GOVERNING RESOURCES IN A DIGITAL AGE

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FOR
CHASING SCARCITY, A DOCUMENTARY

BACKGROUND

Economics textbooks continue to base their content on a single fundamental assumption: that resources are scarce relative to unlimited wants. Our project's experience in the following four locations suggests that the lived reality is far more nuanced:

- The Mongolian pastures, where over-grazing still occurs but at a decreasing rate after the intervention of multiple NGOs

- The Danish island of Samsø, which has achieved energy self-sufficiency since building 11 wind turbines; and where grazing land is shared among the ~4000 inhabitants

- The Ground-Up Initiative (GUI) in Singapore, which aims to foster a stronger sense of community among volunteers and activists through activities that connect them to the land (urban farming, sustainable engineering, etc.)

- Shanghai, one of the most digitally connected cities if one is on Chinese telephone apps and digital platforms (WeChat, Alipay) – but which is also much less connected to non-Chinese platforms like WhatsApp, Viber and Gmail

- Estonia, one of the most digitally advanced nations in the world, which taps into global labour markets to address its internal labour shortage with a domestic population of 1.3 million

- Singapore, another digitally advanced nation that announced a national AI strategy in Nov 2019

INSIGHTS FROM THE FOUR LOCATIONS

Seven broad issues emerged from the experiences of these locations.

First, **physical resources can be managed such that they are abundant relative to human needs, and self-regenerating** – even though digital/virtual resources are the most obviously "abundant", given their lack of physical depletability. In Samsø, this is manifested in how early investments in wind turbines have generated more energy than the island itself needs, and which it can therefore supply to neighbouring Danish cities like Aarhus. In Mongolia, NGO research clearly indicates how much grazing must be reduced in order for the land to replenish (including allowing for the occurrences of severe winters or "dzud"). So the easy stereotype that physical resources are scarce, while virtual resources are abundant, needs revisiting.

Second, with both physical and virtual resources, **communities are key to managing scarcity**. This echoes Elinor Ostrom's Nobel Prize-winning work, on how communities are a critical agent of governance, complementing states and markets. A member of Samsø's Energy Academy refers to the importance of "mobilising social capacities" in governing their island's energy use; GUI explicitly uses community language and approaches in its activities and publicity. Community governance is key in Mongolia, where the state has for decades not enacted any laws on pasture usage, and pasture users have found it necessary to formulate and mutually enforce grazing arrangements. Estonia's approach to addressing its labour shortage includes government policymakers and business owners coming together in communities of mutual interest; with government agencies playing a facilitative role and providing the broad infrastructure of an e-Residency programme, which businesses of all

sizes can use. In all three cases, digital platforms provide online spaces for communities to interact, complementing physical meetings. Shanghai was an exception with a more ambivalent situation – there did not seem to be as much of a sense of community, including among Chinese nationals, and less of a sense of connection and solidarity emerging from the digital platforms.

Third, **digital resources might avoid physical scarcity, but are subject to other, newer forms of scarcity**. Network bandwidth is the most obvious – the reach of such resources (and the communities they sustain) are constrained by internet access, including patchy Wifi. Intellectual property laws also generate new scarcities for otherwise abundant digital resources like information and knowledge – particularly when such content is placed behind paywalls. Several personalities in all locations, as well as respondents to a survey our team conducted, noted that energy, attention and time are among the most scarce items in their lives, given the growing amount of information they have to process, interpret and take action on.

Fourth, **one person's scarcity is another's abundance** – neither concept is absolute. The Shanghai case portrayed this most starkly – digital abundance was restricted to Chinese apps and platforms, while other apps like WhatsApp, Viber, Gmail and Facebook were subject to the Great Chinese Firewall. As a non-user of Chinese platforms, I experienced very little of the much-vaunted digital reach and scale of the Chinese internet.

This is related to a fifth issue – that **even in situations of abundance, some sections of populations are left out**: apart from tourists like myself, this refers especially to those without internet access (e.g. lower income groups, the old and rural dwellers). The unskilled are also excluded from many knowledge-intensive abundances. This is in line with what sociologist of science Robert Merton calls the Matthew Effect, named after the Gospel of Matthew (25:29): in the Bible: "whoever has will be given more, and they will have an abundance. Whoever does not have, even what they have will be taken from them".

Many of the locations prompted me to ask: **Is scarcity always bad?** In the Danish, Estonian and Singaporean AI cases, initial resource scarcity drove the original innovation with wind energy, global labour and digital technology respectively. GUI's space constraints in its location at Khatib, in the north of Singapore, have necessitated creative use of technology and careful planning of its activities tempo. In China, job scarcity and competition has catalysed intensive use of digital infrastructure and the growth of a serious-minded work ethic among Chinese technology firms.

Finally, while the obvious distinction between the locations seems to be the nature of the resources at play (physical or virtual), the **real difference for outcomes came from the mindsets** of the people involved. Success often stemmed from communities with an experimental mindset, willingness to take risks and appetite for innovation. This also ties in with Ostrom's work; she was convinced that the most successful examples of resource governance came from communities that are willing to learn, and do not treat their constituents as static beings stuck in rigid cost-benefit and optimisation mindsets.

RECOMMENDATIONS FOR DECISION-MAKERS

Given these issues, some key recommendations suggest themselves.

First, as countries and especially governments undertake digitalisation and digital transformation to tap into non-scarce virtual resources, they should not ignore the economic potential of physical resources like energy and pasture, where opportunities still abound. This means that policy on energy and agriculture is more, not less, relevant in a digital age; and decision-makers.

Second, groups that are victims of new scarcities, or are left out of new abundances, should be actively engaged on the need and feasibility of reskilling, so that they are both willing and able to tap into the opportunities in these new abundances.

Third, we should avoid simplistic assumptions that scarcity is bad (since it can drive innovation) and abundance is good (since abundant information can be overwhelming and require new ways to manage attention and information flows). This can play out not only in high-level strategy or policy, but also in the daily decisions we make in individual and community lives.

Fourth, policymakers and businesses should proactively engage communities in the governance regimes for new and abundant resources. As the burdens on public and private sector actors grow more numerous and complex, involving communities can be a useful way to burden-share and reap the insights of community actors. This means paying more attention to programmes and techniques that empower communities, like Citizen Assemblies, Citizen Juries, deliberative democracy and citizen engagement.

Fifth, all stakeholders involved in resource governance should remember that mindsets matter. While it may be tempting to wait for the external environment to become more "favourable" to change, the more fruitful approach as illustrated in all our locations may well be Abraham Lincoln's adage: the best way to predict the future is to create it. Positive abundance and constructive scarcity can be part of our collective future, if we exercise human agency and create change before crises beset us.

END

www.chasingscarcity.com
Chasing Scarcity, the 2-part documentary, is available for viewing
Tuesdays, 17 and 24 March, 9 p.m, on cna, Singapore.

View online from 18 March onwards @
www.channelnewsasia.com/news/video-on-demand/chasing-scarcity