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## Inclusivity and Competition

Technological transformation presents both opportunities and multidimensional challenges for public agencies and global governance institutions. On the one hand, technological and economic development generates disruption, especially to labor markets and employment patterns. Consequently, in addressing the disruptive aspects of technological progress, it is essential to minimize unacceptable inequalities in income and wealth both within and among nations. On the other hand, technology-driven productivity improves access to goods and services and the quality of life; it also provides solutions to global challenges – for instance, climate change adaptation and mitigation, as well as healthcare.

Public policy and discourse has neither fully understood nor responded to such developments and the accompanying policy and regulatory challenges. Moreover, innovations have impacts beyond borders; as such, they are not simply to be addressed by national public policy. <sup>2</sup> Therefore, it is important to encourage international collaboration on public policy responses to advances in technology through engagement and consultation with entrepreneurs, investors, and technologists.

This paper addresses inclusivity and competition primarily in the context of science and technology-driven transformations. T20 Turkey has introduced into the G20 agenda a discussion around technological transformation and innovation pointing to their wide-ranging impact on all segments of society; this initiative also coincided with the Turkish government's move to incorporate the Innovation20 – an unofficial initiative that began in Australia – into the T20 framework.

In 2015, the Turkish Presidency placed inclusiveness at the center of its agenda as one of its three priorities; the other two – Low-Income Developing (LIDCs) countries and small and medium-sized enterprises (SMEs) – were identified as crosscutting priorities. T20 discussions addressed multiple

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<sup>1</sup> The author thanks Ussal Sahbaz for his contributions .

<sup>2</sup> Discussions at the TEPAV-EPF T20 Regional Seminar on Innovation and International Technology Diffusion, Berlin, May 18–19, 2015.

priorities of the Turkish Presidency including the links between growth and employment. In its priorities document, the Turkish Presidency called for a discussion of the causes of persistent unemployment trends in order to better understand the factors that lie behind the increase in jobless growth. Turkey also indicated that it would initiate a discussion on the decline in labor incomes as a share of GDP.<sup>3</sup> In addition to addressing these issues, T20 addressed the G20 Employment Working Group's (EWG) emphasis on skills strategies, gender equality, and youth employment. (See Annex for G20 Employment Agenda.)

Emphasizing the disruptive effects of technological and economic development on labor markets and employment patterns, the T20:

- Underlined the need to measure the impact of technological change on global employment and incomes
- Emphasized the need to better understand automation-driven labor market imbalances, and asymmetries between developed and developing countries
- Drew attention to the potential implications of labor-replacing effects of technology on social security for redistribution

Drawing attention to skill gaps initiated by technological change, the T20:

- Proposed the establishment of the Global Skills Accelerator to ensure skill transformation especially in developing countries
- Proposed setting of an ambitious target for universal access to computer skills
- Proposed the inclusion of technological literacy in G20 countries' employment plans
- Proposed the establishment of a global framework for the accreditation and certification of productivity-enhancing skills

Emphasizing cross-border mobility of skilled labor, the T20:

- Proposed further discussion on a multilateral G20 start-up visa for entrepreneurs in both high- and low-tech industries
- Proposed further discussions on non-visa measures to facilitate cross-country labor mobility, including free movement of retirement and social security benefits across countries

On the integration of women, youth, migrants, and rural populations into the workforces, the T20:

- Proposed a report outlining the baseline for measurement of the G20 women labor force participation target

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<sup>3</sup> G20, *Turkish G20 Presidency Priorities for 2015*.

- Proposed the inclusion of entrepreneurship and SMEs in country-specific employment plans to support the youth employment target
- Proposed a broadband access target to support the youth employment target

On improving digital payment for inclusion, the T20:

- Proposed a needs assessment of physical and software needs for electronic payments in LIDCs
- Proposed the establishment of standards for electronic payments in LIDCs

On designing public policy to respond to new technologies, the T20:

- Emphasized the incorporation of the perspectives of entrepreneurs, investors, and technologists to develop public policies responding to new technologies

## **1. Analyzing the impact of technological change on income distribution and global employment**

Science and technology-driven transformations have been reshaping global production processes and have wide-ranging impacts on all segments of society. While technology-driven productivity improves access to goods and services and the quality of life, it is also viewed as among the causes of “jobless growth and the decline in labor incomes as a share of GDP”. Employment elasticity in G20 countries, represented by the percentage growth in employment associated with 1 percentage point growth, ranged from a high of 0.27 in the period from 1991 to 1999 to a low of 0.24 during the crisis and post-crisis periods.<sup>4</sup> The T20 drew attention to the fact that “major productivity progress has not been parallel to improvements in incomes and working conditions for a major part of the active population”.<sup>5</sup>

The effect of technological change on employment remains an issue of debate. One perspective attributes current unemployment trends – especially in developed countries – to fluctuations in business cycles, drawing on parallels with past trends. This perspective emphasizes the need for skills development to facilitate adjustment to the new conditions resulting from technological change (see section “Addressing skill gaps due to technological change” below). As a consequence, countries are increasingly moving towards adopting education policies that are aligned with emerging skills requirements.

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<sup>4</sup> “G20 Labour Markets in 2015: Strengthening the Link between Growth and Employment”, International Labour Organization, Organisation for Economic Co-operation and Development, World Bank Group, with inputs by the International Monetary Fund – report prepared for the G20 Labour and Employment Ministers Meeting and Joint Meeting with G20 Finance Ministers Ankara, Turkey, September 3-4, 2015

<sup>5</sup> Feedback provided to this paper by Centro de Economía y Finanzas para el Desarrollo de la Argentina, CEFID-AR.

Others raise the question of whether current unemployment trends are more enduring, and whether they fit the description of *technological unemployment* (first coined by Keynes) caused by the exponential pace of ICT advancement.<sup>6</sup>

POLICY OPTION:

*The G20 should commission extensive and detailed empirical common studies of developed and developing countries, incorporating the greatest possible sectoral breakdown, focusing on developments and changes in labor markets, employment conditions, evolution of workers' incomes, and the relationship or lack thereof between labor market flexibility and improvements in employment levels, among other issues.*<sup>7</sup>

In the meantime, there is a need to better understand the short-term implications of automation and the asymmetry between developed and developing countries. One perspective argued that exposing the extent of such asymmetry can help in the formulation of reasonable solutions to labor market imbalances. For instance, in developed countries where skilled labor is available, ICT-driven unemployment in the radiology field is likely to increase. In the developing world, in contrast, where highly educated medical personnel are scarce, automation can contribute to productivity by helping to ameliorate the effects of a shortage of qualified labor. Exposing the extent of such asymmetry can help compensate for the adverse effects of new technologies on employment in the developed world – for instance, qualified surplus medical labor in the developed world can be employed in developing countries from a distance via online platforms.<sup>8</sup>

POLICY OPTIONS<sup>9</sup>:

*The G20 could start a sub-group within the Employment Working Group incorporating the perspectives of entrepreneurs, investors, and technologists:*

- *To define the state-of-the-art in the relevant areas of technology*
- *To assess new technologies' disruptive potential in displacing highly educated and qualified labor in highly industrialized countries*
- *To assess new technologies' productive contribution in the developing world in making up for a shortage of qualified labor*

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<sup>6</sup> Carl Benedikt Frey and Michael A. Osborne, "The Future of Employment: How Susceptible are Jobs to Computerisation?", Oxford University, September 17, 2013.

<sup>7</sup> Feedback provided by CEFID-AR.

<sup>8</sup> Kemal Inan, "Policy Proposal on Joint Research Projects on Near-Future Prospects of Automation Technologies that can Displace High-Salaried Labor", Sabancı University, 2015 (policy note submitted to the T20 Turkey Kick-off Event).

<sup>9</sup> Ibid.

If technological change has the impact of downsizing labor in a permanent way, there may be a need to radically rethink redistribution mechanisms in future – for instance, social security systems and tax policy. It is equally important to differentiate between the impact of technology on employment trends in developed and developing countries.

In relation to redistribution, social security spending is a highly charged domestic political issue<sup>10</sup> with “supply-side” perspectives confronting those that emphasize the need for active public intervention to address structural market imbalances and demand weakness.<sup>11</sup>

In their Cairns meeting in September 2014, G20 Finance Ministers asked the IMF to work with the OECD and other IOs to analyze the implications of the tax policy mix and composition of government expenditure for growth outcomes. The aim of the proposal is “to enhance the contribution of [G20 governments’] fiscal strategies to growth.”<sup>12</sup>

**POLICY OPTION:**

*The G20 could ask the IMF and the OECD to incorporate an employment perspective into its ongoing analysis of the implications of the tax policy mix and composition of government expenditure for growth outcomes. The Employment Working Group can be involved in monitoring the progress of that work, and ensure that the merits of pro-employment tax reform are explicitly addressed as part of it.*<sup>13</sup>

## **2. Addressing skill gaps due to technological change**

While its long-term impact on jobs remains unpredictable, there is no doubt that technology is revolutionizing industries and creating new ones, and hence triggering new skills requirements. A primary focus of T20 Turkey has been to analyze mismatches between demand for skills on the one hand and labor supply and education systems on the other. In advanced countries, the demand for middle-skilled workers is either stagnating or falling, pointing to a requirement for the revision of education systems. Meanwhile, developing countries, which often lack access to skills development, risk falling behind in the face of rapid technological transformation.

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<sup>10</sup> Feedback provided to this paper by Tristram Sainsbury, Lowy Institute.

<sup>11</sup> Feedback provided to this paper by CEFID-AR.

<sup>12</sup> Communiqué: Meeting of the G20 Finance Ministers and Central Bank Governors Meeting 20-21 September 2014, Cairns, 2014, <https://g20.org/wp-content/uploads/2014/12/Communique-G20-Finance-Ministers-and-Central-Bank-Governors-Cairns.pdf>.

<sup>13</sup> Ussal Şahbaz, Feride İnan, Ayşegül Aytaç, “Room Document for G20 Employment Working Group Meeting”, TEPAV, 2015.

### **POLICY OPTION:**

*The G20 could commission detailed studies on the gap between educational levels and skills required by new technologies.<sup>14</sup>*

The new jobs being created require dissemination of the skills of the digital age on a global scale. The G20 innovation framework discussed at the T20 Berlin Workshop included recommendations to provide direction and benchmarks for the development of innovative national and cross-country systems for comprehensive and differentiated skilling programs. These aim to encourage technology literacy and the matching of skills with labor market demands in a global digital economy.

### **POLICY OPTIONS<sup>15</sup>:**

*The G20 can work toward setting an ambitious target for universal access to computer skills.*

*The G20 can promote the inclusion of technological literacy in G20 countries' employment plans.*

*The G20 can coordinate with the G20 Employment Working Group and IOs to increase incentives, visibility, and attractiveness of hybrid education (training on the job and vocational training).*

*The G20 can coordinate with the G20 Employment Working Group, IOs, the Business20, and the Labor20 towards the establishment of a global framework for the accreditation and certification of productivity-enhancing skills.*

T20 Turkey presented a proposal to the Employment Working Group for the establishment of a Global Skills Accelerator (GSA), emphasizing the need for global cooperation to address skills mismatches that stem from rapid developments in science and technology. T20 is working together with the World Bank and the Business-20 towards developing the idea further.

### **POLICY OPTION<sup>16</sup>**

*The G20 can support the establishment of the Global Skills Accelerator. The Accelerator is envisioned as a platform to develop the right strategies for skilling/reskilling and to design curriculum of training programs by coordinating the efforts of governments and businesses and collecting data about skills-in-demand from global talent platforms. It will also provide funding to create e-learning modules and to local partners to deliver training programs.*

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<sup>14</sup> Feedback provided to this paper by CEFID-AR.

<sup>15</sup> T20-EPF, "T20 Regional Seminar on Innovation and International Technology Diffusion Berlin," May 18–19, 2015.

<sup>16</sup> "A Proposal for a Global Skills Accelerator", Think20 Turkey, 2015, draft proposal presented to the G20 Employment Working Group,  
<http://www.t20turkey.org/images/pdf/A%20Proposal%20for%20a%20Global%20Skills%20Accelerator.pdf>.

### 3. Skilled labor mobility

Skilled labor mobility is an important feature of the global economy. Domestic policies that enable cross-border mobility of skilled labor can maximize employment potential for the public and private sectors in both developed and developing countries. Developed G20 countries such as the United Kingdom, Italy, and the United States recently adopted or are considering start-up visa programs and visa initiatives for STEM graduates and other skilled labor.<sup>17</sup> Developing countries could initiate similar programs and adjust their labor-market policies to facilitate skilled labor absorption.<sup>18</sup>

#### POLICY OPTIONS<sup>19</sup>:

*The G20 can coordinate recent domestic policy initiatives for labor mobility that enhance job creation to maximize their impact.*

*The G20 can discuss a multilateral G20 start-up visa for entrepreneurs in both high- and low-tech industries.<sup>20</sup>*

*The G20 can discuss non-visa measures to facilitate cross-country labor mobility, including free movement of retirement and social security benefits across countries.*

Meanwhile, some participants called for a thorough analysis of the brain-drain phenomenon and asymmetries of employment opportunities in developing countries.<sup>21</sup>

### 4. Integration of women, youth, migrants, and rural populations into the workforces

Addressing rising inequalities is integral to the G20 employment agenda. In Brisbane, the G20 committed to reducing the gap between male and female labor participation in G20 countries by 25 percent by 2025.

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<sup>17</sup> Ali Sokmen, "Türkiye için Yenilikçilik Odaklı bir Göç Politikası", TEPAV policy note, February 2013, [http://www.tepav.org.tr/upload/files/1391419658-2.Yetenegi\\_Cekebilmek\\_Turkiye\\_icin\\_Yenilikcilik\\_Odali\\_bir\\_Goc\\_Politikasi.pdf](http://www.tepav.org.tr/upload/files/1391419658-2.Yetenegi_Cekebilmek_Turkiye_icin_Yenilikcilik_Odali_bir_Goc_Politikasi.pdf).

<sup>18</sup> Ussal Şahbaz, Feride İnan, Ayşegül Aytaç, 2015.

<sup>19</sup> Ibid.

<sup>20</sup> Also recommended by Business-20 Turkey.

Business-20, "Responding to the three I's Inclusiveness, Implementation, Investment: B20 Policy Proposals for the G20", September 2015 [http://b20turkey.org/policy-papers/b20turkey\\_summary.pdf](http://b20turkey.org/policy-papers/b20turkey_summary.pdf)

<sup>21</sup> Feedback provided to this paper by CEFID-AR.

POLICY OPTION:

*The G20 Employment Group can deliver a report to G20 leaders, outlining the baseline for measurement. The report should include milestones, timeframes, and country goals, as well as the key challenges and risks to the implementation timeframe.*<sup>22</sup>

Another critical issue is youth unemployment, which is linked to skill development, shortfalls in education systems, and limited access to the digital economy. Youth unemployment reached 13.1 percent globally in 2014, three times more than unemployment among adults. Youth unemployment worsened in nearly every region of the world reaching as high as 50 percent in some countries including Greece, Spain, and South Africa. Youth unemployment is a complex problem with differing structural causes in different countries.<sup>23</sup> The Turkish Presidency is currently working toward setting a target for reducing youth unemployment.

POLICY OPTION:

*The G20 member countries should encourage entrepreneurship (for example, start-ups) and SMEs in their country-specific employment plans as part of efforts to determine the scale, nature, and timeframe for the youth employment target.*<sup>24</sup>

At the same time, the digital economy offers a myriad of opportunities to youth and socio-economically disadvantaged groups. Digital inclusion of young people is critical to help build skill requirements in the increasingly digital economy. Yet, there are still 4 billion people around the world without Internet; 6 billion without broadband, 2 billion without mobile phones, and 0.4 billion without a digital signal.<sup>25</sup>

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<sup>22</sup> Ussal Şahbaz, Feride İnan, Ayşegül Aytaç, 2015.

<sup>23</sup> J. Dolado, eds. "No Country for Young People? Youth Labour Market Problems in Europe", VoxEU.org eBook, London: CEPR Press., 2015

<sup>24</sup> Recommendation made by Tristram Sainsbury, 2015 has been modified.

Tristram Sainsbury, "The G20 at the end of 2014" Lowy Institute for International Policy Report, 2015 Available at : <http://m.lowyinstitute.org/publications/g20-end-20> [16.02.2015]

<sup>25</sup> Barry Carin, "Option to Promote Development", 2015, background note for the Global Commission on Internet Governance.

## POLICY OPTIONS:

*The G20 youth unemployment target can be supported with a broadband access target.*<sup>26</sup>

*The G20 should commission a study on affordability, accessibility, and inclusivity of the Internet.*

In addition, the G20 employment agenda should include a focus on agri-skills development. This is important for India and countries in Africa that specialize in producing agricultural products for export markets and also to boost productivity.<sup>27</sup>

Some T20 participants recommended that the G20 agenda should address the issue of jobs for migrants, both skilled and unskilled, in light of the growing significance of cross-border people movements caused by war and political and economic crises. T20 Turkey is organizing a special session on the Syrian refugee crisis alongside the G20 Antalya Summit, which will focus on job creation and the right to work, skills-building development and entrepreneurship development, and social protection for refugees.

## **5. Improving digital payment for inclusion**

Advancements in ICT such as digital payment technologies offer opportunities for greater inclusiveness by facilitating remittance transfers at lower cost. Digital payment technologies can dramatically lower the cost of remittance transfers as well as enhance domestic market integration by offering faster, more secure, transparent, and cost-efficient financial services in payments, savings, insurance, or credit. While the G20 started the Global Partnership on Financial Inclusion in the Korea Summit in 2010, there has not been sufficient emphasis on digital payments in the G20 development agenda.

In developing regions, the lack of digital infrastructure limits the penetration of digital payments. Digital infrastructure consists of physical components (for instance, communication lines) and software such as legal and policy frameworks, human, and institutional capacity. With a lack of physical infrastructure being a limiting factor in relation to penetration of digital payments in developing countries, the digital agenda also has substantial potential crossover with the infrastructure agenda. At the same time, restrictive regulations, insufficient consumer protection, and low levels of education hinder development of digital payments.

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<sup>26</sup> Also recommended by Business-20 Turkey. *Responding to the three I's Inclusiveness, Implementation, Investment: B20 Policy Proposals for the G20*, September 2015, [http://b20turkey.org/policy-papers/b20turkey\\_summary.pdf](http://b20turkey.org/policy-papers/b20turkey_summary.pdf).

<sup>27</sup> Discussions at the Consultative Meeting, TEPAV-Gateway House, "Turkey, India and the G20," October 2015.

POLICY OPTION:

*The G20 should commission a study by the World Bank to conduct a needs assessment of physical and software needs for electronic payments in LIDCs. The needs assessment on these factors can be submitted at the 2015 Leader's summit in China.*

Further, the absence of global standards for personal data hinders interoperability of digital payment systems, potentially limiting their positive impact on developing economies. Internationally established standards can decrease entry costs and ensure safety and reliability. Since electronic payments among the poor are also used for international transfers, such as remittances, the financial systems of different countries need to work together at a low cost.

POLICY OPTION:

*The G20 should work together with the World Bank and other relevant international institutions to establish standards for electronic payments in LIDCs. These institutions should offer countries consulting services in setting up their systems and synchronizing them with primary remittance connections.*

## **6. Designing public policy to address technological transformation**

New innovations such as the digital currency Bitcoin, self-driving cars, drones, and other robotics – as well as critical developments in biology and genetics – challenge existing regulatory systems. However, public policy and discourse has not fully understood or responded to such developments and the exigency of the accompanying regulatory challenges relating to security, health, environment, labor market regulations, and so on. Creating new regulation becomes an even more complex process in a world of rapidly changing technologies. Innovations have impacts beyond borders; as such, they are not simply to be addressed by national public policy. Public policy must rely on mechanisms that allow for more flexibility and have the necessary capacity to take into account both the positive and the disruptive dimensions of evolving technologies.<sup>28</sup>

POLICY OPTION:

*The G20 could develop public policies responding to new technologies through engagement and consultation with engagement groups and multilateral organizations that work on innovation, incorporating the perspectives of entrepreneurs, investors, and technologists – doers in this area. Once adopted, these should be actively communicated to business, societal, and other stakeholders.*

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<sup>28</sup> Discussions at the T20-EPF, “T20 Regional Seminar on Innovation and International Technology Diffusion Berlin,” May 18–19, 2015.