Global Governance in 2030

Prospective Scenarios on the Future of Politics

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About CIPPEC

(Center for the Implementation of Public Policies Promoting Equity and Growth) is a non-profit, impartial independent organization that produces knowledge and offers recommendations to design and implement better public policies. Its mission is to propose policies pursuing development, equity and the strengthening of democracy.

Its policies also aim to anticipate future dilemmas through applied research, open dialogues and supporting governance.

About T20

The T20 is one of the G20's engagement groups, where representatives of different civil society stakeholders take their demands and proposals to G20 countries. It gathers think tanks and leading experts from around the world to produce concrete policy recommendations. During 2018 the T20 is co-chaired by the Argentine Council for International Relations (CARI) and the Center for the Implementation of Public Policies for Equity and Growth (CIPPEC). More information here: https://t20argentina.org

Index

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I. Introduction

We are living in an era of unprecedented changes. Mature democracies, emerging polities and the least electorally competitive countries are now facing new challenges in a globalized world. They are all dealing with technological breakthroughs, changes in global economic power, ageing populations and urbanization of their territories.

Today's picture shows that social inclusion seems to be an unfulfilled promise, and social cohesion is weakening. Some citizens are disenchanted, and political systems are having trouble adapting and responding to new demands. According to Edelman's Trust Barometer (2017), one in every two countries do not have faith in the system, and we still do not know how this picture is going to evolve. In democracies, pro-democracy attitudes coexist with openness to nondemocratic forms of governance, such as rule by experts (49 per cent), strong leaders (26 per cent) or the military (24 per cent). This picture might be part of a transition period or indicating that polities are not being able to cope with some of the new challenges.

It is why we need to think about the future of politics and how these trends will shape global governance in the next 10 to 20 years. Are political systems ready to govern a digital economy?

How should political leaders evolve to address radical changes in an automated world? What will the consequences be for global governance and for the role of G20?

This paper analyzes current global trends in domestic politics and the prospective scenarios on the future of politics. To do so, the paper presents a brief description on three forces we know will forge the future: technological breakthroughs, demographic changes and shifts in global economic power. Later, it turns to the uncertainty of the future. We live in nation states, so we first attempt to devise how these forces will shape domestic politics. We then look at global governance and the way these trends will impact upon it. The final stop of this journey is an analysis of the implications of these scenarios for the role of the G20.

The report draws heavily from the results of an intensive design thinking workshop led by PwC's Global Leader, Strategy and Leadership Development Blair Sheppard. Workshop participants explored how political systems can confront disruptive, rather than incremental, change, worldwide. They engaged in a 'strategic foresight' exercise, an analytical exercise that involves thinking through various ways the future might unfold. We want to thank PwC for their invaluable collabora-

II. The three forces shaping the future

We are living in a world of increasing complexity, uncertainty and rapid change. However there a few megatrends we already know will happen in the upcoming years and there is solid evidence to be reasonably assertive about them. To begin with, *technological breakthroughs*. Automation, robotics and AI are advancing quickly, dramatically changing the nature and number of jobs available (Twomey, 2018). The digital revolution will affect our economies at an unprecedented rate: it took us ten thousand years to go from hunting and recollection to agriculture, but some estimates expect that the next phase of the productive transformation will begin in only 15 years (Grinin, 2007; Sogeti 2014).

Technology has the power to improve our lives, raising productivity, living standards and average life span, and free people to focus on personal fulfilment. Technology is also affecting the way we interact with each other, the construction of a public sphere, the ability of citizens to actively scrutinize government's actions and the possibilities governments have at hand to disseminate information and win elections. Several of these aspects pose new questions: if governments are more able to share information selectively in a hand tailored manner, will citizens be able to hold them accountable for their actions? Are new forms of representation emerging? How should the link between citizens and politicians evolve? The pace, depth and scale of change in the era of the digital technology will make it hard for current governance models to deal with global challenges. And the responses that aim at preserving or renewing politics need to tackle these broader issues, recognizing that Internet has no borders. Neither do the challenges that it entails.

Second, we will experience *shifts in global economic power*. As the 2017 European Strategy and Policy Analysis System (ESPAS)'s global trends analysis shows, the power balance in the international system has changed considerably over the last 10 years and some of these broad trends are likely to continue through 2030: China has expanded its global presence, there is more regional power, Russia has shown a willingness to intervene in other countries and get involved in information 'wars". The economically rapid developing nations, particularly those with a large working-age population are increasing their share of world GDP (PPP)[1]. Despite the negative effect on growth that the decrease in commodity prices has had on a number of emerging economies, GDP forecasts suggest that the 'E7' economies (China, India, Brazil, Russia, Indonesia, Mexico and Turkey) could grow around twice as fast as advanced economies (G7) by 2050 in terms of both size and purchasing power[2]. Yet, emerging nations face the biggest challenge as technology increases the gulf with the developed world; unemployment and migration will continue to be rampant without significant, sustained investment.

1 https://www.pwc.com/gx/en/issues/economy/the-world-in-2050.html

2 www.pwc.com/gx/en/issues/economy/the-world-in-2050.html

In the course of this process, the world's political structure has become multipolarized and, in the context of global rulemaking, tensions could occur between the traditionally advanced countries and the emerging countries (Ohno, 2011). Whether this economic power shift gives rise to a new paradigm in terms of international relations is difficult to predict. However, the overall trend suggests emerging markets will continue to outpace and eventually overtake many developed economies and the opportunities offered by this multipolar world will be wide-ranging.

Finally, *demographic changes* will force questions around economic, social and environmental sustainability. With a few exceptions, the world's population is ageing: there were 901 million people aged 60 or over in 2015 – 12 percent of global population – and that number is growing at 3.26% per year. For 2050 it is expected that all major areas in the world (except Africa) will have a quarter or more of its population aged 60 or over (United Nations, 2015). This puts pressure on business, states, institutions and economies. Longer life spans will affect pension costs, business models, and the labor force. Governments will be faced with falling saving rates, falling consumption, and growing pressure on social services (ESPAS, 2017[3]). Demographic changes can also affect the probability of incurring in risks. An emerging power with a young population could be expected to be more prone to risk than a traditional power

with an ageing population, which would in turn impact their position facing issues such as war or environmental change.

At the same time, there is a high concentration of people in urban centers, due to reasons that range from more opportunities to security. Even though people in some countries are showing a rather negative view on migration, the forces behind it remain strong. The world's population moving towards cities will continue to increase. By 2030, the UN´s World Cities Report (2016) projects that 2/3 of the world will live in cities. By 2050 the world's urban population will have increased by some 72%. In this new world, cities will have a different leverage power vis-à-vis nation states, since they will become important agents for job creation and carry new infrastructure and services challenges. They are also responsible for 70 per cent of global carbon emissions and so their role in tackling climate change is key for global sustainability.

These three forces are constantly evolving and others disruptive forces may also emerge to transform the "normal", expected scenarios. What we do know beyond this underlying uncertainty, is that politics often needs to evolve as a response to changing societal and economic trends. The way in which governments, businesses and societies respond to the known trends and the challenges they will bring, will dictate our upcoming years.

POWER   TECHNOLOGY   DEMOGRAPHY

3 http://www.europarl.europa.eu/RegData/etudes/STUD/2017/603263/EPRS_STU(2017)603263_EN.pdf

III. The Future of Domestic Politics: four worlds

There are two key dimensions that define the future of domestic politics and could radically change during the upcoming years under the effects of the new challenges (megatrends) societies and polities are expected to face. These are the paradigmatic variables to analyze political regimes: the levels of concentration of political power and the degrees of social cohesion. While the first dimension can be defined in a spectrum that goes from more to less democratic, opened and participatory polities, the social cohesion dimension refers specifically to a sense of community that exists in a society.

We first look at the two dimensions in a bit more detail. According to V-Dem (2018), although democracy is still strong across the world, for the first time since 1979 the number of countries backsliding on democracy is the same as the number of countries where it is advancing, and people are losing faith in the system (LAPOP, 2017; Pew, 2017). According to the Human Rights Foundation's research, 3.97 billion people (53% of the world's population) are currently living under authoritarian regimes and, in the democratic world, the expansion of rights and liberties seem to have found a temporary ceiling. For example, results from V-dem's *equality before the law and individual liberty index*[4] between 2000 and 2016 show a very small variation (less than 1%).
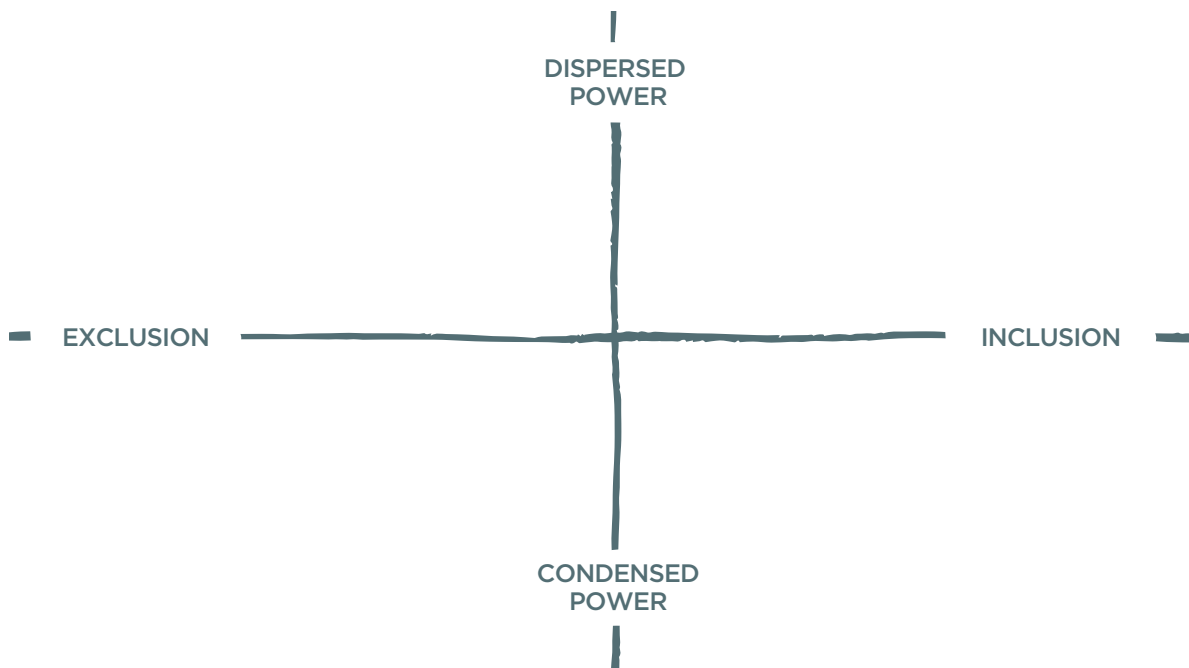
Cohesion is understood as a multidimensional phenomenon, associated with subjective sentiments of integration and solidarity in a society (Schiefer and Noll, 2017). As a consequence,

the manifestations of cohesion and how people perceive it, will often be understood differently according to the society. It is composed by three dimensions: social factors defined by the existence of shared values, the levels of closeness in social relationships and tolerance; a sense of trust in institutions and people; and the perception of equity. There is no academic consensus about the theoretical conceptualization nor the best measure of social cohesion (Chan et al., 2006; Barba Solano, 2011). The prevailing perception is that the international multilateral order is going through a critical period (Peña, 2018); as a correlate, globalization has fostered discontent in many countries and the levels of social cohesion worldwide are decreasing (Grimalda and Tänzler, 2018; Scanlon-Monash Index, 2017), but existing indicators of social cohesion show relative stability in aggregate. Nonetheless, some worrying trends emerge in its underlying components, particularly for trust and satisfaction with their countries' economic situation[5]. Social cohesion is thwarted by social divisions triggered by income, political parties, ethnicity, caste, language, or other demographic variables. So even if inclusion and cohesion are seen as different phenomenon, they are intrinsically related; rising levels of inequality can also undermine social cohesion if these processes are not properly handled.

These dimensions, thought of as continuums, enable us to take a broad perspective of the political life of different polities beyond the normative factors. It allows us to think about and

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4 V-Dem uses expert surveys as its main source of information for constructing its "Varieties of Democracy" report. The mentioned index measures both the extent to which laws are transparently and rigorously enforced by an impartial public administration and the extent to which citizens enjoy access to justice and diverse types of freedoms. Estimates presented here come from a sample of countries: Argentina, Australia, Brazil, Canada, Chile, Colombia, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Israel, Italy, Japan, Jordan, Kenya, Lebanon, Mexico, Netherlands, Nigeria, Peru, Philippines, Poland, Russia, Senegal, South Africa, South Korea, Spain, Sweden, Tanzania, Tunisia, Turkey, United Kingdom, United States, Venezuela and Vietnam.

5 Results are based on a Pew survey for Brazil, Chile, Mexico, South Korea, Ukraine, Kenya, Jordan and Argentina in the last 3 years show this.

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                    DISPERSED
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    ■─  EXCLUSION ────────────┼────────────── INCLUSION  ─■



                    CONDENSED
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discuss the policy implications behind each scenario. How does digitalization influence political participation and political representation in more open and closed systems? Will digitalization change the relationship between citizens and the state? Will changes come only in the form of political participation or will democratic institutions also change? Moreover, how does inclusive and cohesive societies look like when they face exponential rises in the use and penetration of technology? Will this widen the urban-rural or generational gaps? Will this expand the space for participation?

The lines that follow begin to navigate the answers to those questions. They characterize the four worlds that represent different possible intersections between the two dimensions and later on describe both how each world could be shaped by the three megatrends and how the economic and political leadership could respond to these changes. In the words of Levitsky and Ziblatt "crisis are hard to predict, but their political consequences are not" (2018: 110-111).

World 1: Many hands for little cake – Disperse power in exclusive societies

An exclusive, less cohesive society in which power is disperse has tensions between economic elites and the people. It is a scenario that typically characterizes a big portion of the developing world and that goes against a prediction that was sustained by many political theorists in the past: that democracy offers a path to sustained economic success (Boix, 2003). Here, the clear majority is not socioeconomically included and does not feel part of a community, but they do have a voice in the political system. In order to keep the system going, this world either requires people to have some levels of initial opportunities so that progress exists as a possibility, or to create an ideology, a narrative that fosters the belief that it is the case. Otherwise, if people manage to overcome existing barriers to collective action and organize, they would eventually put pressure on the system for it to become more inclusive.

In this world, *technological breakthroughs* generate new possibilities, but it is filled with challenges in exclusive societies. Knowledge and access to

Many hands for little cake
Dispersed power in exclusive societies

technology will probably not be equitably distributed to the many. Even though political power is dispersed, this does not necessarily lead to technological dispersion as well. In fact, the dispersion of power might complicate control over technological production and dissemination, leading towards unregulated robotization with low economic concentration. This scenario could also present conflicts over the control of coding and even algorithm wars, for example, among financial transactions, social media, and information distribution. Finally, technological dispersion can bring about informational distributive issues between developing and developed countries because of the way in which they handle transitions (Albrieu et al., 2018), and can also have a distributive impact among workers and firms (Nofal et al., 2018).

Moreover, as the idea of social media as a democratization catalyzer begins to erode, its existence and strength is starting to be a problem in many countries (Gayo-Avello, 2015). In the presence of either external or internal imbalances (like the war on terror, economic crisis, contentious politics or populism), technological changes can bode badly for liberal democracies and social media regulation would be an early advice of future democratic erosions. Here fake news could

be a key tool used by governments, since communication and the use of digital data can exert a strong influence on public opinion and even affect the outcomes of elections (Epstein and Robertson, 2014; Wooley, 2016). Another difficulty that emerges is how to get rid of echo chambers where power is disperse.

This leads directly to *demographic changes*, as the need for a rhetoric (assisted using technology) or for the perception of equality of opportunities could be also thwarted by the challenges that arise in ageing populations. The pressure exerted on the younger, working-age population can only be kept free of intergenerational conflict, if there is a form of contract between the generations. But how could this take place in exclusive societies? The difficulty is thus reinforced in exclusive scenarios, since that narrative of opportunities won't probably abide to begin with. Then the real issue becomes whether disperse powers can put a strain on the exclusive aspect, making of this world an intrinsically unstable scenario, since it is likely to shift either towards more inclusive societies with disperse power or towards a higher concentration of power.

The growth of cities can also generate other inequalities, such as urban segregation and regional

disparities. As this tension appears, empowering cities might be counterproductive as this could lead to rural-urban conflicts, exacerbating differences between those that can comply their obligations and others that cannot.

As for international relations, this world represents a non-cooperative policy scenario. To a certain extent, when governments meet in the international arena, their actions reflect the political situations at home (Grossman and Helpman, 1995). Despite the exclusion, here governments are not completely immune from political pressures. Therefore, the shifts in global economic power, a turn towards the emerging economies and more regionalism, could lead to protectionism, with the intent of protecting local businesses and jobs from foreign competition, and even to trade wars as restrictions and conflict intensifies.

World 2: Cohesive and powerful – Integrated societies that have a voice in politics

This world presents the most equitable and open scenario, in which power is distributed within societies that feel integrated and close together. People are included both in socioeconomic and political terms. The scenario represents the image of ideal liberal democracies that foster, simultaneously, distributive economic growth. Following the strand of research that studies the impact of political institutions on the allocation of government budget, democracies can favor spending on public goods (such as spending on education or health) and consequently redistribute income mostly through in-kind public services (Bueno de Mesquita et al., 2003; Deacon, 2009). It is a world with high levels of legitimacy, a concept heavily associated with regime survival since it is an alternative resource of support for authorities in times of crisis. Here, legitimacy could be based on shared ideas about what the political system represents, on relatively stable institutional procedures that assure the representation of citizens' interests, and even strong socioeconomic results.

This is meant to be a rather stable society with strong checks and balances that looks for inclusive solutions when facing the forces of the future. Even under economic external pressures or shocks, this scenario is meant to survive. Consequently, this world has strong policy implications requirements. It needs universal access to quality education that incorporates technology in classrooms, so that no one is left behind from the beginning. It also needs platforms for constant education and adaptation of skills in general, especially for the elderly to be included in the society. Moreover, this world could use of universal basic income and government taxation boosted by technology with accountability. In an ageing world that is already departing from a context of high level inequality, it is difficult to arrive at this scenario.

Changes in *global economic power* could lead in the short run (in an integrated, inclusive, and participatory world) to wage compression. Also, countries that implement protectionist policies would have an inclusive component, and international agreements could flourish, fostering new forms of global governance (to build consensus for global solutions).

Technological breakthroughs in this world are meant to be shared as public goods. This could lead, for instance, to the development of open source systems where codes are available for use and modification, where there is strong public platforms for crowdfunding, where transparency of the data, coding and AI are key, and there is collective, public, ownership of robots. Since this societies are meant to be inclusive, there should be a spread access to technology and related knowledge, reducing inequalities.

Since technology would appear to be a public good, it could be used within governments, to enhance decision making during the public policies' design, implementation and evaluation processes. Dissemination of technology can also, in turn, foster new forms of participation in inclusive, integrated societies where power is dispersed. One could think of new ways for active direct participation (linked to

Cohesive and powerful
Integrated societies with a voice in politics

International agreements could flourish, fostering global governance and consensus for global solutions

We all have some power, and that's fine.

A world filled with tensions. If people overcome barriers for collective action they might put pressure on the system. Strong checks and balances

A growing stress on income distribution might jeopardize stability

We benefit from public goods and income redistribution.

Changes in global economic power could lead to wage compression

I don't, but I'm a minor expression of my society.

Voluntary migration is made easier

A scenario of open source systems, with codes available for use and modification. Strong public platforms for crowdfunding. Collective, public ownership of robots

We leverage technological breakthroughs to enhance decision making.

New forms of participation

Universal basic income

online voting), widespread referendums or even AI prediction of voters' preferences being taken into consideration.

This is a world of inclusive solutions, so one can imagine a form of universal basic income and public policies to deal with the demographic changes and, the challenges of an ageing population specifically. However, a need for an intergenerational contract might also arise. Democracy and integration could lead to seeking better, inclusive solutions in which voluntary migration is made easier.

As for urbanization, one can imagine that resolution of conflicts between cities is more plausible than in other worlds. We could find ourselves in a Kuznets curve scenario in which, as an economy develops, market forces first increase and then decrease economic inequality. Within this pattern, initial growth will benefit only a small number of individuals who take advantage of the growing market. After a while the wealth of those individuals will filter down and spread out across the population who can take advantage of the advances in technology, infrastructure, greater investment, and a more skilled workforce.

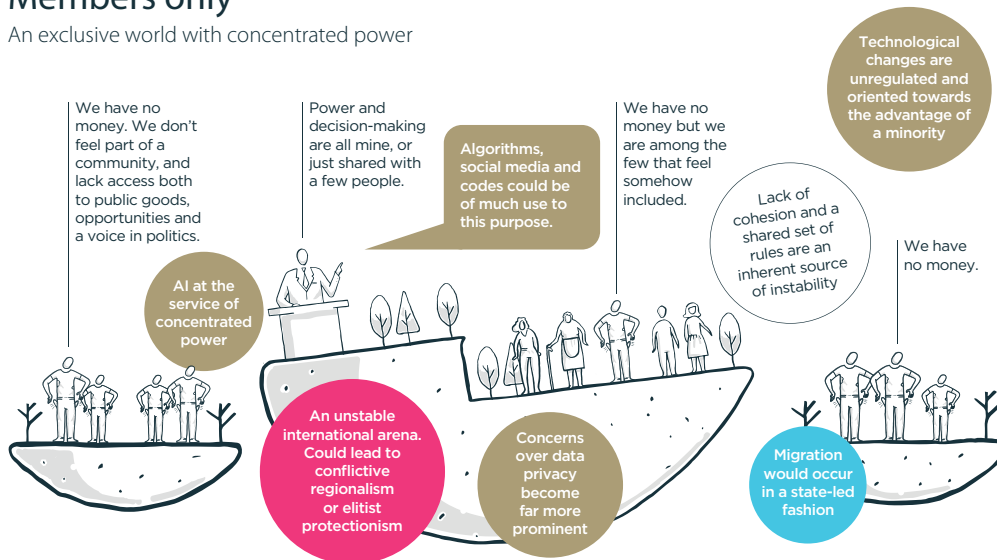## World 3: Members only – An exclusive world with concentrated power

In this scenario, people have limited access to public goods and socioeconomic opportunities. People don't feel like they are a part of a community and they do not have a voice in politics. It's a world of lack of trust and lack of opportunities. Of unregulated technological advances and lack of social protection.

It often said that no political regime or authority wishes to appear illegitimate and even the most coercive regimes are not expected to survive for long terms without some levels of support (Geddes, 1999; Soest and Grauvogel, 2017). Therefore, in these regimes, the lack of cohesion, of a shared and respected set of rules would be an inherent source of instability that could potential lead to the most extreme searches for control over the population. The use of technology, also concentrated in a few hands could help serve this purpose.

This is also an unstable scenario in the international arena. With the *shifts in global economic power*, socioeconomic exclusion and concentra-

Members only

An exclusive world with concentrated power

We have no money. We don't feel part of a community, and lack access both to public goods, opportunities and a voice in politics.

Power and decision-making are all mine, or just shared with a few people.

Algorithms, social media and codes could be of much use to this purpose.

We have no money but we are among the few that feel somehow included.

Technological changes are unregulated and oriented towards the advantage of a minority

Lack of cohesion and a shared set of rules are an inherent source of instability

We have no money.

AI at the service of concentrated power

An unstable international arena. Could lead to conflictive regionalism or elitist protectionism

Concerns over data privacy become far more prominent

Migration would occur in a state-led fashion

tion of power could lead to forms of conflictive regionalism or elitist protectionism, where the few concentrating socioeconomic and political power protect their vested interests.

As mentioned before, *technological changes* and its benefits are heavily concentrated in a few hands, meaning that all technological developments could be unregulated and oriented towards the advantage of a minority. If they lie in the hands of the government, or an economic elite associated with the political power, they could also be exploited to foster further control on societies instead of increasing participation. More technology would not lead to more democracy. However, it is important to note that exclusion also implies that both access to technology by the people and technology related education would be potentially restricted. Information and data could be less available in this world than in a more inclusive scenario, but those with power over algorithms and codes (either state or economic elite) could also use technology that is out of the reach of the people, to monitor (and even sanction) the preferences, tastes, interests, actions and opinions of the people. In the extreme case, a true Orwellian, totalitarian state, were AI could serve as the perfect weapon for authori-
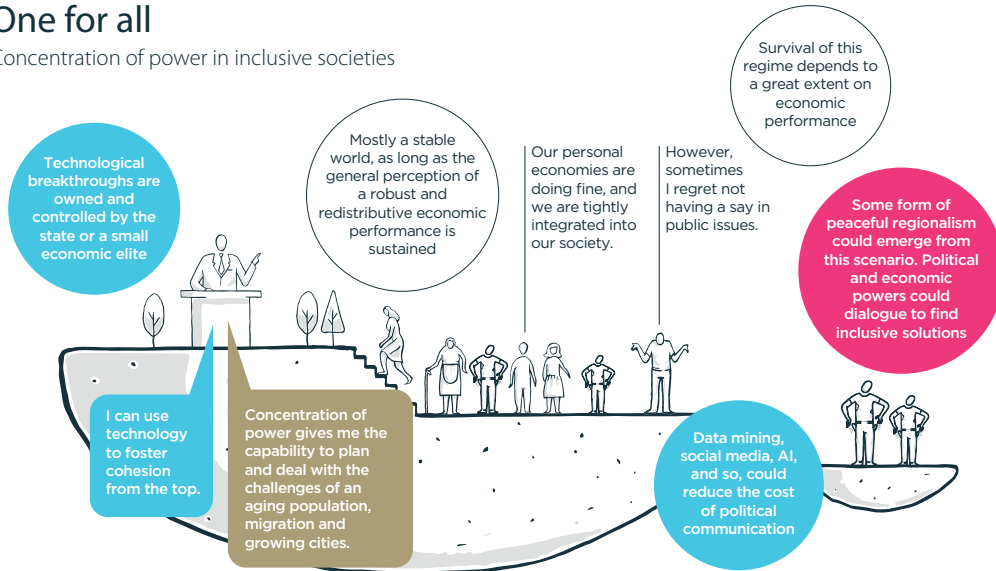
tarian leaders Kopstein (2017). Algorithms allow leaders to efficiently and opaquely enforce systems that are already biased against oppositional and marginalized groups, while still claiming to their "neutrality". For example, studies show that systems used to predict future criminals, assigning "risk scores", are biased against black defendants as they are consistently rated with a higher level of risk than whites facing the same charges (ProPublica, 2006).

Here, inequality would rise and the worst foresights for privacy would come true. With an increase in cyber-attacks and ever-growing internet access, concerns around data privacy promise to become far more prominent in a predatory regime with complete concentration of power, and the need to exert control.

Regarding *demographic changes*, ageing could bring difficulties for these societies. If the power and control of the government is too big, then it would be able to distribute people according to the needs of the economy, without caring about the exclusion of some. But this would bring costs in terms of cohesion and potential stability of the system. We may find ourselves in an exploitative scenario with minimum levels of redistribution in

One for all

Concentration of power in inclusive societies

Technological breakthroughs are owned and controlled by the state or a small economic elite

Mostly a stable world, as long as the general perception of a robust and redistributive economic performance is sustained

Our personal economies are doing fine, and we are tightly integrated into our society.

However, sometimes I regret not having a say in public issues.

Survival of this regime depends to a great extent on economic performance

Some form of peaceful regionalism could emerge from this scenario. Political and economic powers could dialogue to find inclusive solutions

I can use technology to foster cohesion from the top.

Concentration of power gives me the capability to plan and deal with the challenges of an aging population, migration and growing cities.

Data mining, social media, AI, and so, could reduce the cost of political communication

which leaders try to draw upon empty narratives or plain coercion to keep the world going.

Something similar could happen in regards to urbanization, leading to exploitative policies and spurs migration, but with high levels of control. Migration would occur in a state-lead fashion. It is likely that people's voluntary migration patterns would suffer strict regulations. Even though it is important to note that many authoritarian states have relaxed their migration policies in the last decade, it is important to differentiate the freedom people may have to study abroad or leave the country for holiday, from state planning to deal with population problems.

World 4: One for all – Concentration of power in inclusive societies

This scenario is a type of hybrid regime, in the sense that it defies the traditional visions of the democratic-authoritarian spectrum. Scholars have discussed for years whether integration and sustained economic growth could occur in less democratic scenarios. Many have argued that political

institutions that concentrate political power within a narrow segment of the population, generate less fiscal redistribution and greater inequality, while in contrast democratic regimes redistribute more and produce more egalitarian outcomes (Acemoglu and Robinson, 2006). World 4 combines high levels of cohesion with concentration of power, which implies on the one hand, that people are socially and economically included in a tightly integrated society; on the other, that citizens are excluded from the decision-making process.

Politicians have different resources at their hands. They are used to produce stability and legitimacy, as a means of ensuring their survival in power. For instance, since citizens update their beliefs about the government based on the information available to them, leaders spend resources in the molding of public opinion, in order to gain the support of the people and to co-opt members of the elite (Guriev and Treisman, 2015).

In this particular scenery, concentration of power has control at its core. A control that could be used for planning by an enlightened, meritocratic elite. The leaders of this world can affect all the channels of information by making propaganda broadcast via state media more convincing, bribing, im-

posing costs—such as fines or violence—on those who intend to send critical messages, and censoring messages. They can also direct spending on hiring and equipping the police with the tools of repression. However, relying on repression alone is too costly as a means of sustaining a rule, and, at the same time, the high levels of social cohesion imply that the political system enjoys some level of legitimacy. People feel that they are a part of the community. This could take place in a similar way to Huntington's (1991) approach in which the survival of an authoritarian regime (with heavily concentrated power) depends on its economic performance. Whether governments in this world favor the distribution of public goods or rather spend on cash transfers targeted to politically influential groups, as long as the perception of the keen economic performance is sustained, and control is exerted, we are facing a stable scenario.

Technological breakthroughs, such as the use of data mining, social media, AI, and so, could reduce the costs of propaganda and control. If coding is power, high levels of concentration of power imply that platforms, robots and all technological breakthroughs are owned by the few. Technological breakthroughs are owned and controlled by the state or a small political and economic elite, other than shared by the people. Therefore, the regime here could take the form of a digital authoritarian, in which the use of surveillance and machine learning tools could enable new mechanisms to control populations while including them in the process simultaneously.

While many have argued that technology and innovation can decrease an authoritarian government's grip on power, many are beginning to believe that at higher levels of technology, further innovation strengthens the ability of authoritarian governments to stay in power (Dragu and Lupu, 2017). Here, technology could be used both as a source of control and also to foster cohesion from the top, monitoring people's opinions, preferences and actions on a daily basis. It could facilitate the gathering and usage of people's personal information. The strong concentration of

power, can reinforce current the concerns about data privacy (Manson, 2018).[6]

Moreover, the lack of competition and cooperation in the sharing of technology could potentially limit the space for innovation. Still, this world can also present some of the benefits of an inclusive world. For example, government taxation could be made more efficient, but this would happen without any checks and balances.

Shifts in global economic power implies that, emerging nations and regional leaders will see their power grow. Given the characteristics of this scenario, the transformation could lead to some form of peaceful regionalism. The combination of absence of veto powers and inclusive societies could imply that political and economic powers could perhaps dialogue in order to find rather inclusive solutions.

As stressed before, concentration of power implies a big capacity to exercise control that, in an inclusive world, could be used for planning to deal with the challenges brought about by *demographic changes*. Perhaps, this could be a scenario with a government of technocrats that enhances human planning with the incorporation of technologies such as AI into decision making. To deal with ageing, the government elite could focus into providing education to the majority of people, into planning pensions systems that can respond to changes in the age pyramid, or even focus on an organized displacement of the workforce.

As for urbanization, this could also be a scenario of inclusive planned urbanization, with subsidies and guaranteed public sector jobs in cities that would have well-being effects of living in the city-civic space. This would mean that urban residents would benefit more from the urban economic growth, leading towards a particular type of Kuznets curve. A state lead economic development in which, for inequality to decrease, the wealth of the urban areas would have to flow into the rural areas.

This is a world in which citizens can accept hierarchies and the lack of participation as long as

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6 https://thebestvpn.com/vpn-usage-statistics/

they have access to equal opportunities and both social and economic progress is shared: as long as the society is inclusive and integrated. How-ever, this could be an unstable equilibrium point since an external economic shock could make the whole agreement tangle.

IV. The Future of Global Governance

With globalization, supranational and intergov-ernmental structures have been prolific and have acquired a central role during the last years, as they take part in the global discussion. But their future is uncertain. Not only is international com-merce changing due to online giants like Alib-aba and Amazon but, at the same time, global governance systems are suffering from deep le-gitimation deficits, which need to be addressed in order to avoid fragmentation and a decline in global governance (Zürn, 2018).
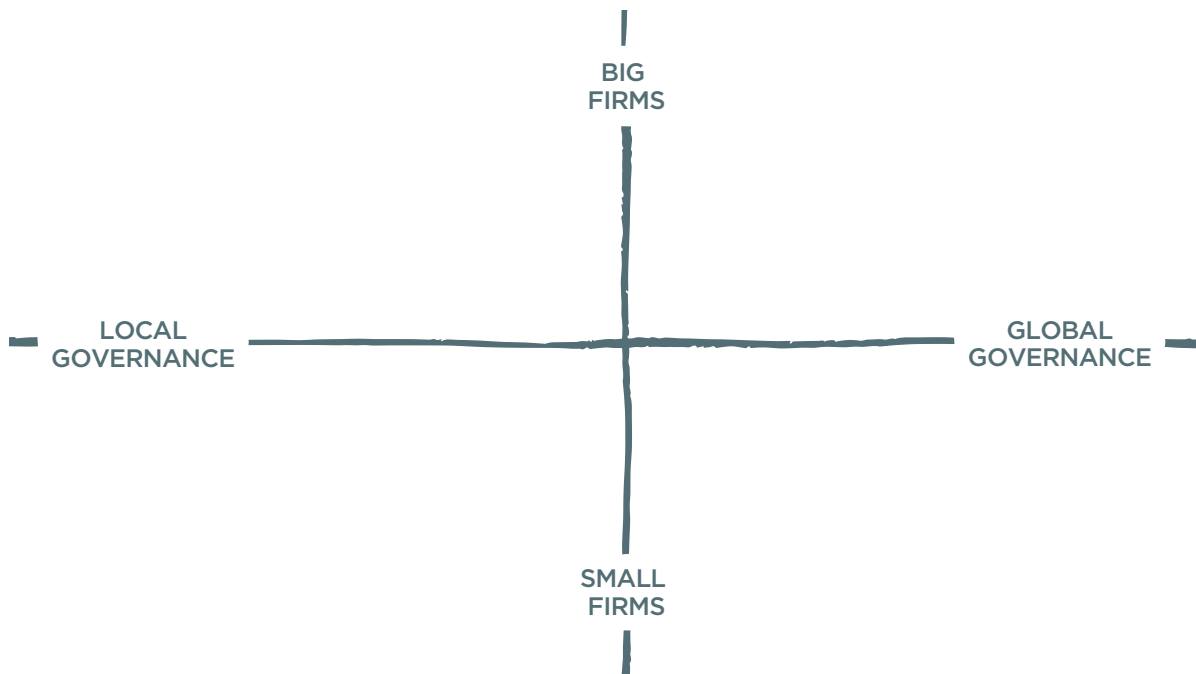
While some countries align around the impor-tance of international cooperation, others are swept by nationalistic sentiments and, like the UK, vote leave in order to abandon pre-existing arrangements. Demands for global governance are not transversal across countries and specific issues; as we see in the expansion of trade re-gionalism in the last decade, fragmentation is already underway (Acharya, 2016). According to Zürn (2018), current politicization and counter-in-stitutionalization could either lead to a break-down of global governance or to its deepening. The result depends on what countries and lead-ers do in the next years.

Decision-making processes, structures and nar-ratives need to change, but it is not the first-time governance models need to be re-thought. The shift from agricultural to industrial societies in the 19th century triggered the need for new in-stitutions to govern social security. World War II brought about the creation of the United Nations.

Nowadays, the progress of digital technology is al-tering every aspect of our private and public lives, and its impact on global governance is also very important. Big data and predictive analysis could affect decision-making processes; digital govern-ance systems may increase public involvement by making it easier and cheaper to participate; and a whole new chapter could emerge for blockchain technologies (Tzezana, 2017). According to Atzori (2017), this technology could radically change funding models for international organizations and enable a new ecology of data governance, based on neutrality, tamper-resistance and transparen-cy. Other researchers such as Bogost (2017) have argued that mature authoritarian states could also fare under the rule of blockchain. Overall, experts around the world are optimistic about what tech-nology can do to improve political processes in democratic countries, as long as we take care of the risks they also imply (Tzezana, 2017).

So how will the governance structures of the future be? Some scholars think that the centralized model of governance we know is already out of date and the future will bring about a decentralized mod-el with a new U.N. facilitating interactions (Orban, 2017). Others think that this trend implies a new par-adigm in which the private sector and the third sec-tor will be more actively involved in global govern-ance structures and policies (Joshi, 2017; Muggah & Tiberghien, 2018). In a discussion in the School of International Futures (SOIF, 2016)[7], government of-ficials and experts thought that global governance could develop into a state-led multipolar model

7 https://www.soif.org.uk/blog/future-global-governance/

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                    BIG
                    FIRMS




LOCAL                                    GLOBAL
GOVERNANCE                               GOVERNANCE




                    SMALL
                    FIRMS
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in which global governance took place through a network involving private companies, states and civil groups. What is indeed clear is that the global governance system must balance efficiency with inclusiveness, leaving no groups behind and making possible that more voices are heard, pointing to the legitimation problem already mentioned above (Kawaguchi, 2017). Achieving public engagement and involving citizens in governance processes might also be important for this goal, especially since most people consider themselves as "global citizens" (Milkoreit, 2017).

Another change taking place globally is the transformation of the size and distribution of firms. As Tim O'Reilly says[8], networks have always been part of business, but the internet takes networked firms to a different level. Among the many changes, the digital era brought about what Esko Kilpi[9] defines as the reversal of Ronald Coase's argument. In his theory about the origins of firms, Coase explained that a firm would emerge and exist successfully if it performed its planning, coordination and management functions at a lower

cost than the market or other firms. This is where competition should keep firms internally efficient and where non-competition in the public sector creates complex, non-efficient governance models. However, the internet has permitted buyers and sellers of products and services to encounter easily and faster than in the past, with a new type of third party mediating between them. It has reduced the need to invest in real estate, reaching customers who are not physically close to prime locations, and building in new habits of customer loyalty and instant gratification. From this perspective, the offer is becoming deeply decentralized, with more SMEs (World Bank, 2014) and the notion that every person could be a potential seller. Decentralization necessarily implies the absence of a clear unified view of how and where the economy is going. It also means the breakdown of the hierarchical and rigid structure of economic entities. In line with this, demand firms, such as Uber or Airbnb, are increasingly being made up by small highly professionalized teams that develop software and algorithms that do most of the work. For those reasons, many

8 https://wtfeconomy.com/networks-and-the-nature-of-the-firm-28790b6afdcc

9 https://wtfeconomy.com/networks-and-the-nature-of-the-firm-28790b6afdcc

companies are starting both to adopt more flexible and decentralized structures and to invest even more in innovation so as to be prepared for sudden changes in their ecosystems.

In spite of the described trend towards a more "dispersed" economy, we can also find an opposite process going on. In the last few years, there have been a recentralization of many industries. Nowadays, fewer than 10% of the world's public companies account for 80% of all profits[10]. This is specially so in the technology sector which is the one who takes the lead in the development of world productivity. According to the Wall Street Journal[11], several economists have warned about the power that the "Tech Giants" (Apple, Google, Microsoft, Facebook and Amazon)[12] are concentrated recently. These companies have grown sharply, destroying or incorporating their competitors and providers into their structure.

How will these two trends develop in the future? Are we going to have a world of decentralized entrepreneurs an, competition or a world were a few firms concentrate all economic power? How would these scenarios coexist with changes in global governance and global challenges? The following lines focus on this issues by analyzing two dimensions of the supranational sphere: the size of the firms and the type of governance structure.

World 1: Big foot in a local world

In a world were economic power is concentrated globally in a few hands, and political power is fragmented, what appears is inequality. Regional differences will increase as cities compete for the investment of the few big firms that exist.

Without a strong unified voice to negotiate, lo-

cal leaders will have a hard time negotiating with centralized, strong, private enterprises. They will also find it difficult to deal with the challenges that emerge, especially in the least developed areas. Global solutions for issues such as climate change will be hard to achieve, since coordination is likely to be led by firms, and their own private interests, instead of government structures. World 4 presents another framework in which the economic and political spheres of authority are only loosely coupled with each other. The private sector here takes the lead.

Shifts in global economic power imply that emerging markets will outpace and overtake developed economies. With very few companies controlling most of the world market, these big firms could be expected to belong to the most successful economies, such as China and India.

In this framework, local identities are threatened because of the homogenizing power of firms across the world (that could also drive migration and increasing diversity within cities). Design and production would be centralized, but inequality could also spark sharp regional differences regarding production, consumption patterns, living standards and human capital accumulation.

Since political power is locally oriented, there could be a tension (and in some cases dependence) between the political power and big firms. Governments in less developed areas would find it hard to stay in power and social cohesion is likely to breakdown. But at least in theory, big firms need cities to thrive: they need capable workers, high levels of consumption, and other indicators of development. Therefore, they could provide incentives for local entrepreneurs to emerge and to develop technological breakthroughs. If this doesn't happen, big risks emerge. Without counterbalances or government checks, regional disparities may arise as big firms lead coordination.
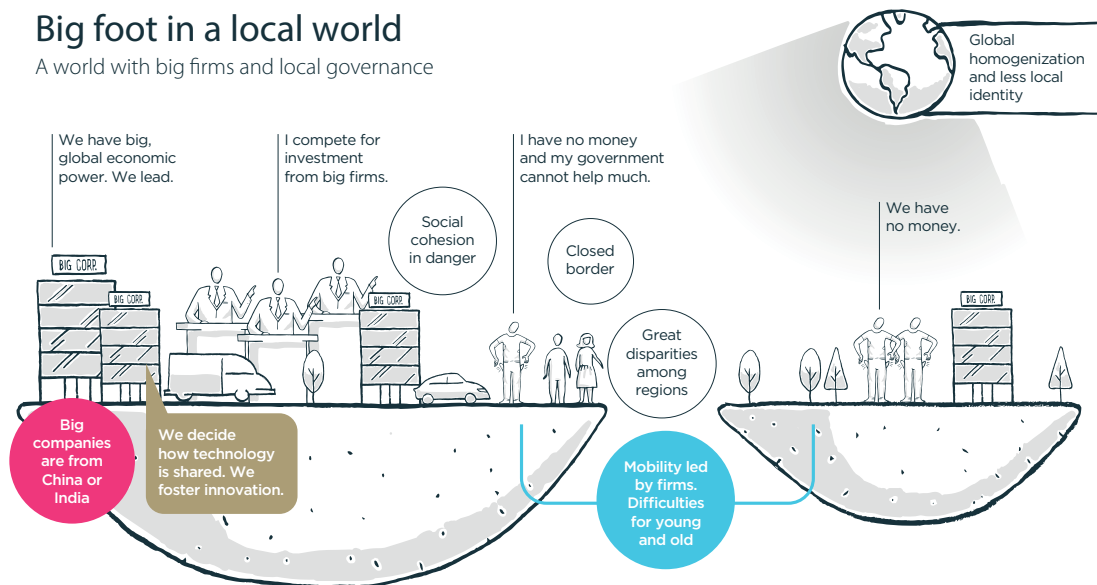
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10 https://www.weforum.org/agenda/2017/01/worlds-biggest-corporate-giants/

11 https://www.wsj.com/articles/techs-titans-tiptoe-toward-monopoly-1527783845

12 According to a The Guardian's article, the five companies together have a collective value of USD 3.35 billons – more than the gross domestic product of the UK and every other country on Earth, except for the US, China, Japan and Germany. https://www.theguardian.com/business/2018/jan/03/apple-leads-race-to-become-world-first-1tn-dollar-company

Big foot in a local world

A world with big firms and local governance

The decision to share technology and information between local units would be at the discretion of the large firms and take place primarily in the private sector. Therefore, cross-boundary regulations on technological developments and usage are unlikely to take place.

The same type of business led decision-making applies for displacement. It is a scenario of controlled mobility lead by firms: specialized clusters may arise, which could be hard for disperse populations.

Demographic changes will present big difficulties both for the young citizens and the old. A pattern that would be especially intensified in less developed areas, since mobility will be driven by private capital rather than government policies.

Overall, this is an inefficient scenario filled with inequality. Regional conflict, based on socioeconomic cleavages, could appear as viable and profitable political option. Cities and countries could compete against each other for big firms and firms would be able to make demands to local governments. Those democratic governments that depend heavily on the interests of pri-

vate capital will find it hard to implement distributive policies leading to high instability in younger states and disaffection in older ones.
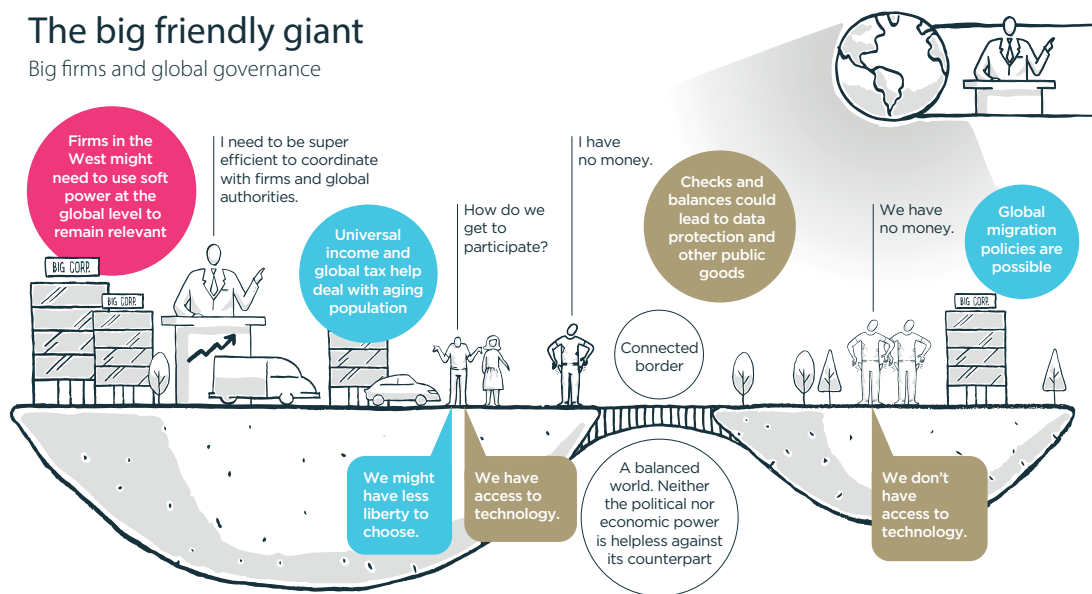
World 2: Big Friendly Giant - big firms in a global scenario

The presence of big firms and global governance generates a rather stable environment in which both actors can be equal partners in the development of technology (sharing information and knowledge). It also enables the development of checks and balances: neither the political or economic power is helpless against its counterpart. In this world, innovation is most likely to take place and both global solutions and cooperation are possible outcomes.

However, questions arise about how political participation could work in a world in which both economic and political power rests in a denser global arena. Technology could serve as a facilitator in democratic governments. But independently from the type of regime, this structure means that power is more centralized. Big firms are denser, so there are few actors con-

The big friendly giant
Big firms and global governance

centrating power over economic resources and work distribution. In the global scenario, political power is more centralized, which implies that decision-making is more coordinated and regulatory measures could be taken and applied locally. Private actors (mainly these few for-profit firms) are more extensively involved, sometimes with technological solutions and sometimes with demands. To a certain degree big firms and global governments are probably allies, since big firms own information and the technology, allocating it strategically. This world needs highly efficient politicians to carry out a double-game, coordinating measures with big firms and regulatory frameworks globally.

In turn, a shift in *global economic* power would imply some level of political tension in the west economies. The only way they can compensate for this loses is with the use of soft power within global governance structures.

Technology breakthroughs would lead to platforms that are privately owned. As big firms take the lead, technological innovation prioritizes firms than consumers. It is a world of more robots and powerful data storage, with unequal distribution of technological knowledge and access. However, some forms of partnerships between global governments and big firms could arise to share information and innovation. Here, checks and balances must be in place in the form, for instance, of data protection regulations at the service of the government, to help them deal with the losers of this economy. On the bright side, this collaboration could in turn lead to innovation on leisure time, but it could also produce more unemployment.
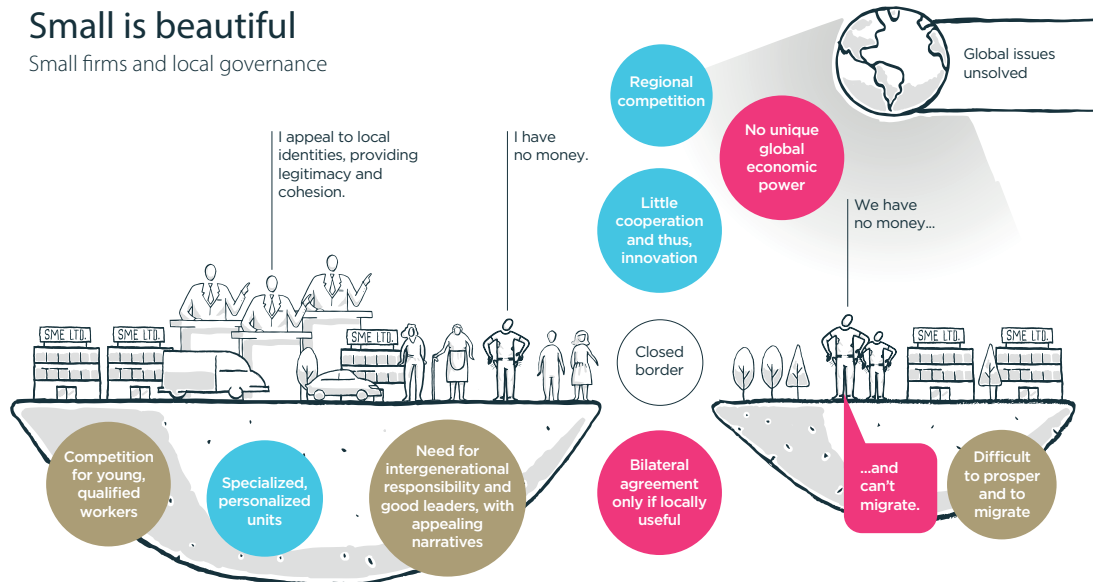
As for *demographic changes*, an increase in ageing population could be handled through policies like universal income and global taxes. International cooperation could mean the developing of migration policies that help deal with demographic challenges. But this also means that there could be less liberty to choose and that young people in poor countries are in trouble.

World 3: Small is beautiful

In this scenario, there is a strong sense of community were small firms operate in societies that are governed locally. The domestic leaders of

Small is beautiful

Small firms and local governance

this world will tend to appeal to local identities as a source of legitimacy, in order to increase their likelihood of staying in power and fostering social cohesion. But it also experiences high levels of poverty and strong interregional disparities. This scenario is likely to reinforce exclusionary forces. Here, the less developed polities will find it hard to thrive and the richer states will have more incentives to close their borders than too cooperate. It is a world where nationalist ideologies and protectionist policies are likely to emerge, both in democratic and authoritarian regimes.

Simultaneously, a change in *international distribution* of power where both firms and local governance are concentrated locally, or at least, were global power is decentralized, implies the disintegration of unique global economic power. In this world it is harder for developing countries to develop and eventually change the global economic power.

Bilateral agreements can occur, but this will depend on the domestic, short term benefits of the governments involved. Thus, international consensus will only be reached if they are useful locally. But certainly, a complete lack of integration
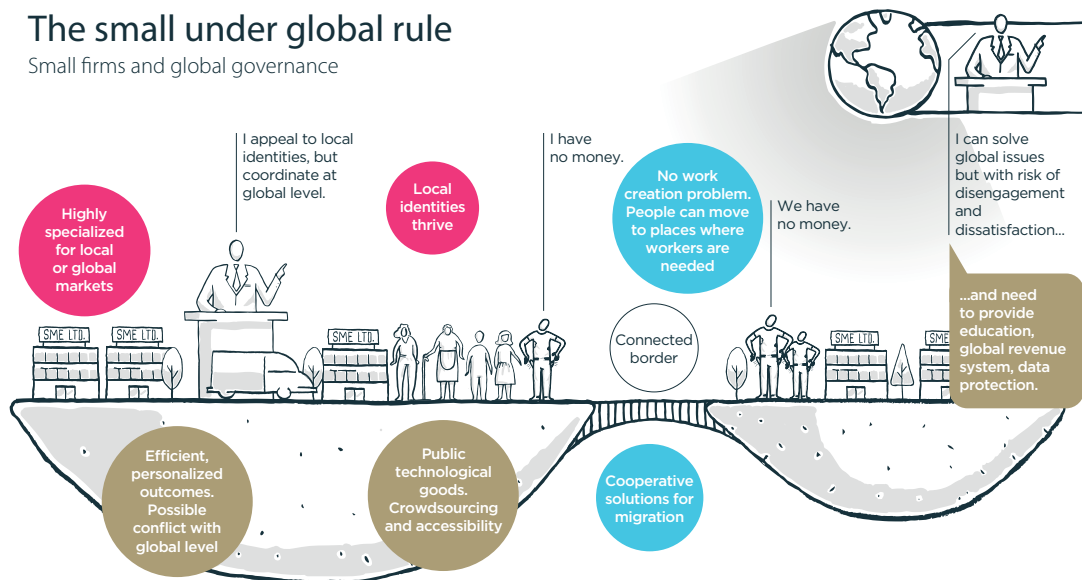
means that the international arrangements needed to solve big, global problems such as climate change, will be difficult to achieve. It is a world of small patches and few opportunities for people's mobility and migration.

Moreover, *technological breakthroughs* won't be shared. With economy and political power locally centered, both local firms and communities are likely to turn into specialized units that produce in a highly personalized fashion, for the local community. In turn, this will foster regional and national disparities, based on the resources and specialty of each local unit. To a certain extent, it could also foster some levels of regional competition, in which local units are organized regionally, according to their productive needs. The lack of cooperation could lead to slower technological innovations or even technological regression, making both the economy and the development of the polities less efficient.

Finally, *demographic changes*. An increase in the world's population moving towards urban centers will lead to regional inequality, as cities will lack the ability to redistribute both resources and people. Cities will compete for capital

The small under global rule

Small firms and global governance

I appeal to local identities, but coordinate at global level.

Highly specialized for local or global markets

Local identities thrive

I have no money.

No work creation problem. People can move to places where workers are needed

We have no money.

I can solve global issues but with risk of disengagement and dissatisfaction...

...and need to provide education, global revenue system, data protection.

Connected border

Efficient, personalized outcomes. Possible conflict with global level

Public technological goods. Crowdsourcing and accessibility

Cooperative solutions for migration

and perhaps for a qualified, young labor force. However, international migration is likely to be more difficult, due to the absence of incentives for cities to create encompassing regulatory frameworks and the difficulty to reach international agreements. This challenge also applies for the difficulties surrounding the ageing population; the local government units are alone to face these challenges and, with few resources and not much international cooperation, there will be a growing need for a sense of intergenerational responsibility and for good leaders, with appealing narratives.

World 4: The small under global rule

This scenario implies a system with a dense set of specific institutions that contain patterns of authority, legitimation, and the presence of general normative principles that are general and sector spanning, in order that deal with and coordinate the existence of small firms. Global governance structures enable and enhance interconnected networks of small firms. There is diversity and some levels of participation.

World 4 also implies the interactions between different spheres of authority within the system, including relationships with state and nonstate members. A good system would include the necessary tools to manage interface conflicts between different spheres of authority. At least prima facie, governments have the capacity to solve big, global, problems and to provide global public goods. But there are also costs of coordination, fragility and political disaffection. As small firms are most frequently sectorally defined, locally or regionally structured and responsible for a limited set of issues, the economic and political spheres of authority are only loosely coupled with each other.

There are important policy implications needed to deal with the forces of the future and the tensions between specialized small firms and global governance. Among several other policies, there is strong need for widespread education, for a global revenue system, for diffusion of technology and data ownership regulations. Therefore, *technological breakthroughs* could be further shared, and platforms presented as public goods. Not only is technology accessible and easier to use, but most of the population is tech-

nologically enabled. It can lead to powerful data storage and distributive crowdsource financing.

Since the economy works at a local level, technological developments are meant to foster efficiency at a local level, generating highly personalized outcomes. This can produce tensions between personalized, local factors and global governance structures.

As for *shifts in global economic power*, either small firms maintain and provide goods to their local community, or technology and political networks enable small firms to trade internationally, making local products flow globally. In both cases, local identities thrive.

Also, this scenario facilitates inter-state collaboration. Consensus for global problems can be reached in a more easily fashion enabling and regulating migration flows. Global governance structures facilitate the displacement and mobility of people. In this world, *demographic changes* can find a cooperative solution. Because of the possibility of producing migration policies and also the demographic pull and push factors, there wouldn't be a "no-work creation" problem: active members of the workforce can move to areas were small firms are demanding for workers. However, this is could also be a world of less social security and less liberty to choose.

V. Conclusion. What role for the G20?

The forces of the future will put (for the better or the worse) more tools in the hands of decision makers. They will foster current tendencies, current scenarios and also generate new challenges. We know for a fact that technology is evolving and that it will change irreversibly many aspects of our lives. We also know that power is changing hands and that demographic transitions are in place: the size of the cities is changing and the population is growing older. What is still unclear is where these forces will lead us. The goal behind this prospective exercise was to think about the possible paths and see where there is room for maneuver. Indeed each world analyzed has its own public policy implications. Both in the domestic sphere and the international arena, the road we follow will have a strong impact on people's lives.

Many of the scenarios analyzed lead to paths of protectionism, nationalism, and the lack or decline of global governance structures. There, the cooperative paths that draw policymaking, for example,

towards the Paris Agreement on climate change, or the international commitment towards the UN Sustainable Development Goals would not be possible. These options overlook the myriads of multilateral win-win opportunities that international cooperation has to offer and imply an unwillingness to confront the world's inherently global opportunities and problems. So, if all international cooperation arrangements are started to be challenged, the international organizations and cooperation forums such as the G20 have a key role to play. Several of the trends shaping these prospective scenarios could be tackled (and some, are already) by coordination at the G20.

To begin with, artificial intelligence (AI) regulation. The use of automated decision making informed by algorithms is penetrating the modern workplace at a rapid rate. Algorithms are driving significant decision making in the workplace and are also determining our present rights and future opportunities, in ways that are not always visible.

Well written algorithms can be rather impartial and notice obscure patterns. They can increase economic growth rates, labor productivity and enable people to make more efficient use of their time. However, there is also a strong debate on the impact AI and related robotics can have on employment. Governments are facing a growing need for a regulatory frameworks on AI and international cooperation needs to lead the way (Twomey et al, 2018). The G20 forum can agree on a series of principles that enable the smoother, internationally broader and more socially acceptable introduction of Big Data and AI in the workspace. The T20 has contributed in this realm.

Building a sustainable future the world also needs an investment and implementation actions in multiple areas, such as providing cleaner energy, and building climate-resilient urban, energy and transport infrastructure. Moreover, cities are responsible for 80% of the global GDP, as well as about 70% of greenhouse gas (GHG) emissions (McKinsey & Company, 2011; United Nations, 2011). There is a growing need to empower cities as leading actors to mitigate climate change, to develop new metropolitan governance mechanisms and to promote a new-ecologically-based urban agenda.

International migration is another phenomenon that affects most countries. However, the debates remain poorly informed, leading to misconceptions and stereotypical views about its drivers, the types of migration, and the impact they may have over the country of origin and the host. Data col-

lection systems and data sources differ in number and quality. Therefore, international cooperations structures such as the G20 can collaborate by seeking agreements on the definitions and on minimum standards of data collection.

Finally, development issues have become inseparable from the domestic politics of both advanced countries and are beginning to be closely linked with economic, diplomatic and security issues (Ohno, 2011). The UN Sustainable Development Goals, present a interdisciplinary and universalist framework for development politics that proposes, among its 17 goals, the eradication of extreme poverty for the year 2030, the promotion of shared prosperity, and support sustainable development for everyone. The G20 can play a leading role in promoting and enhancing the accountability for the implementation of the 2030 Agenda. For instance, by creating a common template for countries to report on the progress made towards implementing and achieving the SDGs which, in turn, can be fed into the Annual Progress Report. Setting up a standardized tool to support reporting at a national level implies that the G20 can align its strategy and accountability framework in light of the 2030 Agenda, increasing coherence within countries and in the G20 as a whole.

Besides specific topics, the prospective scenarios set out in this paper call for an urgent and disruptive debate about how global governance is going to be transformed in the near future and the role G20 should play in order to foster a sustainable and faird world.

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