T20 Recommendations Realized:
2019 Osaka Summit

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Executive Summary

This report on the Think 20 (T20) recommendations realized identifies the impact of the policy recommendations that the T20 and its global network of think tanks made to the Group of 20 (G20) leaders for their Osaka Summit, which took place on 28–29 June 2019. This report first matches the 108 recommendations contained in the T20 Summit 2019 Communiqué across 16 issue areas to the 143 collective, precise, future-oriented and politically binding commitments made by the G20 leaders at Osaka.

Of these 108 recommendations, 50 (46%) either partially or fully matched, and thus realized, the leaders' commitments made at the Osaka Summit. This 46% match is a substantial increase from the 24% match at Buenos Aires in 2018 and the 25% match at Hamburg in 2017. In 2019, the highest number of full recommendation-commitment matches were on labour/employment, gender and development, with a 33%, 25% and 21% match respectively. Health and information and communications technology (ICT)/digitalization followed each with a 20% full match.

Disaggregated by the 10 task forces established by the 2019 Japanese T20 presidency, the task force with the highest recommendation-commitment match is Task Force 6, "Social Cohesion, Global Governance and the Future of Politics," with a 38% match. Task Force 2, "International Financial Architecture for Stability and Development/Crypto-Assets and Fin-Tech," and Task Force 3, "Trade, Investment and Globalization," both had a 25% match.

Ultimately, there is little value if these T20 recommendations are merely realized by G20 leaders as commitments in their communiqué but do not lead to real results through effective implementation when the leaders return home. To predict the impact of the matched commitments on compliance, the T20 recommendations were compared with the historical level of G20 compliance for each subject on which recommendation-commitment matches arose in 2019. Here, on the subjects the 2019 T20 made recommendations on, the G20's strongest compliance since 2008 came on infrastructure, at 90%, followed in turn by macroeconomic policy at 89%, financial regulation at 77%, labour and employment at 75%, and health and energy each at 73%. Below the overall G20 all-subject average of 71% came historic compliance on climate change at 69%, reform of international financial institutions (IFIs) and trade each at 68%, development at 67%, ICT/digitalization at 62%, the environment at 60%, and gender at 60%.

As the subjects with the highest recommendation-commitment match in 2019 do not correspond with the G20's compliance in these issue areas, in crafting its recommendations the T20 could

consider how the G20 can better comply with the recommendations that become commitments at the summit itself.

This 2019 T20 Recommendations Realized Report makes several contributions. First, and most immediately, it provides evidence to encourage think tanks already involved in the T20 process and those not yet involved to increase or initiate their involvement, on the grounds that such investment appears to influence an important centre of global governance. Second, this report helps build an analytical and empirical foundation for the T20 to adjust its process and enhance its influence on the G20 summit and the effectiveness of the G20 summit. Third, this study tests the hope expressed by some scholars that the G20 provides a valuable forum for a diverse array of transnational actors to exercise influence. Fourth, it contributes to a growing data set to identify how the G20 governors themselves can improve their compliance with their summit commitments through the selective use of proven, low-cost accountability measures that they control.

Introduction

The 2019 T20 Recommendations Realized Report identifies the impact of the policy recommendations that the T20 and its global network of think tanks made to the Group of 20 (G20) leaders at their Osaka Summit, which took place on 28-29 June 2019. The report matches the 108 priority T20 recommendations made across 10 task forces to the 143 collective, precise, future-oriented, politically binding G20 commitments made at Osaka, using a method pioneered by the University of Toronto's Global Governance Program at Trinity College and first applied to summits on non-communicable diseases (NCDs) convened in 2007, 2011 and 2014 (Kirton, Kulik and Bracht 2016). The current simplified version gives each of the 108 recommendations a score on a three-point scale to track the degree of the match. A score of −1 indicates no match, a score of 0 indicates a partial match and a score of +1 indicates a full match with one or more Osaka commitments (see Appendix A).

This report finds that 50 (46%) of the 108 T20 recommendations made were either partially or fully realized in the Osaka commitments (see Appendix B). Eighteen recommendations were fully realized and 32 were partially realized.

In 2019, the T20 made the most recommendations on the issue area of development, totalling 19 recommendations (see Appendix C). In turn, this was followed by financial regulation with 18 recommendations, information communications technologies (ICT) and digitalization with 15 recommendations, and trade with 13 recommendations.

The highest number of recommendation-commitments full matches for Osaka came in labour and employment and gender, with a 33% and 25% match respectively. In turn, they were followed by development with a 21% match, and ICT/digitalization and health with a 20% match. By contrast, there was no match on accountability between the T20 recommendation-commitments and the G20 Osaka commitments. However, only one recommendation was identified in this issue area.

This pattern across five issue areas does not correspond precisely with the G20's overall compliance by subject. The average compliance on labour and employment commitments rests at 75%. This is then followed by gender at 60% compliance, development at 67%, digital economy at 62% and health at 73%. This pattern of compliance slightly differs from the recommendation-commitments matches trend for Osaka.

The overall compliance average across the five aforementioned issue areas — labour and employment, gender, ICT/digitalization, development, health — is 67%.

Recommendations Made

The T20 made 108 priority recommendations to G20 leaders in the lead-up to the Osaka Summit, as identified in its communiqué on 27 May 2019 (T20 2019).

The highest number of recommendations was made in the thematic area of development with 19 recommendations. This is closely followed by financial regulation with 18 recommendations. Next, 15 recommendations were made on ICT/digitalization, and 13 were made on the issue area of trade. Nine recommendations were made on labour and employment, and seven were made on infrastructure. The issue area of environment has six recommendations, while health and social policy each have five. Four recommendations were made on gender, and climate change and energy respectively have two. Finally, one recommendation was made in each of the issue areas of accountability, international financial institution reform and macroeconomic policy.

Development

On development, the T20 made 19 recommendations, focused on a human-centred approach to the 2030 Agenda for Sustainable Development. To this end, T20 development recommendations highlighted the role of the private sector, support for developing countries, and sustainable and innovative finance, as well as linkages with other development-related issue areas such as health, education, and gender equality and empowerment. Three recommendations were respectively made on technological cooperation with developing countries and socially and environmentally sound infrastructure financing. Another three recommendations pertained to cooperation with African economies, specifically with regards to non-resource–based growth and the coordination of various development support programs. The T20 further recommended public-private models in support of small and medium-sized enterprises (SMEs) and their intellectual property rights.

Financial Regulation

On financial regulation, the T20 made 18 recommendations. The majority of recommendations in this issue area centred on digital transformation. Several recommendations highlighted the importance of creating or further utilizing multilateral platforms of financial regulation, including the International Monetary Fund (IMF), the Global Monetary Policy Coordination Meetings, the Financial Action Task Force and the G20 Sustainable Finance Working Group. Four recommendations pertained to fintech and crypto-asset regulation, and three recommendations highlighted innovative and sustainable finance, especially with regards to the foreign loan repayment capacity of developing countries. Two recommendations concerned monitoring capital flows, and another recommendation emphasized the repatriation of illicit capital flows to African economies. The T20 further recommended the involvement of various actors and stakeholders, the creation of viable revenue models and tax system reforms to reflect demographic transitions.

ICT/Digitalization

The T20 made 15 recommendations on ICT/digitalization. Overall, it advocated for a framework to use digital technology for sustainable development and support the intergovernmental guidelines on artificial intelligence set out by the Organisation for Economic Co-operation and Development (OECD). With regards to digital literacy, the T20 supported the development of an international digital skills strategy that advances training. It recommended the development of guidelines, metrics, assessment tools and best practices for digital literacy in the workplace, and the creation of a coalition/advisory board for the coordination on digital skills literacy. Furthermore, the T20 noted that G20 governments should ensure digital taxation takes into account the policy priorities of Africa.

The T20 also recommended that G20 leaders adopt guidelines and reforms for coordinating the global governance of platform economies, establish "free flow of data" as a logical benchmark, and harness the benefits of digital innovation for sustainable and inclusive growth. Finally, the T20

suggested that G20 governments help SMEs by developing financial technology and improving entrepreneurial ecosystems. G20 members should also improve traditional lending systems using new technology and big data, specifically by developing process automation as well as a global action plan to promote open access to data, science and information.

Trade
The issue of trade had 13 recommendations, which spanned intellectual property, service economies, digital transformation, investment facilitation, human capital and mutually beneficial foreign direct investment (FDI). Specifically, the T20 made four recommendations on reforming the World Trade Organization (WTO). On environment-related concerns in trade, the T20 called upon G20 leaders to address sustainable ocean resource management and also health and environmental coordination. With regards to Africa, the T20 made two recommendations on subsidies and non-tariff barriers in agriculture trade, as well as the quality and safety of African food exports. The T20 also recommended furthering a conducive business environment for start-up internationalization, harmonizing multilateral agreements and domestic conditions, enhance inter-sectoral networks, and restructure global value chains.

Labour and Employment
On labour and employment, the T20 made nine priority recommendations. The majority of recommendations responded to evolving technology and digital transformations in the labour market. Three recommendations advocated for skills development and vocational education, in light of the objective to reduce inequalities and promote socioeconomic development. Other recommendations pertained to social protection coverage for platform workers, equitable access to resources for entrepreneurship, human resources and financial incentives for SMEs and high-tech start-ups, labour regulations for entrepreneurial recycling, equitable pay and an inclusive labour migration framework.

Infrastructure
On infrastructure, the T20 made seven recommendations. Four recommendations highlighted sustainable and quality infrastructure, specifically concerning the infrastructure project's cost efficiency and contribution to economic growth. Another four recommendations emphasized the environmental outcomes of infrastructure investment, notably as it relates to disaster resilience and ecological, water and transport systems. One recommendation was made to encourage development cooperation between multilateral development banks and other partners. The remaining recommendations commented on the policy and institutional foundations of infrastructure development, such as policies on land acquisition and urban governance.

Environment
On the issue area of environment, the T20 made six recommendations. They range from transitioning to a circular economy to facilitating the Sustainable Development Goals (SDGs). The T20 called upon G20 leaders to spearhead the decarbonization of consumer lifestyles and the reduction of carbon dioxide emissions, specifically by accelerating technology transfers to developing countries and introducing globally appropriate technology systems. Furthermore, the T20 suggested raising the ambition of circular economy policies and incorporating Extended Producer Responsibility by facilitating new business models and community-based initiatives that rebuild social capital and revitalize local areas. Finally, the T20 also recommended the development of an international policy coordination mechanism to realize a circular economy.

Health and Social Policy
The T20 respectively made five recommendations in the two issue areas of health and social policy. For health, the T20 recommended reorienting and harmonizing development assistance to strengthen primary healthcare systems and promote universal access to health coverage, especially for

elderly populations. The T20 also recommended the establishment of a reliable migrant information system to ensure migrants' health and social security. The T20 called upon G20 leaders to establish a working group that strives to harness and regulate health technologies globally. Additionally, the T20 supported the development and adoption of evidence-based medicine to share medical best practices.

For social policy, the T20 recommended reorienting social security systems toward greater means-tested, non-contributory pensions that align with labour force participation. The T20 also recommended improving data on population and economic linkages to reflect key features of generational economies by age, gender and income group. Such data should inform policymakers in establishing an assessment framework for effective and efficient social security systems. Furthermore, greater policy attention should be paid to education on science, technology, engineering and medicine (STEM) and also to physical, digital and people-to-people connectivity in order to narrow widening urban-rural divides.

Gender
The T20 made four recommendations on gender. The T20 first suggested developing baseline data and targeted action to help marginalized girls and boys achieve gender equality in education. The T20 also highlighted the importance of removing systemic legal and social barriers in the labour market that disproportionately limit women's labour force participation. The T20 further emphasized the need to improve data availability and analysis on women's economic empowerment, both in the public and private sectors, while also mainstreaming gender in public policymaking and requiring private- and third-sector entities to adopt and report on gender policies and outcomes.

Climate Change and Energy
Climate change and energy both have two T20 recommendations. One climate change recommendation made was to build the capacity of developing countries in implementing ambitious climate mitigation efforts, notably concerning low-carbon regulation and high-quality infrastructure. Additionally, the T20 suggested creating a G20 metropolitan working group to promote territorial policies between national and subnational governments and empower local governments to finance low-emission and climate-resilient transitions.

On energy, the T20 suggested enhancing the capacity building of entrepreneurial skills required for electricity projects by emphasizing renewables. This recommendation can be implemented by harmonizing policies and standards for cross-border business and human resource flows. Accelerated policies for low-carbon and climate-resilient growth should also be pursued.

Accountability, International Financial Institution Reform and Macroeconomic Policy
The T20 made one recommendation on accountability, IFI reform and macroeconomic policy, respectively. On accountability, the T20 recommended increasing channels of political participation that go beyond electoral turnout, in an effort to include the diverse voices of citizens and civil society through constructive uses of social media and evidence-based research. On IFI reform, the T20 suggested IMF governance reforms by expanding and improving the IMF's tools and more effectively engaging other actors in the global system for sustainable development. On macroeconomic policy, the T20 suggested enhancing discussions between G20 members on debt data reporting and publication standards for low-income countries. The T20 further reaffirmed the importance of an orderly debt resolution mechanism with a diffused creditor base.

Recommendations Realized
Of the 108 priority recommendations, 50 (46%) were either fully or partially realized in the 143 commitments made at the Osaka Summit (see Appendix B).

The highest proportion of recommendations realized, defined as recommendations that were partially or fully realized in the Osaka commitments, came on macroeconomic policy and IFI reform, respectively with one recommendation made and one partially realized. They were followed by gender (four recommendations made and 75% realized), labour and employment (nine recommendations made and 67% realized), trade (13 recommendations made and 62% realized), and climate change and energy (each with two recommendations made and 50% realized). On financial regulation, 18 recommendations were made and 49% realized.

Next came ICT/digitalization, with 47% realized with 15 recommendations made. On infrastructure and social policy, both with 43% realized, seven and five recommendations were made in each respective issue area. Development followed closely with 19 recommendations made, 42% realized. Health had 20% realized with five recommendations made, and environment had 17% realized with six recommendations made. Finally, accountability had one recommendation made, with no realization (0%).

Macroeconomic Policy and IFI Reform

On macroeconomic policy and IFI reform, the one recommendation made on each was partially realized (100%). In macroeconomic policy, the partially realized recommendation aimed to enhance G20 dialogue on debt data reporting, publication standards for low-income countries, and an orderly debt resolution mechanism. In IFI reform, the partially realized recommendation suggested that the G20 reform IMF governance and expand the IMF's tools to further international cooperation, maintain financial stability and achieve sustainable development.

Gender

Of the four recommendations made on gender, one was fully realized and two were partially realized, totalling a realization rate of 50% overall. The fully realized recommendation was made in light of the 2014 Brisbane "25 by 25" commitment to reduce the labour participation gap by 25% by 2025. Guided by this framework, the T20 suggested that G20 governments remove systemic legal and social barriers in the labour market for female labour participation, specifically with regards to unpaid care and domestic work. The two partially realized gender recommendations respectively address 1) gender mainstreaming in policymaking and gender outcome reporting in the private sector, and 2) baseline data to achieve gender equality in education and non-cognitive socioemotional skills development for marginalized girls and boys.

Labour and Employment

Nine recommendations were made on labour and employment, of which three were fully realized and three were partially realized, also totalling a realization rate of 50%.

Of the three fully realized recommendations, the first suggested that G20 governments balance labour markets by matching skills supply and demand while remaining cognizant of evolving technology, reducing inequalities and socioeconomic development. The T20 further recommended that educational systems promote equal opportunities for lifelong learning and digital literacy. The third fully realized recommendation pertains to performance-based remuneration and fair pay, comprehensive skills development, and the international labour migration framework.

Of the three partially realized recommendations, the first recommendation encourages flexible learning models in non-formal education programs, notably including technical and vocational education and training. Another recommendation addresses vulnerable demographics at risk of skills displacement through the development of digital access and equity. The T20 further highlighted the importance of diverse and inclusive entrepreneurial ecosystems to enable the success of new businesses.

Trade

There were 13 recommendations on trade, two of which were fully realized and six of which were partially realized. Trade recommendations were thus 62% realized in general and 38% realized when weighted by degree. The two fully realized recommendations highlighted the importance of multilateral discussions on environment and health issues, transnational intersectoral networks, and WTO dispute settlement reform in the context of ongoing Appellate Body challenges.

Among the six partially realized recommendations, one encouraged the facilitation of a conducive business environment without negative influence from ongoing trade disputes, intellectual property issues, industrial subsidies, WTO reform and ocean resource management. Another called upon G20 members to harmonize multilateral agreements and domestic conditions, especially in areas such as immigration, social welfare and structural economic changes. Two recommendations addressed WTO revival and agenda setting. The remaining two discussed the expansion and restructuring of global value chains in view of physical and human capacity investment.

Climate Change

On climate change, with two recommendations, none was fully realized, and one was partially realized. This constitutes a general average of 50% and a weighted average of 25%. The partially realized recommendation strived to enhance the capacity of developing countries in climate mitigation through data preparation and private financing.

Energy

Energy also had two recommendations, with one fully and one partially realized. This constitutes a general average of zero and a weighted average of 25%. The partially realized energy recommendation aimed to accelerate policies for low-carbon and climate-resilient growth, specifically referencing carbon pricing and the elimination of fossil fuel subsidies.

Financial Regulation

There were 18 recommendations on financial regulation, of which three were fully realized and four were partially realized. Financial regulation achieved a general realization rate of 39% and a weighted one of 28%.

Of the three fully realized recommendations, one suggested that G20 members strengthen the international financial architecture to ensure stability and development in the digital transformation. Another suggested that capital flows be closely monitored, and that the IMF be adequately resourced under global coordination to accomplish this monitoring objective. The third recommendation suggested that G20 governments promote global and regional cooperation to collect the latest information on capital flows.

Of the four partially realized recommendations, the first suggested that G20 countries boost financial system modernization by promoting fintech and introducing crypto-asset regulations. A second recommendation advocated the promotion of fintech governance and regulatory coordination to assess the structural differences between large markets. The third recommendation asked that G20 governments comply with the Financial Action Task Force's guidance on crypto-assets and introduce regulations on crypto-asset exchanges. The fourth recommendation supported the mainstreaming of sustainable finance by providing a conceptual vision, operational coordination and forward guidance for this goal.

ICT/Digitalization

There were 15 recommendations on ICT/digitalization, with three fully realized and four partially realized. ICT/digitalization achieved a general realization rate of 47% and a weighted one of 34%.

Of the three fully realized recommendations, the first suggested the development of a global action plan to promote open access to data and technology. This recommendation further asked G20 governments to adopt regulation models to govern innovation in line with promoting the public good. The second recommendation asked the G20 to support OECD intergovernmental guidelines for artificial intelligence, encourage the use of technology for social goals, promote educational technology and create a system to distribute income generated from technology for welfare purposes, such as digital taxation. The third recommendation suggested harnessing the benefit of digital innovation to promote sustainable and inclusive growth.

Of the four partially realized recommendations, one recommendation suggested that G20 governments ensure the alignment of digital taxation with the priorities of African policymaking, especially regarding profit allocation rules for multinational enterprises. The second recommendation stressed the need to establish a framework and utilize digital technology to achieve sustainable development, including an information system for food market transparency, fintech development to facilitate financial access for local small businesses, and revenue administration that helps to eliminate tax leakages. The third recommendation suggested the establishment of a collaborative body to develop a comprehensive digital skills strategy that advances training, preparation for work and well-being for all. The fourth recommendation advocated for the establishment of free flow of data as a logical benchmark, encouraging G20 governments to reorganize support policies and address socioeconomic concerns.

Infrastructure
Seven recommendations were made on infrastructure, with one fully realized and two partially realized. Infrastructure scored a general realization rate of 43% and a weighted realization rate of 29%.

The one fully realized recommendation noted the urgent need for G20 countries to develop high quality infrastructure that is cost efficient throughout its life cycle and maximizes its contribution to economic growth and environmental outcomes.

Of the two partially realized recommendations, the first recommendation suggested that G20 governments strengthen collaboration between multilateral development banks and other development partners to support the quality infrastructure agenda in emerging markets and developing countries. The second recommendation promoted upstream planning for quality infrastructure that fully incorporates social and environmental risks and costs into project pipeline development, considering the role and value of ecosystem services and nature-based solutions.

Development
There were 19 recommendations on development, with four fully realized and four partially realized. Recommendations made on development achieved a general realization rate of 42% and a weighted one of 32%.

Of the four fully realized recommendations, the first suggested that G20 members take steps to accelerate the implementation of the 2030 Agenda by taking a human-centred approach, specifically contributing to sustainable health systems, education in development and women's economic empowerment. The second recommendation suggested the integration of science, technology and innovation cooperation into SDG strategies. The third recommendation suggested that G20 members and African countries coordinate their development efforts and economic policies to seize new opportunities for the advancement of African economies and the SDGs. The fourth recommended that G20 leaders rethink the purpose of corporate governance to include greater

alignment with global and social goals, noting that sustainable socioeconomic foundations for firms are vital.

Of the four partially realized recommendations, one recommended that G20 governments share the good practices of expanding sustainable finance, especially involving large institutional investors and development banks in G20 members. The second recommendation promoted "quality FDI" in developing countries to support their industrial and social upgrading. The third recommendation suggested that G20 governments enhance the alignment of actors involved in African development, such as G20 Compact with Africa country teams, local businesses and business in G20 members, in order to foster non-resource–based economic development led by the private sector. The fourth recommendation urged the private sector to embed sustainability into core strategies and operations, link corporate reporting to SDGs based on a common framework of standards, and raise incentives for joint business action for social good.

Health
Health had five recommendations, with one fully realized and the others not at all. Thus, health achieved both a general and weighted average of 20%.

The fully realized recommendation advocated for advancing universal access to health coverage and long-term care for the elderly, especially for those without adequate family support.

Social Policy
Social policy had five recommendations, with none fully realized and two partially realized. Therefore, social policy achieved a general realization rate of 40% and a weighted one of 20%.

The first partially realized recommendation included improving physical, digital and people-to-people connectivity to narrow widening urban-rural divides, especially encouraging private actors to work closely with governments in tapping urban-rural potential. The second recommendation suggested that G20 leaders agree on timely policy measures to enhance STEM education with an emphasis on cultivating children's interest in STEM education.

Environment
Six recommendations were made on the environment beyond those on climate change reported above. None of the six was fully realized and one was partially realized. Thus, environment achieved a general realization rate of 17% and a weighted one of 8%. The partially realized recommendation suggested that G20 governments achieve SDGs within planetary boundaries, further stating that it is essential for G20 countries to transition to a circular economy in which secondary resource use increases and natural resource consumption decreases.

Accountability
The one recommendation on accountability had a realization rate of 0%.

Results
Ultimately, it is of little value if the T20 recommendations are merely realized by G20 leaders as commitments on paper in their summit communiqués but do not lead to real results through effective implementation by these leaders when they return home after the summit. Thus, this section reviews how well the G20 has complied with its past commitments that match the subjects the 2019 T20 made recommendations on.

G20 Overall Compliance: 2008–2019

Overall, on the subjects the T20 2019 made recommendations on, the G20's strongest compliance since 2008 is in the issue area of infrastructure, at 90%, or +0.8 (see Appendix C). This is followed closely by macroeconomic policy at 89%, or +0.78. Then came financial regulation at 77% (+0.54), labour and employment at 75% (+0.49) and health and energy at 73% (+0.45) each.

Four issue areas fell below the overall G20 all-subject average of 71%: climate change at 69% (+0.38), IFI reform and trade each at 68% (+0.36 and +0.35 respectively), and development at 67% (+0.34). The three lowest-ranked issue areas by the G20's historic compliance were ICT/digitalization at 62% (+0.24), environment at 60% (+0.20) and gender at 60% (+0.19). No commitments on social policy or accountability were assessed for compliance.

The G20's overall compliance across the equally weighted issue areas is 72%. Among all issue areas, where 278 commitments have been assessed for compliance by the G20 Research Group, the average across all equally weighted commitments was 71%.

Compliance with Matched Commitments from the 2018 Buenos Aires Summit

An examination of compliance with the priority commitments made at the 2018 Buenos Aires Summit reveals slightly higher compliance with those assessed commitments that fully matched the T20's recommendations for that summit in 2018.

The 2018 T20 made 135 recommendations to the 2018 G20 Buenos Aires Summit. Of these, 33 (24%) matched the 128 commitments made at Buenos Aires (Warren and Kirton 2019). Across various subjects, 14 recommendations were fully matched and 19 recommendations were partially matched.

The G20 Research Group and the Centre for International Institutions Research (2019) assessed 20 Buenos Aires priority commitments for compliance. Of these, 11 commitments fully matched one or more of the 2018 T20 recommendations. These were on future of work, climate change, financial stability, trade, gender, food security and sustainable development. The weighted average of compliance of these nine commitments was 57%.

Three commitments, on financial stability, food security and tax, partially matched, with an average compliance of 73%. Yet, the three commitments that did not match any recommendation also averaged compliance of 80%.

The ratio of matched T20 Buenos Aires recommendations realized in G20 commitments (partial and full combined) to that of unmatched commitments is 65:80 or, simplified, 13:16. This suggests that there is no influence of the T20's recommendation of the compliance level achieved for overlapping commitments.

Thus, the gap is substantial between matched and non-matched (65% to 80%), which suggests that T20 recommendations realized promote a commitment to be made in the G20 communiqué. Therefore, the G20's high compliance with assessed priority commitments from Buenos Aires was not necessarily achieved through commitments that carried the full weight of civil society, and particularly a T20 recommendation.

Compliance with Matched Osaka Commitments

The next step in this analysis is to assess the 2019 T20 recommendations that matched the 2019 G20 commitments, as well as the compliance these commitments receive in the time before the subsequent summit arrives in Riyadh, Saudi Arabia, in November 2020. This will be done when data

from the Interim Compliance Report becomes available in the coming months. As with the G20 Research Group's Recommendations Realized Reports in 2018 and 2017, an analysis of compliance data will show if the priority G20 commitments matched with and thus backed by T20 recommendations had higher compliance than those that were not (Kirton and Warren 2017; Warren and Kirton 2018).

This extended same-summit year compliance analysis begins with the facts reported above, that the 2019 T20 made 108 recommendations to the 2019 G20 Osaka Summit. Of these 108 recommendations, 50 (46%) recommendations fully or partially matched the 143 commitments made at Osaka. There were 18 recommendations — on development, financial regulation, gender, health, ICT/digitalization, infrastructure, labour and employment, and trade — that fully matched, and 32 recommendations partially matched and 58 recommendations did not match.

The G20 Research Group and the Centre for International Institutions Research have selected and are assessing 19 Osaka priority commitments for compliance. Of these 19 commitments, eight fully matched one or more of the 2019 T20 recommendations (see Appendix D). These commitments were made on trade, labour and employment, gender, development, health, climate change, and environment. When the 2019–2020 compliance data become available, it will be assessed to see if the weighted average of compliance of eight fully matched priority commitments exceeds the five partially matched ones, and if those partially matched commitments in turn exceed the six non-matched commitments.

If this is the case, this comparison supports the T20's influence, in that T20 recommendations are realized in G20 commitments that are complied with more than those that are not backed by the T20.

Conclusion

At present, there is promising evidence to suggest that the T20 has influence over the G20 summit's work. The 2019 T20's 108 recommendations were fully or partly realized in the G20's 143 commitments at a level of 46%. This compares with the level of 24% for the 2018 T20 in Buenos Aires and 23% for the 2017 T20 in Hamburg.

The 17% match of the 18 T20 recommendations that were fully matched in 2019 is substantially higher than the 10% match in 2018 (14 of 135 recommendations) and 2% match in 2017 (2 of 89 recommendations). Recommendations on sustainable development were realized in all three years, with an increasing number of overall recommendations made at each summit between 2017 to 2019. Furthermore, a comparison between 2018 and 2019 shows that the issue areas of digital economy and financial governance are among the highest subjects of fully matched-and-realized recommendations in both years.

There are several further factors to consider in determining how well the G20 complied with its priority commitments from the Osaka Summit. One key factor worth further research is the quality or ambition of the commitments made, and, in particular, how well civil society's recommendations are listened to and what impact this has on compliance. In 2019, the T20 made a large number of recommendations to the G20 Osaka Summit, and most had a high-level of specificity across all issue areas. Notably, many T20 recommendations under the Japanese presidency included references to specific multilateral mechanisms, in addition to reaffirmations of various principles of sustainable development and global governance. It is noteworthy that conventionally, fewer and more general recommendations could lead to a higher degree of match and higher compliance.

Further research here would signal to the G20 that aligning its commitments more closely with non-state actors can improve its compliance, ensuring that the G20 is governing global issues in a way

that capitalizes on the expertise of those working on these issues daily. Such research would further the recent recommendation of Sören Hilbrich and Jakob Schwab (2018, p. 8) that "if given sufficient access to the relevant information, Engagement Groups such as the T20 could play a vital role in providing credible and informed independent evaluation of G20 policies." According to Hilbrich and Schwab, the T20 plays a constructive role in informing policy implementation and accompanying the summit process from an academic perspective. Analysis from Domenico Lombardi and Samantha St. Amand (2015) have found that by providing accountability and policy recommendations, the T20 can realize its purpose of offering unique and insightful support to G20 decision-making processes, given its "analytical capacity and diversity, [and ability to] identify governance gaps and suggest new policy solutions that take into account political restraints." Thus, the T20 plays a central and supportive role in magnifying the G20's strengths as a plurilateral summit institution and enhancing its accountability and compliance through the T20's recommendations.

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Appendix A: Recommendations Realized Methodology

Recommendations Realized Reports identify the impact of policy recommendations made to G20 leaders by formal and informal engagement groups in the lead-up to their annual leaders' summits. This set of reports do so by matching the recommendations made by a given entity, such as the Think 20 (T20), with the collective, precise, future-oriented, politically binding commitments the summit leaders make in their official documents. The assessment uses a method pioneered by the University of Toronto's Global Governance Program, first applied to summits on non-communicable diseases (NCDs) convened in 2007, 2011 and 2014 (Kirton, Kulik and Bracht 2016). This methodology has since been applied to recommendations contained in the G7/20 background publications produced by the G7 Research Group and G20 Research Group, the Young Entrepreneurs' Alliance and now by the Think 20.

In the more simplified version employed here, each recommendation made is given a score on a three-point scale. A score of −1 indicates no match with a commitment, a score of 0 indicates a partial match, and a score of +1 indicates a full match. The following explanation of the assessment of the degree of match can also be applied to scoring commitments, rather than recommendations,

on the same three-point scale (i.e., does the leaders' commitment fully, partially or not match a recommendation?).

Degree of Match

Full Match

For a recommendation to receive a score of +1, all components of that recommendation must match with at least one commitment. It is not required that all components of the recommendation are found in a single commitment; a full match can occur if all components of the recommendation are split between more than one commitment.

For example, the 2019 T20's communiqué made a recommendation to the G20 ahead of its Osaka Summit to "support OECD [Organisation for Economic Co-operation and Development] intergovernmental guidelines for artificial intelligence to encourage the use of technology to boost social goals and promote educational technology at different stages of life, as well as create a system, such as digital tax, to distribute income generated from technology for welfare purposes."

Parts of this recommendation were realized across several commitments the G20 made at the Osaka Summit. These include, but are not limited to:

1. 2019-22: To foster public trust and confidence in AI [artificial intelligence] technologies and fully realize their potential, we commit to a human-centered approach to AI, [and welcome the non-binding G20 AI Principles, drawn from the Organization for Economic Cooperation and Development (OECD) Recommendation on AI.] (Issue Area: Climate Change)
2. 2019-98: Recognizing the importance of science, technology and innovation (STI) for SDGs [Sustainable Development Goals], we endorse the Guiding Principles for the Development of STI for SDGs Roadmaps. (Issue Area: Development)
3. 2019-69: We commit to continue support for girls' and women's education and training, including] … improved access to STEM (Science, Technology, Engineering and Mathematics) education (Issue-Area: Gender)
4. 2019-71: In order to close the digital gender gap, we will continue enhancing girls' and women's access to digital technology with a focus on the needs of those in poverty and rural areas. (Issue-Area: Gender)
5. 2019-31: We [welcome the recent progress on addressing the tax challenges arising from digitalization and] endorse the ambitious work program that consists of a two-pillar approach, developed by the Inclusive Framework on BEPS [Base Erosion and Profit Shifting]. (Issue-Area: Financial Regulation)

Partial Match

For a recommendation to receive a score of 0 for a partial match, only one or some of its components need to be realized in any number of commitments. For example, the 2019 T20's communiqué recommended that the G20 is "advised to support the mainstreaming of sustainable finance by providing a conceptual vision, a roadmap, operational coordination and forward guidance for achieving this goal." This recommendation was partially realized in the following commitments:

1. 2019-28: We support the work of the Institute of International Finance on the Voluntary Principles for Debt Transparency to improve debt transparency and sustainability of private financing and look forward to follow up (Issue Area: Financial Regulation)
2. 2019-115: To this end, we strive to foster inclusive finance for sustainable development, including public and private financing mobilization and alignment between them (Issue Area: Climate Change)

Here, the G20 addressed bilateral and regional trade agreements, but it did not specifically commit to measures that improve "coordination" as mentioned in the recommendation. The commitments made at the Osaka Summit also did not discuss multilateral trade rules.

No Match

For a recommendation to receive a score of −1 for a non-match, either no part of the recommendation matches any commitment made, or there is no match with the core focus of the recommendation. For example, the 2019 T20's communiqué recommended that "G20 countries should also boost financial system modernization by promoting FinTech and introducing crypto-asset regulation." Although the G20 at Osaka made 10 financial regulation commitments, none of these referenced fintech or crypto-asset regulation.

Conclusion

A more complex matching analysis, developed and used for the NCD summit evaluation, also charts the breadth of the match according to the number of commitments containing all components in the recommendation. Further work could measure the novelty of the match, i.e., whether the matched recommendation repeated one previously made by the same source; reverse influence; i.e., whether the recommendation largely repeated a commitment made by a previous summit; and distinctiveness of match, i.e., whether the matched recommendation was also made by other engagement groups or individuals.

Appendix B: T20 Recommendations Made

Match	Number of recommendations	Percentage of recommendations
Fully realized	18	16%
Partially realized	32	30%
Not realized	58	54%
Total	108	100%

All recommendations identified in the 2019 T20 communiqué published on 27 May 2019:

Fully Realized Recommendations (n = 18)

TF1 2030 Agenda for Sustainable Development

G20 countries must take bold and transformative steps to accelerate the implementation of the 2030 Agenda by taking a human-centered approach that contributes to building a sustainable health system for all and promotes education in development and women's economic empowerment. (development)

Develop a global action plan to promote open access to data and science and technology information, and adopt new regulation models that govern innovation in ways that advance global public good. (digitalization)

Integrate science, technology and innovation cooperation into strategies for the achievement of the SDGs and promote good practices towards this objective among G20 countries (development)

Remove systemic legal and social barriers in the labor market that disproportionately limit women's labor force participation and countries' potential to deal with demographic transition, especially by adopting policies that recognize, reduce, redistribute and represent unpaid care and domestic work, and by presenting mid-term reports on the 2014 Brisbane commitment on "25 by 25." (gender)

TF2 International Financial Architecture for Stability and Development/Crypto-asset and FinTech

G20 countries must strengthen the international financial architecture to ensure stability and development with the acceleration of digital transformation. (financial regulation)

To this end, capital flows need to be closely monitored, the IMF should be adequately resourced and macroprudential/monetary policy should be globally coordinated. (financial regulation)

Promote global and regional cooperation to collect the latest information on capital flows to effectively monitor capital inflow surges and sudden cessation as well as abrupt capital outflows. (financial regulation)

TF4 Economic Effects of Infrastructure Investment and its Financing

There is an urgent need for G20 countries to develop high quality infrastructure that is cost efficient over the life cycle, and maximizes the contributions to economic growth, the Sustainable Development Goals and environmental outcomes including impact on and resilience to climate. (infrastructure)

TF5 Cooperation with Africa

G20 and African countries should coordinate their development efforts and economic policies to seize new opportunities for the advancement of African economies and achieve the Sustainable Development Goals. (development)

TF6 Social Cohesion, Global Governance and the Future of Politics

Rethink the purpose of corporate governance to include greater alignment with various global and social goals, articulating the notion that sustainable socioeconomic foundations on which firms can stand are vital for sustainable corporate businesses as well as profit maximization activities (development)

Strengthen multilateralism at multiple levels by coordinating discussions on global priorities, such as the environment and health issues within various international fora and organizations; nurturing transnational networks connecting the private sector, civil society, experts, and local governments; and developing the core capacity of countries to implement effective policies. (trade)

Support OECD intergovernmental guidelines for artificial intelligence to encourage the use of technology to boost social goals and promote educational technology at different stages of life, as well as create a system, such as digital tax, to distribute income generated from technology for welfare purposes. (ICT/digitalization)

TF7 The Future of Work and Education for the Digital Age

G20 countries should adopt policies that achieve well-balanced labor markets capable of matching skills supply and demand in an environment of rapidly evolving technology while reducing inequalities and promoting economic and social development. (labour/employment)

G20 countries should also develop educational systems that promote equal opportunities, lifelong learning and reskilling, and digital literacy. (labour/employment)

TF8 Trade, Investment and Globalization

Solve Appellate Body challenges immediately by conducting necessary reforms of the dispute settlement mechanism. (trade)

Harness the benefits of digital innovation, particularly communication technology, to promote sustainable and inclusive growth. (ICT/digitalization)

TF10 Aging Population and its Economic Impact + Immigration

Improve productivity in the workplace via performance-based remuneration and the elimination of gender and seniority-based pay differentials. At the same time, introduce a comprehensive skills development and inclusive international migration framework in line with the Sustainable Development Goals. (labour/employment)

Advance universal access to healthcare and long-term care for the elderly, especially those without adequate family support (health)

Partially Realized Commitments (N = 32)

TF1 2030 Agenda for Sustainable Development

Develop baseline data and targeted action to help marginalized girls and boys and achieve gender equality in education and promote research and practice on non-cognitive "socioemotional skills" to transform traditional schooling systems. (gender)

Agree on timely policy measures within G20 countries to enhance STEM education, particularly basic mathematics and science. Emphasis should be on cultivating the interest of children in STEM education. (social policy)

Share the good experiences derived from expanding sustainable finance especially those involving large institutional investors and national and international development banks in G20 member countries, and pursue actions that boost private financing for social good (Development)

Urge the private sector to embed sustainability into core business strategies and operations and link corporate reporting to the Sustainable Development Goals (SDGs) based on a common framework and standards. In addition, raise incentives for joint business actions for social good by showcasing such arrangements at major international events. (development)

Promote "Quality FDI" to developing countries and support their industrial and social upgrading so that they can benefit from Global Value Chain (GVC) participation and avoid the risk of inappropriate supply chain management by FDI (development)

Mainstream gender in public policymaking and require private and third sector entities to adopt and report on gender policies and outcomes. (gender)

TF2 International Financial Architecture for Stability and Development/Crypto-asset and FinTech

G20 countries are advised to support the mainstreaming of sustainable finance by providing a conceptual vision, a roadmap, operational coordination and forward guidance for achieving this goal. (financial regulation)

Significantly reform IMF governance, expand and improve the IMF's available tools and better position it to cooperate with other actors in the global system to maintain financial stability and achieve sustainable development. (IFI reform)

Promote FinTech governance and regulatory coordination among G20 countries by assessing structural differences between major markets.(financial regulation)

Comply with Financial Action Task Force (FATF) guidance on crypto-assets and introduce regulation to crypto-asset exchanges, including registration systems to enforce Know Your Customer (KYC) rules. Consider Japan's pioneering comprehensive regulations for crypto-asset exchanges introduced in April 2017. (financial regulation)

TF3 Climate Change and Environment
To achieve the SDGs within planetary boundaries, it is essential that G20 countries transition to a circular economy in which secondary resource use increases and natural resource consumption decreases. (Environment)

Build the capacity of developing countries to implement ambitious actions to address climate change mitigation, including preparation of critical data, and support the financing of these actions by mobilizing private capital through a low-carbon transition fund, a financial performance warranty program, best low-carbon regulations and a high-quality infrastructure program. (climate change)

TF4 Economic Effects of Infrastructure Investment and its Financing
Strengthen collaboration between the multilateral development banks as well as with other development partners to support the quality infrastructure agenda in emerging market and developing countries through country, regional and global platforms to provide strategic advice to governments, build local capacity in critical areas such as planning and procurement, adopt universal standards and transparency, and mobilize private capital at scale, locally and internationally. (infrastructure)

Promote upstream planning for quality infrastructure that fully incorporates social and environmental risks and costs into project pipeline development and considers the role and value of ecosystem services and nature-based solutions. (infrastructure)

Accelerate policies for low-carbon and climate-resilient growth, including carbon pricing and elimination of fossil fuel subsidies and disclosure of climate risk. (energy)

TF5 Cooperation with Africa
Enhance discussions between G20 countries on debt data reporting and publication standards for low-income countries, especially those in Africa, as well as an orderly debt resolution mechanism with a more diffuse creditor base. (macroeconomic policy)

Ensure that taxation of the digitalized economy works for Africa, especially regarding the profit allocation rules for multinational enterprises (ICT/digitalization)

Enhance alignment of actors involved in African development such as G20 Compact with Africa country teams, local businesses and business sectors in G20 countries to foster non-resource- based economic development led by the private sector. (development)

Establish a framework for utilizing digital technology to achieve sustainable development, including an information system for food market transparency, FinTech development to facilitate access to finance by local small businesses and revenue administration that helps to eliminate tax leakages. (ICT/digitalization)

Strengthen efforts to combat illicit capital outflows such as tracking and repatriating illicit funds back to African countries as well as support global and inclusive discussion of new approaches to taxation of the digital economy. (financial regulation)

TF6 Social Cohesion, Global Governance and the Future of Politics
Create a conducive business environment for domestic and foreign firms to operate their business activities without stresses and impediments by resolving ongoing trade disputes, addressing intellectual property issues and industrial subsidies for state-owned enterprises, achieving a successful WTO reform, and sustainable ocean resource management. (trade)

Harmonize multilateral agreements with domestic conditions and across multiple actors so that the consequences are fully considered and appropriate policies are put in place to address challenges, such as immigration and social welfare, and absorb structural changes in the economy. (trade)

Improve physical, digital, and people-to-people connectivity to narrow widening urban-rural divides, especially as populations age. Encourage private actors like businesses and civil society to work closely with governments to tap urban-rural potential. (social policy)

TF7 The Future of Work and Education for the Digital Age
Encourage more individualized and flexible learning as well as certification processes that facilitate the skilling, reskilling, and upskilling of workers through greater participation in alternative and non-formal education programs, such as technical and vocational education and training (TVET) and other work-based learning models. (labour/employment)

Help vulnerable groups most likely to be affected by skills displacement, such as poor, aging, and low-skilled people, women, and small-business workers, by supporting policies and programs aimed at improving digital access and equity. (labour/employment)

Establish a collaborative body to develop a comprehensive digital skills strategy that advances the training, preparation for work and civic life, and well-being of all. (ICT/digitalization)

TF8 Trade, Investment and Globalization
Revive the WTO as a negotiating forum by making negotiating and decision-making procedures flexible and introducing both multilateral and plurilateral or critical mass approaches. (trade)

Encourage the WTO to establish an agenda prioritizing ongoing and emerging issues for advancing liberalization and rule-making. (trade)

Establish the "free flow of data" as a logical benchmark and reorganize supporting policies to address the related economic and social concerns. (ICT/digitalization)

Expand and restructure Global Value Chains by addressing human capital development, increasing infrastructure demand, business matching, regulatory and institutional barriers, and protectionist sentiment. (trade)

TF9 SME Policy faced with Development of Financial Technology
Establish effective ecosystems in which potential entrepreneurs of any gender, race, or age, can access the resources crucial to the success of new businesses. Enable individuals with a wide range of backgrounds to acquire the knowledge and skills to identify and pursue entrepreneurial opportunities. (labour/employment)

TF10 Aging Population and its Economic Impact + Immigration
Promote investment in human and physical capital to improve the productivity and adaptability of society and facilitate foreign direct investment that benefits both developed and developing economies. (trade)

Not Realized (N = 58)

TF1 2030 Agenda for Sustainable Development

It is also critically important for G20 countries to scale up the impact of business on inclusive and sustainable development and establish a global framework for mobilizing and catalyzing capital and facilitating technological cooperation, based on the principles of access, equity and inclusion for developing countries. (development)

Re-orient and harmonize development assistance to strengthen primary healthcare systems. In addition, promote reliable, efficient and self-sufficient domestic financing mechanisms based on experience and best practice-sharing. (health)

Establish a reliable migrant information system to ensure health and social security benefit parity between migrant and local workers. (health)

Establish a G20 working group on harnessing and regulating health technologies at the global level. (health)

Strengthen G20 commitment to advancing access to locally and culturally appropriate quality Early Childhood Development (ECD)/Early Childhood Education and Care (ECEC) for all children from birth, and build international consensus on government responsibility for a "whole systems" approach to ECD/ECEC policies. (development)

Build the capacity of developing countries to create sector-specific platforms for generating coherent and high-quality project proposals linked to national development plans, partnership with multilateral development banks (MDBs) and United Nations agencies. (Development)

Institute a systematic approach to aid replenishment negotiations (expected in 2019/2020) based on an agreed upon set of core principles and encourage greater use of innovative finance mechanisms. (development)

Reshape the economic system around a common purpose by promoting Environmental, Social and Governance (ESG) investment as well as sustainable procurement in the public sector. (development)

Establish a comprehensive technology facilitation mechanism, including technology banks, to accelerate and incentivize technology transfer to developing countries. (development)

Improve women's economic empowerment data availability, analysis and quality in the public and private sectors, recognizing that data inputs are essential for quality policy design, benchmarking and measuring implementation and accountability progress. (gender)

TF2 International Financial Architecture for Stability and Development/Crypto-asset and FinTech

G20 countries should also boost financial system modernization by promoting FinTech and introducing crypto-asset regulation. (financial regulation)

Commence Global Monetary Policy Coordination Meetings entrusted by the G20 with the task of assessing the global impact of different monetary and macroprudential policies. (financial regulation)

Champion coordinated government efforts to improve financial inclusion and FinTech development through bridging technology, innovation, consumer protection policies and regulations, and best practice-sharing for building vital infrastructure (financial regulation)

Support the mainstreaming of sustainable finance by providing a comprehensive conceptual vision, an evolving roadmap, operational coordination and forward guidance to involved actors as well as building problem-solving capacity to tackle obstacles that emerge during this transition. (financial regulation)

Create a G20 Sustainable Finance Working Group (SFWG) and direct it to develop an architectonic vision on how to utilize finance to enhance sustainability, outline steps for comprehensive environmental, social and governance integration across the financial system and detail a G20 action plan to advance this agenda with active government, private sector and civil society participation. (financial regulation)

TF3 Climate Change and Environment

Lead the transition towards the decarbonization of consumer lifestyles through footprint assessment and strategic planning as well as enabling policies such as carefully designed carbon pricing. (environment)

Create a G20 metropolitan working group to promote the development of comprehensive territorial policies between national and subnational governments and empower local governments to finance low-emission and climate resilient transition. (climate change)

Reduce CO2 emissions per GDP by accelerating technology transfer and introducing globally appropriate technology systems through international cooperation, efficient application of state- of-the-art systems in developing countries as a leap-frogging method and establishment of a scheme to boost decarbonization technology/system investment that considers regional energy situations, the natural environment and living standards, and future technological and social innovation using the quantitative technology evaluation method.(environment)

Step up government and development bank-led efforts to foster research and innovative finance that promotes renewable energy, with Southeast Asia as a possible pilot case, as well as transform hard-to-abate sectors. (development)

Make concerted efforts to enhance capacity building in view of the entrepreneurial skills required for electricity projects with an emphasis on renewables, to promote inclusive growth of the communities, and to harmonize policies and standards for facilitating cross-border business and human resource flows. (Energy)

Raise the ambition of circular economy policies incorporating Extended Producer Responsibility (EPR) not only focusing on waste management, recycling and clean-up but by facilitating new business models not depending on ever-increasing material consumption and waste generation. (environment)

Facilitate community-based circular economy and society initiatives to rebuild social capital and help revitalize local areas. In addition, enable circular business models through policy instruments including development of indicators and targets for resource efficiency reflecting new gauges of wealth and planetary boundaries. (environment)

Develop an international mechanism for policy coordination and harmonization critical to realizing a circular economy and society. (environment)

TF4 Economic Effects of Infrastructure Investment and its Financing

Develop an integrated approach to quality infrastructure through robust upstream policy and institutional foundations including multilevel governance; high quality standards to guide the design,

build and operation of projects; project preparation platforms and facilities; and mobilization and alignment of large-scale financing. Reform the land acquisition process through measures such as land trusts to unlock investments. Connect infrastructure development, urban governance and earth system research and develop comprehensive infrastructure models to promote sustainable growth in all regions. (infrastructure)

Create viable revenue models by tapping spillover effects that can boost long-term returns, and which together with improved credit enhancement mechanisms, can attract private capital, pension funds and sovereign wealth funds worth trillions of dollars, reduce costs of capital and improve debt sustainability. (financial regulation)

Establish common financing principles, standards and frameworks that minimize ecological footprints through land and water conservation, biodiversity enhancement and healthy ecosystems. (infrastructure)

Promote research, policies and commitments that advance deforestation-free development models and restoration of landscapes (development)

Incorporate spatial vulnerability and impact of climate change into infrastructure planning and design through comprehensive assessments and warning systems; improve the interaction between higher education programs, policymakers and owners and operators to strengthen disaster resilient infrastructure. (infrastructure)

Develop and share national and urban strategies for promoting resilience, including resilient transport systems based on proactive, holistic resilience engineering and management processes, and rapid disaster response and post-crisis policies. (infrastructure)

TF5 Cooperation with Africa
Assist in negotiations over innovative funding sources that limit the need for foreign currency and volatile borrowing and ensure that borrowed funds, especially non-concessional, are used productively to enhance repayment capacity. In this context, ensure that Multilateral Development Banks are adequately capitalized. (financial regulation)

Consolidate development support programs under a common framework like the Comprehensive Africa Agriculture Development Program (CAADP) to improve coordination between individual development programs. (development)

Realign G20 countries' agriculture trade practices, especially subsidies and non-tariff barriers that are inconsistent with WTO regulations to provide opportunities for African producers to participate in global value chains. At minimum, a "do no harm" approach should be guaranteed. (trade)

Develop regional regulatory institutions to ensure the safety and quality of African products, especially food products, while not placing a prohibitive burden on African small and medium enterprises and smallholder farmers in complying with associated regulations. (trade)

TF6 Social Cohesion, Global Governance and the Future of Politics
Formulate and adopt global corporate governance codes across G20 countries in collaboration with the Organisation for Economic Co-operation and Development (OECD). These codes should help balance the contributions of corporations to society at large, including the achievement of the Sustainable Development Goals and an enabling business environment necessary for economic and social prosperity. (development)

Increase the channels for political participation that go beyond electoral turnout and include both citizens and civil society, and encourage new constructive roles for social media and evidence- based research that can bring a wider spectrum of voices into global policy discussions. (accountability)

TF7 The Future of Work and Education for the Digital Age
Support the development of an international digital skills strategy that includes standardized metrics and assessment tools for measuring digital literacy. Emphasize the multidimensionality of digital literacy, including technical skills, socioemotional human skills, and specific competencies in areas such as digital financial literacy, given the rise of FinTech. (ICT/digitalization)

Promote the development of guidelines and best practices for transforming digital literacy into tangible outcomes in the workplace and beyond. Digital dividends to bridging the skills divide should also be defined, especially in terms of employability and social mobility. (ICT/digitalization)

Support the creation of a coalition or advisory board to develop a coordinated approach to digital skills literacy. This includes the development and implementation of standardized skills and assessment tools for establishing targets, tracking progress, and updating policies and programs to bridge the digital skills divide, especially for vulnerable groups. (ICT/digitalization)

Assess the benefits and challenges of the emergence of the platform economy and the "servification" of economic transactions and develop an international strategy including definitions, metrics, and assessment tools for measuring the platform economy and its impact on labor markets.(ICT/digitalization)

Adopt guidelines and reform existing frameworks for updated and more coordinated global governance of platform economy transactions, recognizing that the emergence of global markets for virtual services can be a powerful source of economic growth and that global (ICT/digitalization)

Improve revenue and social protection coverage for platform workers. This includes fostering data-sharing and regulatory collaboration with platform firms to ensure worker rights, govern user data, and facilitate healthy competition among firms; coordinating definitions of formal legal categories around platform work; and devising integrated systems to tax and target the appropriate social benefits for platform workers. (labour/employment)

TF8 Trade, Investment and Globalization
Pay greater attention to trade in services given the rise of the services economy and the digital revolution. (trade)

Apply G20 Guiding Principles on investment facilitation to build an international framework of non-controversial technical measures to enhance the quantity and quality of investment. (trade)

TF9 SME Policy faced with Development of Financial Technology
G20 countries can help SMEs cope with these challenges by developing financial technology and improving entrepreneurial ecosystems. (ICT/digitalization)

Develop human resources for public and private agencies who can evaluate the growth and innovation potential of SMEs and provide effective support for high-tech start-ups, including tax break-related financial incentives. (labour/employment)

Reduce exit and entry barriers to achieve a significant level of entrepreneurial recycling. Loosen labor regulations to make it easier for new and growing ventures to attract workers. (labour/employment)

Educate entrepreneurs through brochures, seminars, and innovative digital tools, such as webinars and social media, as well as through direct consultations. (ICT/digitalization)

Construct comprehensive databases to link SMEs with other firms, specialists, universities, and public research institutes. Develop a dedicated online platform for merger and acquisition matching and business transfer to help SMEs seek partners and finance from venture capital firms and other alternative resources, like crowdfunding. (financial regulation)

Improve traditional lending using new technology and big data by developing process automation, encouraging the innovative use of technology and data-sharing, and enhancing credit guarantee programs. (ICT/digitalization)

Rebuild incentive schemes based on empirical evidence and increase attention to "demand-side" support (public procurement of innovative products) and "soft" support, such as networking and consulting. Promote public–private partnerships for research and development investment in SMEs and more efficient protection and utilization of intellectual property rights, including enhanced access to intellectual property databases. (development)

Improve understanding of the conditions under which global start-ups are likely to prosper as well as start-up internationalization through appropriate support programs. Promote policies that streamline border procedures, simplify trade documents, and automate border passage. (trade)

Implement support policy for "backing challengers" rather than "backing losers" or "picking winners." (financial regulation)

TF10 Aging Population and its Economic Impact + Immigration
Reform tax systems to accommodate demographic transition, both in terms of revenue requirements and the choice of tax base. Upon implementation, tax incentives should internalize potential negative externalities, such as greater income inequality. (financial regulation)

Re-orient social security systems towards greater means-tested, non-contributory pensions and align incentives with increasingly mature labor force participation, including indexing access age to life expectancy. Continue to support contributory pensions for those who can afford to save for retirement. (social policy)

Boost the development of simple and easy-to-understand financial products, such as lifetime annuities, through supportive regulatory structures that ensure the proper design and fairness of such products and encourage greater financial knowledge and literacy through education programs and school curricula. (financial regulation)

Improve the collection and analysis of data on population and economic linkages that reflect key features of generational economy by age, gender, and income group and develop tools to help policymakers deal with the effects of population aging, especially in emerging economies. (social policy)

Support the development and adoption of Evidence-Based Medicine (EBM) to better match medical best practices with the evolving needs of aging populations through the launch of a new Global Fund for Healthcare in Aging Populations (GF-HAP). (health)

Establish an assessment framework for effective and efficient social security systems, particularly for developing economies. (Social policy)

Appendix C: T20 Recommendations Made and Realized by Issue

Issue	Number of T20 recommendations made	Number of recommendations realized in G20 summit commitments	Degree of match (average score)	G20 overall compliance with similar commitments 2008–2019
Accountability	1	0 (0%)	−1 (0%)	—
Climate Change	2	0 (0%)	−0.50 (25%)	+0.38 (69%)
Development	19	4 (21%)	−0.37 (32%)	+0.34 (67%)
Energy	2	0 (0%)	−0.50 (25%)	+0.45 (73%)
Environment	6	0 (0%)	−0.83 (9%)	+0.20 (60%)
Financial Regulation	18	3 (17%)	−0.44 (28%)	+0.54 (77%)
Gender	4	1 (25%)	0 (50%)	+0.19 (60%)
Health	5	1 (20%)	−0.60 (20%)	+0.45 (73%)
ICT/Digitalization	15	3 (20%)	−0.33 (34%)	+0.24 (62%)
IFI Reform	1	0 (0%)	0 (50%)	+0.36 (68%)
Infrastructure	7	1 (14%)	−0.43 (29%)	+0.80 (90%)
Labour/Employment	9	3 (33%)	0 (50%)	+0.49 (75%)
Macroeconomic Policy	1	0 (0%)	0 (50%)	+0.78 (89%)
Social Policy	5	0 (0%)	−0.60 (20%)	—
Trade	13	2 (15%)	−0.23 (39%)	+0.35 (68%)
Total/Average	108	18 (17%)	−0.42 (29%)	—

Notes:

This table shows the number of priority recommendations made by the T20 in 2019 to the G20 in the lead-up to the Osaka Summit, by thematic area. It shows the number and percentage of recommendations realized in the official documents produced in the leaders' name at the Osaka Summit. It also shows the average score for the degree of match or the average score of the recommendations realized.

For example, on the issue area of development, eight (42%) of the 19 recommendations made were fully or partially realized in the commitments made at the Osaka Summit. Four were partially realized, which would be assessed with a score of 0 each. Four were fully realized with a score of +1. Eleven were not realized, scoring −1. Thus, the average of these four scores is −0.37 (32%). The percentage is calculated by adding 1 to the average score, dividing by 2 and multiplying by 100 (e.g., −0.37+1/2 = 0.315 x 100 = 32%).

Degree of match: If all components of the recommendation were realized in one or more commitments, the recommendation received a score of +1 for a full match. If at least one, but not all, components of the commitment matched with one or more commitments, the recommendation received a score of 0 for a partial match. If no components of the recommendation matched any commitment, the recommendation received a score of −1 for no match.

Appendix D: G20 Osaka Priority Commitments by Degree of Match with 2019 T20 Recommendations

The G20 Research Group assessed 19 Osaka priority commitments for compliance. Of the commitments assessed, eight commitments fully matched with an identified recommendation in the 2019 T20 Communiqué. Five commitments were partially matched, and six commitments were not matched with any recommendations made.

Fully Matched Commitments (N = 8)

2019-14: We reaffirm our support for the necessary reform of the World Trade Organization (WTO) to improve its functions. (trade)

2019-55: We will also continue to promote employment opportunities for and employability of the young population. (labour and employment)

2019-62: We will also address the gender gap in unpaid care work which remains a major obstacle to women's participation in the labour market (gender)

2019-69: [We commit to continue support for girls' and women's education and training, including]…improved access to STEM (Science, Technology, Engineering and Mathematics) education (gender)

2019-96: We reaffirm our commitment to invest in human capital…[as emphasized in the G20 Initiative on Human Capital Investment for Sustainable Development.] (development)

2019-103: We will promote healthy and active ageing through policy measures to address health promotion (health)

2019-115: To this end, we strive to foster inclusive finance for sustainable development, including public and private financing mobilization and alignment between them (climate change)

2019-135: In this regard, we are determined to swiftly take appropriate national actions for the prevention and significant reduction of discharges of plastic litter and microplastics to the oceans. (environment)

Partially Matched Commitments (N = 5)
2019-13: [We strive to] … keep our markets open. (trade)

2019-24: We endorse the G20 Principles for Quality Infrastructure Investment as our common strategic direction and high aspiration. (infrastructure)

2019-90: [We support developing countries in their efforts to advance progress towards the timely implementation of the SDGs in such areas as]…energy…[using all means of implementation, such as the mobilization of private sector resources and capacity building assistance.] (development)

2019-116: [To this end, we strive to foster]…innovation in a wide range of areas for low emissions and resilient development. (climate change)

2019-140: For us all to reap the rewards of digitalisation, we are committed to realising an open, free and secure internet. (terrorism)

Non-Matched Commitments (N = 6)
2019-6: We reaffirm our commitment to use all policy tools to achieve strong, sustainable, balanced and inclusive growth, and safeguard against downside risks, by stepping up our dialogue and actions to enhance confidence. (macroeconomic policy)

2019-9: We also reaffirm the exchange rate commitments made by our Finance Ministers and Central Bank Governors in March 2018. (macroeconomic policy)

2019-20: We will cooperate to encourage the interoperability of different frameworks (digitalization)

2019-32: We will redouble our efforts for a consensus-based solution with a final report by 2020. (financial regulation)

2019-36: We also continue to step up efforts to enhance cyber resilience. (crime and corruption)

2019-107: We are committed to improving public health preparedness and response including strengthening our own core capacities (health)