the ability of adjustment mechanisms to reallocate workers within or across sectors and about institutional capacities across countries. Giovanni Dosi and Maria Enrica Virgillito argue that these adjustment mechanisms should include not only income and labour market policies but also policies that foster human-enhancing innovations instead of human-replacing ones. However, as Samuel Jubé points out, because company accounts do not treat labour as an asset but as a liability, there is a risk that companies shun their responsibility to provide workers with skill acquisition and training, offloading the costs of adjustment on to their workforce.

The new wave of digital technologies enabled through information and communication technology (ICT), such as cloud computing, has transformed the production landscape and opened up new ways of organizing work. Digital platforms allow firms to externalize a diverse range of activities to a global pool of labour that is geographically dispersed and completes tasks in a short time (Berg et al., 2018; Irani, 2015). The speed at which tasks can be completed using these platforms is appealing to firms, thus transforming the way both work and business are organized. However, as digital platforms are not regulated, they risk worsening the conditions of labour and create new labour market challenges. A number of articles in this double Special Issue engage with digital platforms from varied perspectives: Antonio Aloisi and Valerio de Stefano examine the regulation and working conditions dimensions; Hannah Johnston discusses the extent to which traditional mechanisms of social dialogue, such as work councils, collective bargaining and multiparty agreements, can be effectively utilized to ensure protection for platform workers in both place-based and web-based work; Hamid Ekbai and Bonnie Nardi engage with issues related to the high intensity of work, the risk of “low pay” and “no pay”

for tasks performed on these platforms, and the high profits that are generated for them (including so-called superstar firms); and lastly, Dominique Méda argues that the outsourcing and fragmentation of tasks leads to a deskilling of work and risks creating sweatshops of digital labour.

The new ICT-enabled digital technologies have also led to a re-examination of business practices in terms of supply chain management. Agile, digitized supply chains and the rise of e-commerce are creating greater complexity that requires precise planning and automated processes. Big data analytics are helping to forecast societal and economic trends, changes in consumer behaviour and regional preferences, and they are transforming the speed at which just-in-time manufacturing can meet consumer and business demands. Mark Anner uses field survey data from India to investigate the squeeze that supplier firms face in the garment sector as a result of this new pattern of global competition, revealing a worsening of working conditions and abuse of workers' rights.

Technology can, however, also be used effectively to formalize workers and to improve their working conditions in different contexts. For example, it could help small producers in rural areas to access credit and gather information on commodity prices and market conditions, or facilitate the formalization of small firms by simplifying processes of registration and tax payments (Chacaltana, Leung and Lee, 2018). In many countries, technology has also enabled wage monitoring and improved working conditions (Rani et al., 2013). Stephanie Barrientos, Lara Bianchi and Cindy Berman provide a governance framework for addressing women workers' rights in supply chains and, in this context, blockchain technology can be used effectively to monitor workers' rights and hold businesses accountable for their practices.

Technological change can bring about significant productivity gains. However, despite the speed of innovations and continuing progress of ICTs in many new areas, aggregate labour productivity growth has decelerated in 28 of the 29 member countries of the Organisation for Economic Co-operation and Development (OECD), including the United States, over the past decade. Even in emerging and developing economies, productivity growth rates have declined since the 2008 economic crisis (Brynjolfsson, Rock and Syverson, 2019). The current slowdown in productivity despite technological advancements in artificial intelligence, robotics and the ICT-enabled digital economy is similar to that of the 1980s, when massive investment in information technology did not lead to productivity growth in the United States (Solow, 1987).

Brynjolfsson, Rock and Syverson (2019) provide three explanations for this so-called "productivity paradox". The first is mismeasurement, given that some benefits of new technologies are not reflected in GDP and are therefore absent from productivity statistics (Mazzucato, 2018). In this regard, Günseli Berik's article, in the second part of this Special Issue, shows how alternative indicators to GDP, such as the Genuine Progress Indicator, are able to provide a more accurate reading of some of these elements and can generate an improved measure of productivity. A second explanation is that it takes considerable time to harness the effects of new technologies due to lags in diffusion

or lack of organizational capabilities and/or workforce skills to exploit them (Brynjolfsson, Rock and Syverson, 2019) – an issue also explored by Giovanni Dosi and Maria Enrica Virgillito. A third plausible explanation is that the productivity gains from technology are not evenly distributed, with only the small fraction of firms that adopted them early on reaping the benefits. This leads to increasing productivity differences between frontier firms and average firms (Andrews, Criscuolo and Gal, 2016) and a rise in the market share captured by superstar firms (Autor et al., 2017). Giovanni Dosi and Maria Enrica Virgillito illustrate how new technologies enable select firms to introduce new metrics that generate value through either network effects or through monitoring people and workers (i.e. tracking and selling users' data), which helps these firms to increase their market share and profitability. Similarly, Hamid Ekbia and Bonnie Nardi introduce the concept of “heteromation”, which is a new mechanism for extracting value from both work and non-work environments. These different avenues of value generation are not captured by traditional measures of income and productivity and require alternative indicators.

Inequalities:

The problem of inequality-inducing growth

While new technologies raise many questions for the distribution of gains from productivity growth and wealth generation, the issue of inequalities deserves a major focus in its own right, in particular to interrogate transformations in the causes, characteristics and consequences of inequality. It is clear that the current model of economic development and work organization has not delivered a convergent trend of rising incomes among the world's workforce. Indeed, the overall international evidence on inequality points to significant distributive failures: wealth is increasingly concentrated; the gap between richest and poorest is widening within countries, the labour share of income is declining; gender inequalities in earnings are persistent; inter-generational inequalities are accumulating; entire regions of the world are falling behind; and large portions of the world's workforce (in high- and low-income countries) have experienced real wage stagnation (e.g. Atkinson, 2015; Folbre, 2009; Gomis, 2019; Milanovic, 2016; UNDP, forthcoming). The one bright spot is found in combating extreme poverty through concerted international and national action. This demonstrates that proactive targeted interventions can work, but also casts new light on the hundreds of millions of people who still live in “moderate poverty” of less than US\$3.20 a day.

New evidence of wealth concentration, sparked by Piketty's work and others, provides an important empirical basis for understanding the current sense of economic injustice around the world. The trickle-down gains from economic growth have not had a sufficiently wide reach. Moreover, as Miriam Cherry elaborates, the new technological socio-economic paradigm further challenges existing institutions for redistribution, including questions about the role of unions and principles of data ownership. Overall, as argued above, the evidence

shows that the fruits of progress are increasingly captured by a small elite of individuals and high-tech companies (Piketty and Zucman, 2014; UNCTAD, 2019).

Beyond income inequalities, unequal access to worker rights and social protection, particularly among people in informal work or outside employment altogether, adds to the uncertainty created by new technologies and climate change. During a period of potentially radical transformations of livelihoods, unequal exposure to worker protections fuels social distress and alienation, as well as populist rage, including towards migrants. Enduring poverty, diminishing or unequal access to welfare services and a lack of opportunities to progress suggest that many people's lived experience is far removed from the average experience in high-income economies (Pilling, 2018). The aggregate welfare cost is such that several current indicators of well-being (such as those published in the UNDP's Human Development Reports) make an "inequality adjustment". As the article by Günseli Berik describes, this statistical adjustment demonstrates an improvement in aggregate welfare by apportioning a greater share of wealth to a poor person than to a rich one.

The complex patterns of inequalities thus present a major challenge for the future of work. Yet while there is broad acceptance of the argument that high inequality breeds multiple adverse consequences – including for the economy, for health and well-being and for democratic institutions – there is no consensus among scholars or policy-makers on the causes of inequality, nor on what should be done to address it.

In this double Special Issue, several articles highlight key causes. In their wide-ranging critical analysis of "heteromation", Hamid Ekbia and Bonnie Nardi argue that the social, economic and political features of digital technologies provide a new mechanism for increasing inequality that is qualitatively distinctive from past periods of labour automation and labour augmentation. In this connection, Giovanni Dosi and Maria Enrica Virgillito advance the argument that contemporary inequality reflects the "rentification of capitalism", characterized by an exponential growth of wealth concentration among information-intensive firms such as Google, Facebook and Amazon. This phenomenon is closely associated, they argue, with the financialization of the global economy. Financialization, banking crises and other characteristics associated with the financial development of an economy positively correlate with measures of a country's income inequality (de Haan and Sturm, 2017) and reflect a generalized uncoupling of the financial and real economy. This is a serious problem for economic development and the future of work. Economists at the International Monetary Fund are concerned about the huge share of foreign direct investment offshored to "empty corporate shells" in low tax jurisdictions with no activity related to the real economy (Damgaard, Elkjaer and Johannesen, 2019). The problem of non-productive investments is also signalled by the massive volume of share buy-backs, financial speculation and rising returns on financial assets (Lazonick, 2017).

Overall, the persistence (and, for certain dimensions, an increase) of inequalities raises a fundamental question about the type of growth and devel-

opment being pursued by today's policy-makers. The contemporary model may be described as "inequality-inducing growth", since the causes of inequality appear to be sustained whether growth rates go up or subside. Drawing on the arguments and evidence of the articles in this double issue, what is needed is a concerted effort to shift to an "equality-inducing growth" model, which chimes with the 2030 Agenda for Sustainable Development of the United Nations.

Persistent gender inequality

A major enduring feature of the world of work and one that, if not addressed urgently, will continue to hamper countries' capacity to provide a future of decent work, concerns gender inequality. In the absence of gender equality in the labour market, countries are unlikely to achieve gender equality in the home and in civic life, and vice versa. Women are still under-represented in labour markets (registering far lower rates of labour market participation than men in all but a handful of countries) and are concentrated at the lower echelons of the occupational ladder (associated with a high concentration among the lowest paid); they work more hours than men in all regions of the world (and most hours are unpaid); they face a higher risk of violence and harassment in the workplace; and they earn, on average, less than men.² With the fast-changing disruptions of technology and environmental transformations, new risks and opportunities for gender equality arise.

Feminist economics research provides a useful framework for identifying relevant future of work issues for gender inequalities. First, changes in economic structures, rather than simply gender preferences, have a powerful influence on patterns of gender inequality. Structural adjustment policies, including austerity-led macroeconomic policies,³ have powerful gender effects (Elson, 1995; Karamessini and Rubery, 2014), as do technology-led changes in job structures (Fernandez-Macias, Hurley and Storrie, 2012). New research on gig economy micro-task work, for example, finds surprising evidence of gender pay gaps despite the apparent anonymity of such work (Adams and Berg, 2017). There is nevertheless the promise, as Hamid Ekbja and Bonnie Nardi argue, of the gig economy diffusing more opportunities of jobs with flexible autonomy, which ought in principle to benefit workers tied to the home with care responsibilities.

Second, future economic choices are strongly influenced by conventions about the economic value attributed to different forms of work. This is especially significant for debates about how to address the care economy and unpaid work, and underlines the importance of incorporating a measure of

² Using data for more than 70 countries – which represent about 85 per cent of the world's wage employees – ILO research shows that on average women are paid about 20 per cent less than men across the world, with large variations between countries (ILO, 2018).

³ In post-crisis Europe, for example, austerity economics imposed significant gender inequality effects due to women's over-representation among the public sector workforce and because women are the primary beneficiaries of government-funded family support schemes (Karamessini and Rubery, 2014).

unpaid work in the Genuine Progress Indicator (see article by Günseli Berik). Gendered notions of skill play a significant role in explaining inequalities in job structures. Furthermore, women's over-representation in delivering unpaid care and other household work hinders prospects for gender-equal labour market status, especially in low-income countries (Chakraborty, 2010). Typically, the less "visible" the work, the less value ascribed to it and the higher the share of women doing it. The two articles by Mark Anner and by Stephanie Barrientos, Lara Bianchi and Cindy Berman expose this phenomenon in global supply chains (GSCs), and show that powerful buyers are able both to exploit a given gender unequal situation and to shape forms of gender subordination.

A third point is that the goal of gender equality is likely to benefit from broader policies for societal equality and vice versa. This is largely because women are less likely to be among the high earners and more likely to be among the low earners compared to men. Examples of pro-gender equality policies include an adequate minimum wage, progressive income tax, limits on executive pay and bonuses, coordinated collective bargaining and welfare benefits indexed to the real cost of living and made accessible to all workers. This does not of course rule out the potential power of targeted policies designed to root out discrimination on the grounds of sex *per se*. In their article, Barrientos, Bianchi and Berman examine such policies in a selection of GSC case studies, but find that an effective approach requires broader questioning of the business models of buyers and suppliers, arguing for a combination of targeted and broad-based inequality-reducing practices.

Fourth, future patterns of gender inequalities need to be interrogated through the lens of intersectionalities, since women may face multiple disadvantages due to class, ethnicity, age, disability, migrant status and race, among others. Miriam Cherry highlights the additional risks of job displacement due to automation faced by Hispanic women in the United States. More generally, the status of motherhood significantly shapes women's multiple disadvantage in all regions of the world.

Risks and opportunities of global supply chains

A major question for debates on the future of work concerns the international division of productive activities, and their associated income (and value added) benefits for workforce groups and their respective local and national economies. One of the most important mechanisms in this regard is the GSC. Much like trade debates of the 1970s and 1980s, the conventional economic wisdom suggests that participation in GSCs brings economic benefits, job creation and improved competitiveness. As the World Bank's World Development Report 2020 puts it:

Overall, participation in global value chains can deliver a double dividend. First, firms are more likely to specialize in the tasks in which they are most productive. Second, firms are able to gain from connections with foreign firms, which pass on the best managerial and technological practices. As a result, countries enjoy faster income growth and falling poverty (2020, p. xii).

However, numerous studies identify potential obstacles to economic upgrading (productivity and firm growth) and social upgrading (real wage growth, job creation, job quality and workplace justice), suggesting that there is no deterministic relationship between incorporation into GSCs and “high-road development” (e.g. Barrientos, 2019; Gereffi, 2019; Rossi, 2013). Future of work research should therefore consider the characteristics of GSCs and what organizational and country capabilities and institutional conditions can enable or hinder positive interlinkages.

The three articles in this double issue that deal with this question (Reinecke and Posthuma; Anner; Barrientos, Bianchi and Berman) advance our understanding of organizational capabilities, labour market policies and business strategies for fair and inclusive GSCs. Drawing on diverse sectors and varied forms of GSC integration (involving distinct inter-organizational dynamics), Gerhard Reinecke and Anne Posthuma identify three types of economic and social upgrading across nine case studies in Latin America. This represents a very useful analytical leap. First, “more integrated upgrading” describes GSCs where lead firms support upgrading among suppliers. Second, “truncated development” is characterized by a disconnect between lead firms and suppliers, displaying limited evidence, for example, of backward linkages that stimulate technology transfer, of scaling up among small firms, or of raising value added among suppliers. Third, cases of “oppositional development” display uneven patterns of upgrading for some suppliers and downgrading for others, leading to wide heterogeneity in job quality among different tiers of GSCs. The problem, the authors argue, is not simply that the gains from a GSC are unevenly shared, it is that the gains appear to be won at the expense of negative spillovers for a majority of small-scale supplier segments. The valuable takeaway is that GSCs come in different shapes and sizes, so that while policies may be designed to help distribute the gains, GSCs themselves may need to be re-designed to enable the possibility of such gains.

Inter-firm power dynamics are a key feature of GSC research (Davis, Kaplinsky and Morris, 2018) and are an important theme in all three of the aforementioned articles. Future trends in globalized capitalism are likely to reflect two counteracting dynamics. In buyer-driven chains, as suppliers adopt more activities and move up the value chain they can potentially increase their leverage over buyers. On the other hand, lead firms can accumulate greater power via mergers and acquisitions, and financialization may also drive such firms to deliver higher returns and in effect bolster their power.

In a detailed interrogation of GSC-integrated garment industry workers in India, Mark Anner exposes how power dynamics enable lead firms to adopt “predatory purchasing practices” and traces their consequences for workers. The balance of power is multifaceted and reflects industry, market and institutional conditions. It is therefore important to apply a critical assessment not only to the business strategies of lead firms in GSCs, but also to host country institutional contexts (involving, for example, weak labour law compliance) and the employment practices of supplier firms.

Concerning policy options to ensure better working conditions and worker rights in GSCs, one common recommendation is the need for a multi-layered system of public, private and social governance that can diffuse minimum labour standards, improve opportunities for worker voice and introduce quality work practices along the supply chain around the world (Delautre, 2019). Private governance alone is unlikely to foster sustained improvements in worker rights (Locke, 2013). Stephanie Barrientos, Lara Bianchi and Cindy Berman ask what multilayered governance can do for women workers' rights, focusing on the role of the UN Guiding Principles on Business and Human Rights. Drawing on detailed examples of gender initiatives in nine member companies of the Ethical Trading Initiative, the authors highlight the limits of current initiatives, including "little or no consultation with workers on the design of the [gender discrimination] interventions in advance" and no challenges to the business model of cost reduction and just-in-time production.

Overall, the evidence in this double Special Issue suggests that trading via GSCs certainly offers the potential for developing and emerging countries (and for enterprises located in them) to transition towards higher value added activities. However, as with other context-specific studies (e.g. Heintz, 2006; Milberg and Winkler, 2013), the findings suggest problems of unequal distribution of rents (skewed towards powerful lead firms), partial failure of self-managed enterprise codes of conduct, obstacles to the inclusion of SMEs in GSCs, and exploitative labour practices among distant suppliers, including among homeworkers.

Building solidarities: Trade unions and collective bargaining

Representative forms of social dialogue between workers, employers and government are essential in designing and implementing the radical changes required at workplace, industry and national levels for a sustainable and inclusive model of economic development in a future of decent work. This is the argument of the United Nations 2030 Agenda for Sustainable Development and it is reinforced in several flagship reports by multilateral agencies (e.g. OECD, 2019; European Commission, 2019; ILO, 2019a). The problem, however, is that there is rather less attention at the national policy level where the argument has failed to gain traction in the majority of countries.

Indeed, the data on trade union membership and collective bargaining coverage point to a declining trend in most countries. ILO data for 69 countries show a fall in union density in 42 countries during 2006–16 and a rise in only 16. The problem in developing countries is especially severe given that union membership among people in informal work is negligible, aside from a few exceptions (Grimshaw and Hayter, forthcoming; Visser, 2019). This trend represents a real wasted opportunity, especially given the scale of transformative change currently being unleashed on the world of work and the ongoing

problems of exploitation, precarious work and injustice. Systems of social dialogue, combined with effective statutory protections, offer the best means of addressing such problems.

As several articles in this double Special Issue demonstrate, collective bargaining and social dialogue form an essential corrective mechanism in otherwise distorted and imbalanced labour markets where employers enjoy the upper hand over workers. The sources of this power imbalance are varied and can be associated with the risk of unemployment (and associated weakness or absence of full employment policies), employer wage-fixing power in conditions of monopsony, labour segmentation practices by employers, business strategies of offshoring and outsourcing, anti-union legislation, employer discrimination and limited worker mobility. In this light, statutory support for collective representation at workplace and/or industry levels – what Sengenberger (1994) calls “participative standards” – provides an essential bulwark against the power advantage enjoyed by employers, which also includes the State in its role as employer (Grimshaw et al., 2017).

Our understanding of the future operationalization of such participative standards benefits from adopting a geographical perspective to the future of work. Hannah Johnston argues that collective organizing responses in the gig economy are strongly affected by the localized versus globally dispersed nature of gig economy work, although sometimes in unanticipated ways. For example, Johnston takes issue with the supposed “placelessness” of online web-based work, purported to exist beyond regulations linked to national jurisdiction. Because digital platforms tend to standardize work experience and working conditions, Johnston argues, they can in fact create a common experience, sowing the seeds for coordinated worker responses across national borders.

A crucial issue for future developments is how to extend collective bargaining rights (and other employment rights such as a minimum wage or maternity and paternity leave) to groups of self-employed workers caught in the grey zone between employee and self-employed status. There is by now a great deal of empirical evidence that many self-employed (including homeworkers and gig economy workers) are trapped and exploited in strongly dependent relationships with a business client. This situation probably requires a twin strategy of extending traditional collective bargaining rights and membership of trade unions, as many governments are currently doing, alongside recognizing other representative organizations that are organizing workers on the margins of formal employee status or in the informal economy (Doellgast, Lillie and Pulignano, 2018).

At the same time, it is important to remind policy-makers of the social and economic advantages of the long-standing “open-ended employment relationship”, which is apparently threatened by the rise of the digital economy and of forms of subcontracting arrangements for economic activity. There is strong theoretical scholarship to support the inherent flexibility and security that the employment relationship offers employers and workers, respectively (Marsden, 1999; Simon, 1951), as well as its role as a foundation for a nexus

of standard employment protections, whether established by law or collective negotiation. By contrast, the social and economic merits of the network of digitally facilitated contracts for tasks or gigs are unfounded, while their contribution to an “inequality-inducing growth model” wherein employers shed more and more of their welfare responsibilities is significant. Aloisi and De Stefano develop this line of argument through a sophisticated weaving of ideas from labour law, organizational studies and comparative employment systems. Significantly, they argue against those calling for the abandonment of the employee/self-employed distinction and instead propose to extend existing labour regulations to workers found to be “unreasonably excluded from the scope of employment law”.

The way forward

The articles presented in the double Special Issue highlight a number of challenges facing the world of work and call for creative and adaptive solutions in our institutional and governance systems and a radical rethinking of national and international policy approaches towards a human-centred “equality-inducing growth” model. With a view to ensuring social justice and sustainability, the adoption of technology should benefit societies and workers, augment their skills and productivity, enhance the meaning of, and the fulfilment procured by, work and improve opportunities for decent work. It is critical to support enterprises to innovate, diversify and adopt new technologies so as to enable transitions to sustainable development paths and ensure decent work. The different authors propose a number of policy options that could help promote decent work, fair and equitable income distribution and sustainable development that could be categorized under the following areas for action.

Worker protection: The problems confronting workers today are not new and, similarly, many of the policy solutions proposed have been advanced before. Previous policy solutions recommended reducing working hours, providing social protection, promoting union negotiations around automation, ensuring safety and health and ensuring effective minimum wages, among others. However, many of these policies were never comprehensively implemented. It is thus important to “re-open this conversation” – as Miriam Cherry puts it – to see how these policies can be effectively implemented in the current technological context, which requires a new political willingness. The decent work deficits within the GSCs can be addressed through different mechanisms, such as strengthening governance institutions (see Reinecke and Posthuma), adopting the United Nations Guiding Principles on Business and Human Rights (see Barrientos, Bianchi and Berman), transforming purchasing practices and involving social actors (see Anner). Recent innovations, such as blockchain technology, can also be harnessed to promote decent work and ensure transparency in GSCs and other work arrangements. Similarly, account-

ing practices in companies should be changed and workers could be provided with “social drawing rights” – as argued by Samuel Jubé and Alain Supiot – which would allow them to access resources for training and skill acquisition, and prepare them for labour market transitions.

Representative institutions: The collective capacities and resources of employer organizations and trade unions need shoring up, having declined alongside a falling share of wages in many countries’ national income. This situation calls on both parties to improve their representativeness and extend the scope of their membership, bringing diverse groups of workers to the negotiating table through innovative inclusive strategies, as illustrated by Hannah Johnston. This would allow the gains from automation and productivity to be shared equitably.

Regulatory framework: While new regulatory challenges are emerging as a result of technological change, Antonio Aloisi and Valerio de Stefano argue that it is important to extend the scope of existing labour and employment regulations to workers who are not currently covered by employment law. New forms of work, such as digital platforms, pose serious regulatory challenges since they operate beyond national jurisdictions. The Global Commission on the Future of Work, drawing its inspiration from the 2006 Maritime Labour Convention, which is a global labour code for seafarers, called for an international governance system for digital labour platforms that transcends geographical borders (ILO, 2019b).

Just transition: There is a need to shift away from the current “inequality-inducing growth” model. This requires that we shift the metrics of measurement and examine alternative indicators of GDP. This approach captures not only workers’ well-being, but also the environmental and sustainability costs and benefits. As argued in the articles by Günseli Berik, Dominique Méda, Alain Supiot, and Hamid Ekbia and Bonnie Nardi, this shift is fundamental for addressing inequality, directing scarce investments to rural areas and climate-friendly industries and for making economic decisions that are sustainable.

Tax policies: Lastly, taxation allows governments to make the necessary investments in public services that support sustainable employment. In this light, taxation rules should be revisited to ensure that all actors pay their fair share. There are growing problems in capturing rents and profits as value is increasingly generated in both work and non-work environments. Accordingly, taxation systems should be adapted to the new business models enabled by digital technologies and to the growing cross-border trade in data. Furthermore, addressing inequality in the digital economy requires a fair distribution of productivity gains through measures to tackle the high concentration of private ownership in this sector, and appropriate tax systems designed via coordinated global efforts, such as a robot tax, “bit tax” and web tax, as was suggested in the articles by Giovanni Dosi and Maria Enrica Virgillito, and by Hamid Ekbia and Bonnie Nardi.

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