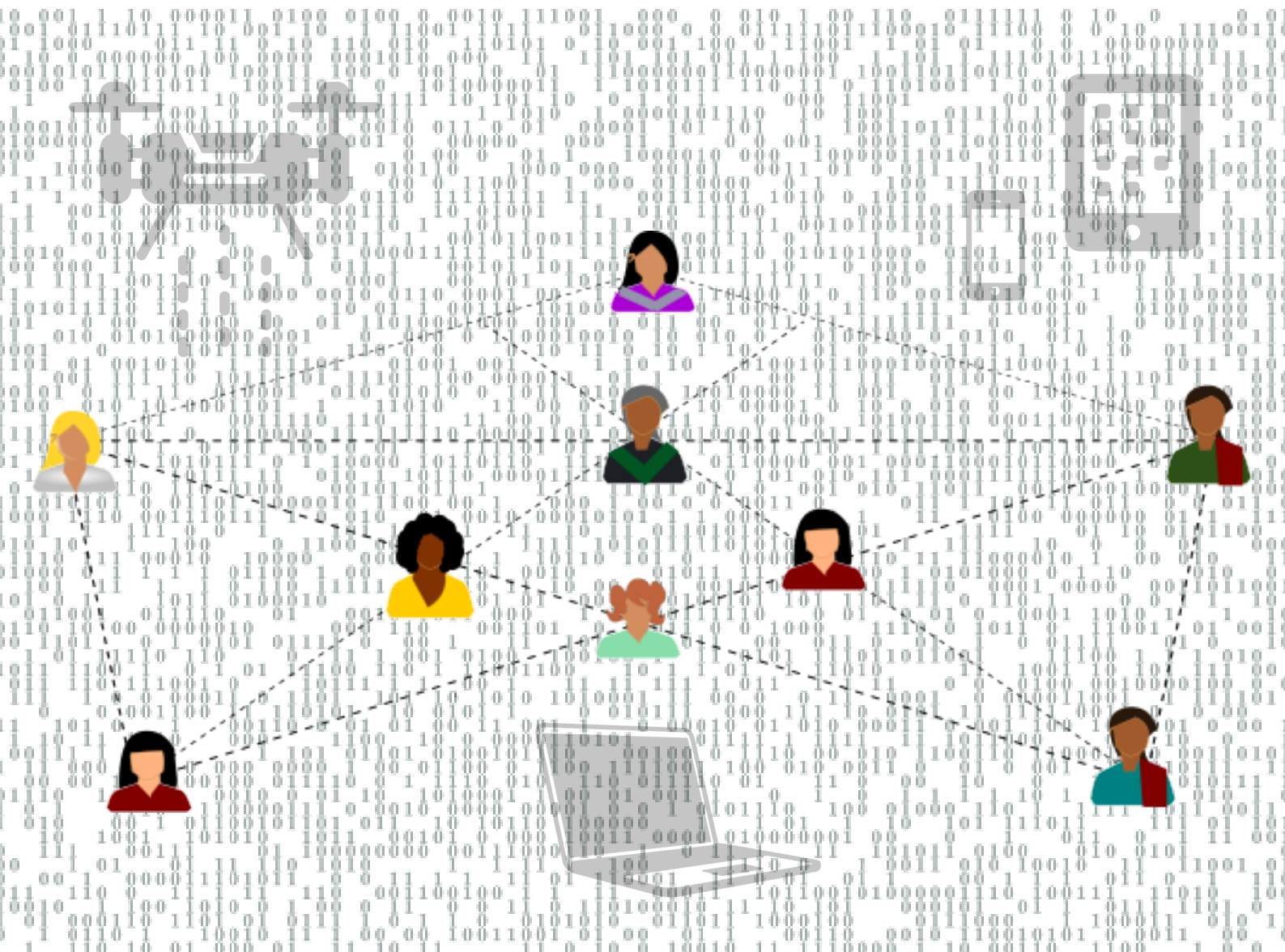
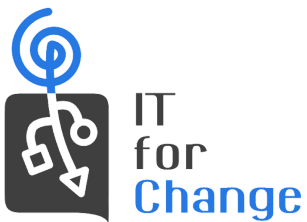


# What has the future of digital economy and society got to do with women's rights?

IT for Change, December 2017

Anita Gurusurthy and Nandini Chami





IT for Change is an NGO based in Bengaluru, India. We aim for a society in which digital technologies contribute to human rights, social justice and gender equality.

Authors: Anita Gurumurthy and Nandini Chami  
Design: Yatti Soni



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IT for Change | 2017

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# 1. Writing on the wall: development crises and digital realities

Agenda 2030 envisions progress towards gender equality as an overarching moral imperative<sup>1</sup>. To achieve this vision, the Agenda invokes the enabling role of Information and Communication Technologies (ICTs)<sup>2</sup>. While digital technologies do enable transformative change, providing avenues for voice, and catalysing engagement for women's human rights, the techno-paradigm is no linear pathway to gender equality.

Evidence suggests that market-led expansion of connectivity is not automatically opening up Internet access for women<sup>3</sup>. In Africa, the gender digital divide is in fact widening<sup>4</sup>. Even in middle-income countries such as China, India and Brazil, the Internet continues to be out of reach for the majority of poor, less educated, and rural women. It is clear that a digital capability deficit that is distinctly gendered needs to be tackled urgently<sup>5</sup>.

The experience of going online may not always bring gains for women. Underlying gender divides in education and income manifest as 'use' divides, leaving a large proportion of women ill-equipped to use the Internet for expanding their strategic life choices. Dominant gender ideologies are reproduced in online spaces, given that social norms are co-extensive in the online space, with sexism and misogyny normalised within the white male geek culture that characterises most online communities<sup>6</sup>. Also, state and corporate structures in the information age variously undermine women's informational and communicative autonomy through pervasive surveillance<sup>7</sup>.

Today, slow growth<sup>8</sup>, extreme levels of hunger and food insecurity<sup>9</sup>, poor progress on maternal mortality<sup>10</sup>, and child wasting<sup>11</sup> in many parts of the global South signal a sobering setback for human progress. They reflect a feminisation of the development challenge. Digital technologies can play a role in addressing these grievous trends. However, the current trajectory of the information society is contributing to a deepening of historically entrenched patterns of exclusion. While the lack of meaningful access to digital technologies marginalises women, an emerging socio-economic order coded through the digital raises critical concerns for gender

<sup>1</sup> <https://www.itforchange.net/sites/default/files/Anita%20Gurumurthy%20-%20UNESCO-GAMAG%20-%20SDGs%20panel%20.pdf>

<sup>2</sup> Goal 5 b of Agenda 2030. See <https://sustainabledevelopment.un.org/post2015/transformingourworld>

<sup>3</sup> <http://a4ai.org/digging-into-data-on-the-gender-digital-divide/>

<sup>4</sup> <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2017.pdf>

<sup>5</sup> <http://a4ai.org/wp-content/uploads/2013/12/Affordability-Report-2013-FINAL.pdf>

<sup>6</sup> A staggering 73% of women have experienced online gender-based violence, but redress mechanisms are limited. A recent research study by the Association for Progressive Communications about the policies of three major Internet intermediaries – Facebook, Youtube and Twitter – with respect to technology-mediated violence against women found that these platforms engaged with the issue only when it affected public relations.

<sup>7</sup> <https://www.apc.org/sites/default/files/FeministActionFrameworkOnDevelopmentAndDigitalTechnologies.pdf>

<sup>8</sup> [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP\\_mid-2017\\_Press\\_Release\\_E.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP_mid-2017_Press_Release_E.pdf)

<sup>9</sup> <http://www.fao.org/state-of-food-security-nutrition/en/>

<sup>10</sup> <https://sustainabledevelopment.un.org/content/documents/14383SDG5format-revOD.pdf>

<sup>11</sup> <http://www.fao.org/state-of-food-security-nutrition/en/>

justice<sup>12</sup> (See Box 1). A new imagination about gender and ICTs is therefore needed to address afresh old questions about ‘systemic crises’ and ‘reproduction failures’ of development, raised by feminist movements of the global South<sup>13</sup>.

### Box 1. Gender inequality in the digitalised economic order

The nature of economic activity is radically altered with the advent of the platform economy, with new products, services, jobs, enterprises and even, market places. The big picture emerging out of this evolutionary path suggests the need for a reassessment of the gender, development and technology discourse.

**Gender ideologies and women’s economic participation:** Over-optimistic narratives of ICTs and women’s enterprise need to be examined critically for their techno-determinism. Digital enterprises need a complex ecosystem often absent in developing countries<sup>14</sup>. Small businesses in the global South are unable to reap the network effect, and are often at the mercy of mainstream online platforms – large multinational corporations – through which they are forced to sell goods and services, often on unfavourable terms<sup>15</sup>.

The rhetoric on mobiles often fails to adequately factor in the institutional challenges that cause women’s exclusion from the economy in the first place<sup>16</sup>. Gender-based exclusions in access to land, banking and credit, employment etc. are critical factors that cannot be fixed just through access to mobile phones.

**Gender-based exploitation in the data economy:** Corporate mergers in agriculture for control of global agricultural inputs – seeds, pesticides, fertilizers and farm machinery – signal a shift in farming practices based on Big Data crunching, with potential threats to local agricultural autonomy and food security<sup>17</sup>. This is bound to have far-reaching impacts on the well-being of women farmers in the global South.

<sup>12</sup> [http://itforchange.net/sites/default/files/608/The\\_Information\\_Society\\_Context-Paper\\_for\\_UNESCAP%20.pdf](http://itforchange.net/sites/default/files/608/The_Information_Society_Context-Paper_for_UNESCAP%20.pdf)

<sup>13</sup> Sen, G. and Grown, C. (1986) Development, Crisis and Alternative Visions: Third World Women’s Perspectives.

<sup>14</sup> One of Kenya’s leading tech investors, Ory Okollah, recently called attention to how developed countries adopt the route of robust public policies and public investment in their key economic sectors, but push the discourse of SMEs /entrepreneurship in Africa, thus evading the key development question of digital public goods for Africa. See <https://qz.com/501056/were-live-from-the-quartz-africa-innovators-summit-in-nairobi/>

<sup>15</sup> Recently Amazon extended its ‘return’ policy, where users can send back items at the merchants’ expense, to all vendors using its platform. Small businesses fear this will crush them. See <https://www.cnn.com/2017/08/02/amazons-new-refunds-policy-will-crush-small-businesses-say-sellers.html>

<sup>16</sup> For example, see the critique of mobile-based price information services in [https://markets.ischool.berkeley.edu/files/2015/02/MythOfMarketPrice\\_wp.pdf](https://markets.ischool.berkeley.edu/files/2015/02/MythOfMarketPrice_wp.pdf).

<sup>17</sup> There were seven major mergers in the agriculture sector in 2016, all of which were driven by transnational agricultural corporations’ push for control over seed, soil and weather data. <http://www.etcgroup.org/content/monsanto-bayer-tie-just-one-seven-mega-mergers-and-big-data-domination-threaten-seeds-food>

**Access to the digital knowledge commons:** Digital affordances for collaborative knowledge production<sup>18</sup> are thwarted by Technology Protection Measures (TPMs) introduced by powerful corporate lobbies<sup>19</sup>. Through such measures, a highly restrictive copyright regime becomes default, without regard for the right to knowledge of women in the global South.

**Digital automation and future of women's work:** Women have a very low share in the advanced technology jobs that are in demand in the digital economy<sup>20</sup>. Trends also reveal a technology-induced reduction in mid-level cognitive jobs where women dominate<sup>21</sup>. It is anticipated that digital automation may result in a decline in low-skilled jobs in manufacturing, and send wages into a downward spiral<sup>22</sup>. In the emerging gig economy, a marked precarity of jobs is foreseen for the majority<sup>23</sup>. Considering that the present neo-liberal policy model has completely cut back on the welfare net, these trends imply that care work burdens for the poorest women, especially from the global South, will increase dramatically in the emerging economic context<sup>24</sup>.

## 2. Furthering gender justice in the digital society: Key insights for policy and programming

Efforts to bridge the gender digital divide or use ICTs towards women's empowerment must be more than just about women's access to connectivity. They must focus on the design of institutional frameworks that can guarantee the democratic distribution of digital dividends for marginalised women to claim their share in the economic, social and political gains of the information society. Such a radical departure towards a connectivity-plus approach calls for a review and reformulation of policy actions by states at national and international levels, as discussed below.

### 2.1 Recommendations for national governments

#### 2.1.1 Make digital policies, revisit sectoral policies

<sup>18</sup> The Internet supports collaboration through widespread information and knowledge flows at no additional cost. See <https://mitpress.mit.edu/books/understanding-knowledge-commons>

<sup>19</sup> Consider the controversial adoption of the Encrypted Media Extensions standard for web browsers by the W3C consortium, which has enabled the de-facto imposition of US-based copyright legislation on the rest of the world, including citizens of countries whose Parliaments have rejected such frameworks.

<sup>20</sup> For example, in Silicon Valley, hardly 11% of executive positions are held by women.

<sup>21</sup> Research by the World Economic Forum indicates that women face five jobs lost for every job gained, versus three jobs lost to one gained for men overall.

<sup>22</sup> <https://www.whitehouse.gov/sites/whitehouse.gov/files/images/EMBARGOED%20AI%20Economy%20Report.pdf>

<sup>23</sup> <http://library.fes.de/pdf-files/bueros/indien/13226.pdf>

<sup>24</sup> Race and gender are key determinants of global care work chains. As Naila Kabeer highlights, "*It is not only the elite, but also middle class women, who come to rely on women from poor and marginalised groups and ethnic minorities within their own countries and now, increasingly from abroad, to take up their domestic responsibilities*". See <https://www.ids.ac.uk/files/dmfile/Wp290.pdf>.

The degree of empowerment women have to make decisions affecting their lives in digital times is contingent on robust policies in digital and traditional sectors to protect and promote women's rights.

Digital policies pertain to a wide range of digital goods and services – from broadband and mobile infrastructure, Internet protocols and standards, software applications, platform services, to cloud technologies, IoT, data analytics tools, Artificial Intelligence technologies and more. Digital aspects are also implicated in sector-specific policies. For example, health information portals for women need accessibility standards for information sharing in local languages. The health sector also needs standards for data collection, storage, use and sharing. While data protection laws can ensure that platform companies, cloud service providers and data analytics firms follow guidelines with respect to the collection, storage, and processing of sensitive personal information, sectoral laws may address more specifically how, for example, health sector data may be regulated.

Mechanisms for a gender audit of emerging technologies – applications of IoT, algorithms, Artificial Intelligence, etc – are essential to prevent the pervasive gender bias and sexism evident in the design of technology<sup>25</sup>.

### 2.1.2 Enact comprehensive digital rights legislation and reformulate gender equality laws

Articulating a comprehensive digital rights legislation at the national level<sup>26</sup> is an important normative exercise to protect and promote women's human rights in the information age. It is also critical that gender-based cyber violence – a widespread and invisible phenomenon – is addressed through an overhauling of relevant laws.

### 2.1.3 Create new digital public goods

Digital public goods, extending over a range of artefacts – from standards, algorithms to apps and even robots, are vital resources for development, and need to be shaped through gender perspectives and policies, as discussed below:

**(a) Broadband:** Governments must ensure that connectivity policies, broadband plans, and associated budgets have a dedicated gender component<sup>27</sup>. This should be used to support initiatives that couple connectivity with the creation of empowering use-cultures for women. Public access kiosks can act as safe spaces providing requisite digital literacy skills<sup>28</sup>. Universal mobile data allowance - for zero-rated access to public information, basic digital services and communication with local government - may be seen as a legitimate exemption to net neutrality regulation. Municipal broadband programmes can offer subsidised connectivity to women-run SMEs<sup>29</sup>.

<sup>25</sup> This is critical in the current context where we are encountering programmed sexism in digital personal assistants, huge privacy risks in latest IOT developments such as Wi-fi enabled sex toys, and gender-biased algorithms.

<sup>26</sup> Such as the Marco Civil da Internet enacted by Brazil.

<sup>27</sup> <https://www.itu.int/en/action/gender-equality/Documents/ActionPlan.pdf>

<sup>28</sup> An useful exemplar in this regard is the Community e-Centres programme of the government of Philippines. See <http://egov4women.unescapsdd.org/report/annex-ii-case-study-synopsis>

<sup>29</sup> For example, see <http://www.connectingcheshire.org.uk/superfast-broadband-provides-business-boost-for-female-entrepreneurs/>

**(b) Public digital platforms:** Governments must view digital platforms in key sectors – online retail, e-marketplaces for agricultural products, education portals, employment listing services etc. – as essential public infrastructure for marginalised women’s full citizenship in the digital economy and society. Government of India’s *Mahila e-Haat* (online marketplace for women)<sup>30</sup> and the Philippine government’s e-TESDA initiative for blended learning<sup>31</sup> are some interesting examples.

**(c) Data commons:** Governments will need to think out of the box about new ownership regimes for data – largely owned by the big digital corporations presently – to create informational public goods needed to equalise opportunities. Along with Open Data initiatives, experiments like Transparent Chennai, for developing public spatial data resources and gender-inclusive planning of urban sanitation<sup>32</sup>, suggest important uses of public data.

#### 2.1.4 Invest in creating and nurturing the new knowledge commons

Governments must support the development of minority language fonts in non-proprietary formats<sup>33</sup>, incentivize content creation by rural, indigenous and minority women, and encourage the adoption of the Creative Commons licensing system in publicly funded research and knowledge processes. IP frameworks must protect women’s rights to access the digital knowledge commons while preventing the co-option of their knowledge traditions by powerful corporations<sup>34</sup>.

#### 2.1.5 Forge a new social contract for gender equality in the emerging digital economy

To enable women’s enterprises and small businesses to compete in the platform economy, new governance frameworks that can ensure fair play and enforce obligations of user privacy, transparency, consumer rights etc. on platform intermediaries are essential<sup>35</sup>.

New laws are also needed to regulate crowdwork for their compliance with decent work standards, with a specific focus on the conditions of women workers<sup>36</sup>. The deployment of robotics to reduce the drudgery of care work<sup>37</sup> and social security nets for women, especially those who are displaced from traditional sectors, requires new public investment.

Digital upskilling programmes must be designed to tackle socio-cultural issues (using creative strategies like cyber mentoring<sup>38</sup>), and STEM policies must be geared to promote girls’ participation in the advanced tech sector<sup>39</sup>.

<sup>30</sup> See <http://pib.nic.in/newsite/PrintRelease.aspx?relid=137415> and <http://www.enam.gov.in/NAM/home/index.html>

<sup>31</sup> See Blended Learning Programmes, Philippines at <http://egov4women.unescapsdd.org/report/annex-ii-case-study-synopsis>

<sup>32</sup> <http://www.transparentchennai.com/tag/toilets/?catID=1>

<sup>33</sup> <http://gb1.apc.org/en/pubs/feminist-action-framework-development-and-digital>

<sup>34</sup> *ibid*

<sup>35</sup> <https://edri.org/french-digital-council-publishes-report-platform-neutrality/>

<sup>36</sup> [http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/di/di\\_wp71.pdf](http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/di/di_wp71.pdf)

<sup>37</sup> <http://www.thehindu.com/opinion/op-ed/should-robots-be-nationalised/article19919764.ece>

<sup>38</sup> See the Cybermentoring initiative of the Ministry of Gender Equality and Family, Republic of Korea, at

<http://egov4women.unescapsdd.org/report/annex-ii-case-study-synopsis>

<sup>39</sup> [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf)

### 2.1.6 Use e-government as a game changer for women

Often times governments tend to use digital technologies to maximise bureaucratic efficiency and centralised control rather than to promote accountability and citizen participation<sup>40</sup>. However, e-government constitutes a creative policy instrument to promote gender-equitable development and gender-responsive governance<sup>41</sup>. For instance, integrated e-health information systems can be designed to facilitate tracking of services by beneficiaries, rather than as a tool for top-down monitoring by hospital administrators<sup>42</sup>. Similarly, the design of grievance redress systems must facilitate monitoring of welfare delivery by women's groups<sup>43</sup>.

Gender-responsive e-government presupposes a key role for the women's ministry, institutional commitment to gender mainstreaming, inter-ministerial coordination mechanisms, and ongoing consultations with women from diverse socio-structural locations<sup>44</sup>.

## 2.2 Policy interventions at the global level

The networked socio-economic order needs to be reconfigured to promote gender justice. Today, transnational digital corporations wield extraordinary clout<sup>45</sup>, evading national laws<sup>46</sup> and showing scant respect for women's rights<sup>47</sup>, especially in the developing country contexts they operate in. Regional agreements such as RCEP are pushing for e-commerce rules carrying the very real risk of possibly furthering a global trade regime does not work for women from the south<sup>48</sup>. Sweeping powers for state surveillance, with minimum safeguards for citizens, is increasingly the norm, not only in the developing world, but also in many developed countries<sup>49</sup>.

It is against this backdrop that the UN Special Rapporteur on freedom of expression, David Kaye, and the UN Special Rapporteur on the right to privacy, Joe Cannataci, have called for an international treaty on human rights on the Internet. Women's economic, social and cultural rights and their right to development in the twenty-first century needs international benchmarks that are well-deliberated and democratically evolved to tackle the opportunities and challenges posed by the digital phenomenon. The human rights obligations of digital TNCs is also a vital issue to be addressed internationally<sup>50</sup>. New international norms may also be needed to define decent work in the digital economy and for data governance.

<sup>40</sup> <https://www.itforchange.net/e-governance-india-existing-context-and-possible-scope-for-undp-programing-over-2013-18>

<sup>41</sup> <http://egov4women.unescapsdd.org/report>

<sup>42</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4721069/>

<sup>43</sup> For example, the grievance redress system of the conditional cash transfer scheme of the government of Philippines feeds into, and reinforces, local accountability systems for health and education services. See <http://egov4women.unescapsdd.org/report/annex-ii-case-study-synopsis>

<sup>44</sup> <http://egov4women.unescapsdd.org/report>

<sup>45</sup> The world's top ten largest companies – compiled by market capitalization – are tech companies

<https://www.weforum.org/agenda/2017/01/worlds-biggest-corporate-giants/>

<sup>46</sup> For example, see <http://fortune.com/2016/03/11/apple-google-taxes-eu/>

<sup>47</sup> [https://www.genderit.org/sites/default/upload/apc\\_facebook\\_case\\_study.pdf](https://www.genderit.org/sites/default/upload/apc_facebook_case_study.pdf)

<sup>48</sup> <https://thewire.in/162115/rcep-talks-questions-loom-large-over-india/>

<sup>49</sup> <http://www.newsweek.com/state-surveillance-europe-populism-cctv-citizens-553857>

<sup>50</sup> <https://www.itforchange.net/draft-treaty-on-transnational-corporations-and-human-rights>



### Box 2. Big Data essentials for gender-responsive tracking

High-quality, timely and reliable data disaggregated by “*income, gender, age, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts*”<sup>51</sup> are essential for tracking progress towards the SDGs.

The official statistical community is increasingly turning to Big Data to fill in the existing gaps/inadequacies of national statistical systems, including in the area of tracking women’s empowerment and gender equality<sup>52</sup>. Big Data approaches may illuminate previously invisible areas of people’s lives, but they can lead to incomplete, and even misleading, results, if used in isolation. Their limitations – representational bias, exclusion of the priorities of women who are off the connectivity grid or inattention to deeper causality – suggest the need for caution in building theory<sup>53</sup>.

Partnerships in data for development (goal 17) have often adopted a celebratory rhetoric, although evidence has pointed to uncomfortable ethical ambiguities<sup>54</sup>. States must recognise that Big Data approaches can only be a complement to other tools for data-gathering in development decision-making. It is therefore vital that public finance support national statistical systems to generate gender-disaggregated data sets<sup>55</sup>. Big Data methodologies must also be used in conjunction with sampling, to be sure of the validity of results<sup>56</sup>. Public Private Partnership agreements for Big Data initiatives must be backed by “*ethical, legal and statistical standards to improve data quality and protect people from abuses in a rapidly changing data ecosystem*”<sup>57</sup>.

<sup>51</sup> <http://in.one.un.org/page/sustainable-development-goals/sdg-17/>

<sup>52</sup> <https://www.cfr.org/blog/big-data-filling-gender-data-gaps-and-pushing-us-closer-gender-equality>

<sup>53</sup> <http://www.sciencedirect.com/science/article/pii/S0268401214001066>

<sup>54</sup> <https://responsibledata.io/big-data-ebola-data-responsible-data/>

<sup>55</sup> <http://data2x.org/wp-content/uploads/2017/03/Closing-the-Gender-Data-Gap-Mayra-Buvinic-and-Ruth-Levine.pdf>

<sup>56</sup> <http://www.sciencedirect.com/science/article/pii/S0268401214001066>

<sup>57</sup> <http://www.undatarevolution.org/report/>