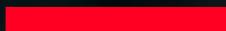


About Doughnut Economics, Technology and Humanitarian Crises



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2021

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About Doughnut Economics, Technology & Humanitarian Crises



By

| Sarah A Jabbar (sara.abdulrahman@mail.utoronto.ca | [LinkedIn](#))
Munk School of Global Affairs & Public Policy, University of Toronto

| Andrej Verity (verity@un.org | [@andrejverity](#) | [LinkedIn](#))
United Nations Office for the Coordination of Humanitarian Affairs (UN-OCHA)

Design

| Lorena Velázquez | kunoichidesign.com
| Alexandra Sternin | alexsternin.com

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A special thanks to Kate Raworth, creator of the doughnut model of economics, Andrew Fanning from the DEAL team and Nicole Hagerman Miller from the Biomimicry 3.8 team.

Interviewees



<u>Name</u>	<u>Organization</u>	<u>Position</u>
Kate Raworth		Creator of Doughnut Economics
Andrew Fanning	Doughnut Economics Action Lab (DEAL)	Data Analysis & Research Lead
Nicole Hagerman Miller	Biomimicry 3.8	Managing Director

Purpose, Research Methodology & Limitations



The purpose of our research is to explore the doughnut model of economics in its relation to humanitarian crises and technology, especially as the topic of sustainability continues to become ever more important.^{1,2} Our questions included: How could the doughnut model of economics be applied in the event of a sudden-onset humanitarian disaster? Does technology enable the doughnut model of economics? Is the model feasible in disaster-prone areas? How would the model be applied in vulnerable or low-income countries? How would a humanitarian crisis influence the effectiveness of the model itself?

This report is based on a literature review and a small number of semi-structured interviews with key individuals familiar with the model. As the model is relatively new and only recently being adapted in cities, the publicly available information was limited for our context. A list of all the resources used can be found in the appendix section.

About the Doughnut Model of Economics



In 2012, economist Kate Raworth developed the doughnut model of economics as “a visual framework for sustainable development.”³ The model contains two concentric circles where the inner circle demonstrates the social boundary and the outer circle represents the ecological boundary, as shown in **figure 1**. Thus, the doughnut model merges two traditionally separate concepts - economy and environment - into one module.⁴

The inner boundary is now based on the 2015 Sustainable Development Goals (SDGs),⁵ which outline the minimum global standards to ensure humanity’s well-being.⁶ The SDGs address

-
- 1 Kaplan, Sarah. “The Undeniable Link between Weather Disasters and Climate Change.” The Washington Post. WP Company, 22 October 2020. Accessed 15 July 2021. <https://www.washingtonpost.com/climate-solutions/2020/10/22/climate-curious-disasters-climate-change/>
 - 2 Haller, K., Lee, J., & Cheung, J. (2020). Meet the 2020 Consumers Driving Change: Why brands Must deliver on omnipresence, Agility, and Sustainability. Retrieved 18 July 2021 from <https://www.ibm.com/downloads/cas/EXK4XKX8>
 - 3 Raworth, Kate. “A Safe and Just Space for Humanity,” Oxfam Discussion Paper, (May 2017): p. 4. <https://www.oxfam.org/en/research/safe-and-just-space-humanity>
 - 4 Toye, Richard. “Doughnut Economics by Kate Raworth Review – Forget Growth, Think Survival,” 8 June 2017. Accessed 24 June 2021. <https://www.theguardian.com/books/2017/jun/08/doughnut-economics-by-kate-raworth-review>
 - 5 The social boundary was initially based on the goals outlined for the 2012 United Nations Conference on Sustainable Development, Rio 20+.
 - 6 “Historic New Sustainable Development AGENDA Unanimously Adopted by 193 UN Members – United Nations Sustainable Development.” United Nations. United Nations. Accessed 11 August 2021. <https://www.un.org/sustainabledevelopment/blog/2015/09/historic-new-sustainable-development-agenda-unanimously-adopted-by-193-un-members/>

critical social needs such as access to water, food, health, education, income and work, peace and justice, political voice, social equity, gender equality, housing, networks and energy.⁷

The model's outer boundary focuses on planetary limitations identified by scientists including biodiversity loss, air pollution, ozone layer depletion, climate change, ocean acidification, chemical pollution, nitrogen and phosphorus loading, freshwater withdrawals and land conversion.⁸

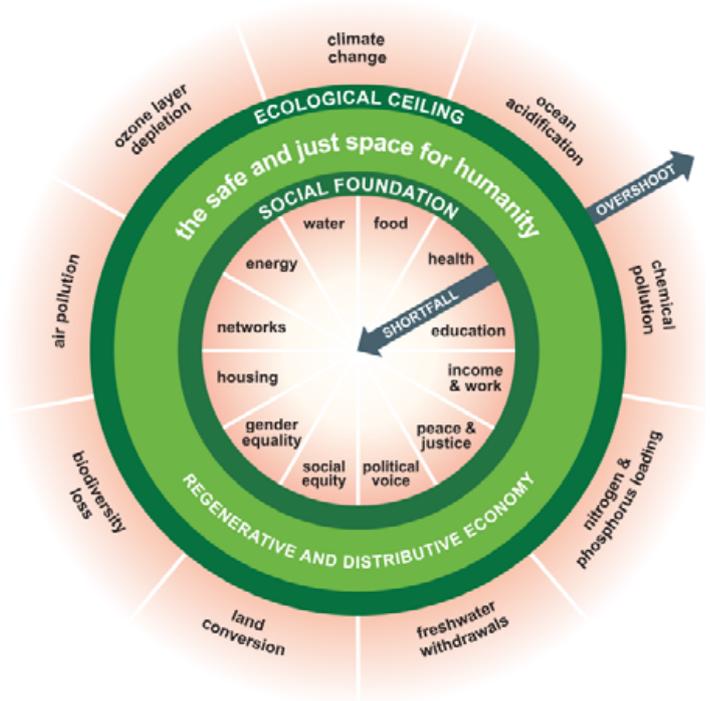


Figure 1¹⁰

Using the model, our goal is to live within the green space between these two boundaries, as illustrated in figure 1. Raworth describes this space as *“a safe and just space for humanity to thrive in.”*⁹

Figure 2 shows what Raworth refers to as the 21st century “selfie”¹¹ or “our 21st century compass.”¹² Highlighted in red are “shortfalls and overshoots.”¹³ The figure depicts a scenario where we are far from living within the confines of the doughnut.

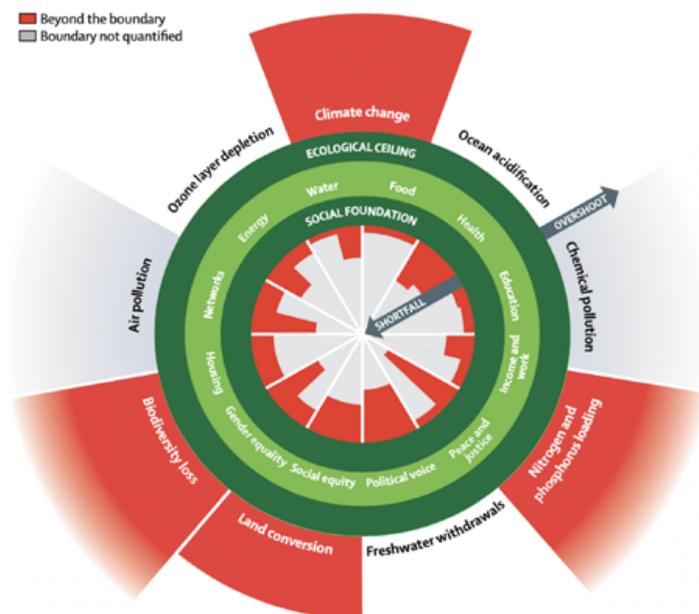


Figure 2¹⁴

7 Ibid.
 8 Raworth, K. (May 2017). “A doughnut for the Anthropocene: Humanity’s compass in the 21st century.” *The Lancet Planetary Health*, 1(2). doi:10.1016/s2542-5196(17)30028-1
 9 Raworth, K. “A Safe and Just Space for Humanity,” p. 4.
 10 “About Doughnut Economics,” Accessed 15 August 2021. <https://doughnuteconomics.org/about-doughnut-economics>.
 11 A Healthy Economy Should Be Designed to Thrive, Not Grow | Kate Raworth, 2018. <https://www.youtube.com/watch?v=Rhcrbcg8HBw>
 12 Raworth, K. “A Safe and Just Space for Humanity,” p. 6.
 13 Raworth, K. (May 2017). “A doughnut for the Anthropocene: Humanity’s compass in the 21st century.” *The Lancet Planetary Health*, 1(2). doi:10.1016/s2542-5196(17)30028-1
 14 Raworth, K. “A doughnut for the Anthropocene: Humanity’s compass in the 21st century,” p. 1.

Why Doughnut Economics?

“*What if we started economics not with its long-established theories, but with humanity’s long-term goals, and then sought out the economic thinking that would enable us to achieve them?*”

– Kate Raworth¹⁵

The doughnut model promises to transform our current extractive economies from ‘degenerative and divisive’ to ‘regenerative and distributive.’¹⁶ In a TED talk, Raworth emphasizes that 20th century economics will not save the economies of today. She stresses our need for fresh new ideas to combat the challenges of the 21st century, **“because we are the first generation to see this, and probably the last generation with a real chance of turning this story around.”**¹⁷ Our economies today are centred around the concept of growth, valued using gross domestic product (GDP). Since our planetary resources are finite, GDP cannot increase forever. The doughnut model places human and planetary well-being at its centre and sidelines the GDP measure.

With the increasing occurrence of natural disasters and numerous warnings from climate scientists, there is an urgent need to reframe economic thinking to centre around the question of global sustainability.¹⁸ Given the interconnectedness of global economies and systems, the model’s framework encourages thinking of the collective good regardless of the implementation level - local, provincial or national. In other words, the model pushes policymakers to think of their economies’ impacts on well-being beyond only their constituents.

“*The doughnut model is a powerful catalyst for the shift from a linear economy to a circular economy.*”¹⁹

15 “Doughnut Economics by Kate Raworth Review – Forget Growth, Think Survival,” (8 June 2017) <https://www.theguardian.com/books/2017/jun/08/doughnut-economics-by-kate-raworth-review>

16 Interview with Kate Raworth and Andrew Fanning, 14 June 2021.

17 A Healthy Economy Should Be Designed to Thrive, Not Grow | Kate Raworth, 2018. <https://www.youtube.com/watch?v=Rhcrbcg8HBw>

18 “The Undeniable Link between Weather Disasters and Climate Change,” 22 October 2020. <https://www.washingtonpost.com/climate-solutions/2020/10/22/climate-curious-disasters-climate-change/>

19 Sukharenko, Danielle. “Amsterdam’s Sweet Tooth for a Doughnut Model,” 26 August 2020. Accessed 24 June 2021. <https://sustainablereview.com/amsterdam-doughnut-model/>

The original doughnut model was designed with low-income and vulnerable cities in mind.²⁰ However, policymakers in large cities including Amsterdam, London and Philadelphia have taken steps to adopt the model. The engagement of high-income cities is a significant accomplishment, especially given that 50 per cent of global carbon emissions are generated by high-income countries (i.e. only 11 per cent of the world’s population).^{21 22}

From Theory to Practice

Evidence shows that it requires significant efforts to turn the theoretical doughnut model into “transformative action.”²³ It involves engaging with stakeholders on multiple levels of the economy to ensure their inclusion in the process. Customizing the model for one’s context can be extremely challenging, as it necessitates high levels of collaboration at many levels. Policymakers and stakeholders must answer one key question, also known as the 21st century question:

“*How can [location] be a home to thriving people, in a thriving place, while respecting the wellbeing of all people, and the health of the whole planet?*”²⁴



Figure 3²⁴

20 Interview with Kate Raworth and Andrew Fanning, 14 June 2021.

21 Raworth, K. “A Safe and Just Space for Humanity,” p. 5.

22 Interview with Kate Raworth and Andrew Fanning, 14 June 2021.

23 “Amsterdam’s Sweet Tooth for a Doughnut Model”

24 “The Amsterdam City Doughnut: A Tool for Transformative Action,” (March 2020): p. 5. <https://www.kateraworth.com/wp/wp-content/uploads/2020/04/20200406-AMS-portrait-EN-Single-page-web-420x210mm.pdf>

25 “The Amsterdam City Doughnut: A Tool for Transformative Action,” p. 5.

To answer this question thoroughly, the doughnut model offers four lenses - social, local, ecological and global, as depicted by **figure 3**.²⁶ Each lens will look at the city target compared to the current city snapshot, presenting a vision for the city and enabling changemakers to draw plans to bridge the gap. An accurate depiction of the city's portrait can be developed only by moving through this challenging process, engaging in complex conversations and collaborating with multiple stakeholders.

Through this process, the “cycle of co-creation” (**figure 4**), or a doughnut economy, is started. Of course, the real challenge begins after creating the location-specific doughnut portrait. Based on the insights and knowledge used to create the portrait, policymakers and stakeholders must take action via policies to make a meaningful impact in their communities and to begin the transformation into a doughnut economy. This is a lengthy, tiresome process that requires timely information and data, research, innovative mindsets and initiatives, coordination between hundreds of different organizations and groups, and patience most of all.

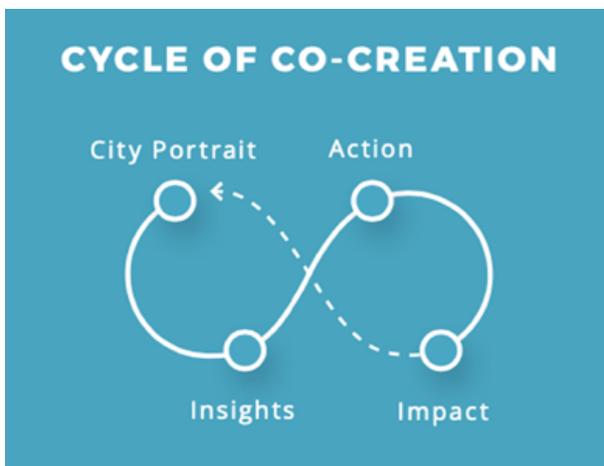


Figure 4²⁶

Components of Success and Failure

The interviewees had similar positions on the fundamental factors leading to the model's successful adoption or to its demise.

The first important factor for the model's success is the mindset of policymakers and local communities on sustainability. The Doughnut Economic Action Lab (DEAL) team²⁸ refrains from approaching policymakers with its model.²⁹ Rather, DEAL relies on the local policymakers approaching the DEAL team. By doing so, the policymakers signal that they have the right mindset to implement necessary change. For the model to be effective, the goal of sustainable development and the implementation of the doughnut model must appeal to the changemakers³⁰ and policymakers.

Secondly, interviewees stressed the importance of localization and local ownership of the model's implementation strategy. Local ownership is achieved through stakeholders'

26 "The Amsterdam City Doughnut: A Tool for Transformative Action," p. 3.

27 "The Amsterdam City Doughnut: A Tool for Transformative Action," p. 14.

28 Led by Raworth, the DEAL team aims "to help create 21st century economies that are regenerative and distributive by design, so that they can meet the needs of all people within the means of the living planet." For more information and resources see appendix: Doughnut Economic Action Lab (DEAL).

29 Interview with Kate Raworth and Andrew Fanning, 14 June 2021.

30 Changemakers include the communities, corporations, academic institutions, small businesses, startups and Government agencies. From "The Amsterdam City Doughnut: A Tool for Transformative Action," p.14.

engagement, awareness of ongoing initiatives, and initiative owners' involvement in the decision-making process.³¹ To increase the model's effectiveness, policymakers must customize the strategy to fit the local context and incorporate active initiatives in their strategy.

Failure of the doughnut model is likely with the reversal of the aforementioned factors. For instance, implementing the model will be unsuccessful if policymakers start strategizing and planning without recognizing the work already taking place. Failing to give local communities ownership of their economy's transformation is another cause for unsuccessful implementation. Additionally, new thinking cannot be forced easily onto policymakers who are not ready for change, or who do not have the capacity and willingness to think through a global social or sustainability lens.

According to one interview, adapting the model in Amsterdam was successful because there were over 50 organizations involved that were already deeply entrenched in social and climate movements. This scenario enabled a lot of effort to be put into collaboration and cooperation, thus ensuring that these organizations' contributions were integrated into the overall strategy. The Amsterdam team held stakeholder meetings, engaged in active listening sessions and openly shared the team's mission and vision.

Limitations of the Doughnut

One of the model's primary critiques discusses its failure to incorporate political contexts and circumstances. Some critics have asserted that political circumstances play a significant role in economic change. An important example of this is authoritarian regimes, where advocating for change in economic policy can be extremely challenging.³² Another critique is that the planetary boundary of the doughnut mentions neither renewable nor non-renewable natural resources, both critical components of the planet.³³

In a lengthy blog post, Branko Milanovic, one of the model's biggest critics, took issue with Raworth's frequent use of the word 'we' when explaining the model in her book, *Doughnut Economics*. He argued that people across the globe do not have similar objectives; therefore, 'we' does not realistically reflect the world in which we live.³⁴ In response, Raworth has noted that her book does in fact recognize "the pervasive role of power relations between social groups."³⁵ Yet, she strongly believes in a collective 'we.' She writes: "I very much believe there is a 'we' of 7.3 billion people: it is the 'we' of *Homo sapiens*, the most dominant species on the planet, whose collective activities have given rise to a new epoch on Earth, the Anthropocene."³⁶

It is also worth restating here that the DEAL team encourages policymakers to customize the doughnut to a local/city scale, thus capturing the location-specific 'we' reality.

31 Interview with Nicole Hagerman Miller, 24 June 2021.

32 "Doughnut Economics by Kate Raworth Review – Forget Growth, Think Survival" (8 June 2017) <https://www.theguardian.com/books/2017/jun/08/doughnut-economics-by-kate-raworth-review>

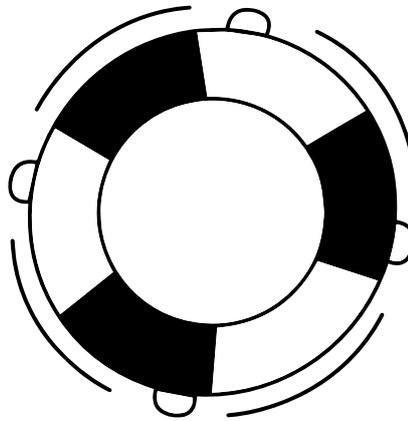
33 Bardi, Ugo. "Doughnut Economics: A Step Forward, but Not Far Enough," 30 June 2017. Accessed 11 July 2021. <https://www.resilience.org/stories/2017-06-30/doughnut-economics-a-step-forward-but-not-far-enough/>

34 Milanovic, Branko. "Book Review - Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist," 12 July 2018. Accessed 11 August 2021. <https://www.globalpolicyjournal.com/blog/12/07/2018/book-review-doughnut-economics-seven-ways-think-21st-century-economist>

35 Milanovic, Branko, and Kate Raworth. "Doughnut Economics: Seven Ways to Think like a 21st-Century Economist by Kate Raworth." *Brave New Europe*, 10 July 2018. <https://braveneweuropa.com/doughnut-economics-seven-ways-to-think-like-a-21st-century-economist-by-kate-raworth>

36 Ibid.

Finally, the foundations and theories of 'development' that the model relies on have also been questioned. Some have questioned whether the notions of development are essentially rooted in western ideologies³⁷ and thus may not resonate with the global South. Varying definitions of 'development' have significant implications on "the role of state, the concept of property, and ways of redistributing wealth."³⁸ Consequently, the manifestation of sustainable development varies depending on the geopolitical landscape and sensitivities. But since one of the doughnut model's strengths is encouraging its adaptation for contextual factors of local regions, this concern should not be a major drawback of its adoption.



37 Gudynas, Eduardo. "Is Doughnut Economics Too Western? Critique from a Latin American Environmentalist," 15 February 2012. Accessed 5 August 2021. <https://oxfamapps.org/fp2p/is-doughnut-economics-too-western-critique-from-a-latin-american-environmentalist/>

38 Ibid.

Intersection with Technology



Our research explored technology's role in the acceleration of the model's use across the globe. Does technology enable the doughnut model? If so, how? Should technology be placed in the centre of the model?

Through our research and interviews, it has become evident that technology is not the most important piece of the doughnut model of economics. Yet, technology remains indispensable to the model's growth and empowerment. The Internet has been a powerful force, as it enables the spread of the concept and connection between implementers around the world.

Building the doughnut model frameworks requires data, which thus stresses the significance of open data at local and global levels. To develop a localized doughnut framework, implementers need local and global data in order to build a current picture, set future targets and monitor progress over time. The data also informs policymakers of the global implications of their policies. For example, information about companies that use sweatshops is significant to cities that are refocusing their economic priorities towards a more integrated global vision.

The Global Component

Developing a global-lens perspective relies on technology to receive timely and relevant data. Whereas the social, ecological and economic lenses help identify a location's investments and consumption habits, the global lens helps to connect the people of the world. It educates policymakers on the positives and negatives of their location's consumption patterns and the consequences of supporting certain trades and investments. For example, as the world's largest importer of cocoa beans, Amsterdam is encouraged to think about the working conditions of labourers, which are generally described as exploitative and not meeting the minimum global standard.³⁹ The model encourages Amsterdam to explore its position in the global supply chain and thus its impact on the well-being of all people rather than a narrow focus of just its citizens. The necessary information and data for such an exercise would not be accessible without the Internet connecting these communities to one another.

“Who would expect in a portrait of the city of Amsterdam that you would include labour rights in west Africa? And that is the value of the tool.”

— Kate Raworth⁴⁰

39 “The Amsterdam City Doughnut: A Tool for Transformative Action,” p. 12.

40 Boffey, Daniel. “Amsterdam to Embrace ‘Doughnut’ Model to Mend Post-Coronavirus Economy.” 8 April 2020. Accessed 12 August 2021. <https://www.theguardian.com/world/2020/apr/08/amsterdam-doughnut-model-mend-post-coronavirus-economy>

The Ecological Component

According to the model, cities should be designed in ways that reflect the “generosity and resilience as the ecosystems in which they are located.”⁴¹ By customizing this way, the resulting ecosystem will be stronger and cities will be better able to endure “extremes of heat, rainfall, coastal erosion and drought.”⁴² As one interviewee explained, stakeholders need to design interventions that help shift local communities to perform more like the neighbouring ecosystem. Leveraging technologies can help measure the ecosystem services as well as the benefits of these services at the ecological and social levels. Cities are then better able to design nature-based solutions to strengthen the city’s resilience.

In the case of Amsterdam, it is surrounded by forests that help “regulate rainfall and cool local air temperatures through a process of evapotranspiration.”⁴³ In an effort for Amsterdam’s city infrastructure to reflect its neighbouring forests, the city is dedicated to building rooftop gardens and increasing its green infrastructure.⁴⁴ Amsterdam has at least 200 rooftop gardens⁴⁵ and its urban designers have constructed buildings that can house bird nests on the walls to better accommodate a more natural habitat.⁴⁶ In such ways, technologies can foster and create innovative solutions to build a city’s resilience while respecting its environment.



41 “The Amsterdam City Doughnut: A Tool for Transformative Action,” p. 8

42 Ibid.

43 “The Amsterdam City Doughnut: A Tool for Transformative Action,” p. 9.

44 Ibid.

45 Ibid.

46 “The Amsterdam City Doughnut: A Tool for Transformative Action,” p. 8.

Intersection with Humanitarian Crises



With doughnut economics becoming a possible trend of the future, one begins to ask how or if it could be applied in the humanitarian context. How does the model apply in a humanitarian disaster? Is it beneficial in the event of a sudden-onset disaster? Could it build resilience? Does it shift the way humanitarians are expected to respond to disasters?

Although the concept is still new and there is little information on how the model manifests during a humanitarian crisis, there are at least two reasons the humanitarian sector needs to familiarize itself with the model. First, it will shift various policies at a variety of levels. How a Government thinks about its economy and its effects on the world may impact how the Government supports (foreign) disasters or responds to its own. Second, humanitarians may need to think about how their actions will fit within such a model. For example, is flying in thousands of plastic bottles from abroad still the best or right solution? How would the model alter the way humanitarians deliver aid?

Low-Income and Vulnerable Countries

How would the model be applied? How effective would the model be in a vulnerable or low-income country? How can policymakers measure the impact of the doughnut model in this case? In the case of low connectivity or damaged infrastructure, how feasible would the model be?

In her interview, Kate Raworth mentioned that the model was designed with low-income countries in mind. Plus, all interviewees seemed confident that the doughnut model could support low-income countries including during a sudden-onset disaster. They cited their confidence in the doughnut looking for long-term investments rather than short-term wins. By supporting the right infrastructure for “long-term thriving” within the doughnut, the interviewees are certain that doughnut economics could build resilience in a humanitarian crisis.

In general, low-income and vulnerable countries fall short of their social foundation, or the inner boundary of the doughnut. Since poverty is the best predictor of civil instability,⁴⁷ an economic model that aims to strengthen the conditions necessary for the community to prosper seems like a wise choice for Governments. According to a paper by Raworth, “environmental stress can exacerbate poverty and vice versa.”⁴⁸ If the model can guarantee that social foundations and planetary boundaries are respected, ultimately leading to a reduction in poverty, it should help build resilience and strength against instability. What difference could this make to the realities of millions of people from around the world?

47 Sambanis, Nicholas. “Poverty and the Organization of Political Violence.” *Brookings Trade Forum* 2004, no. 1 (2004): 167. <https://doi.org/10.1353/btf.2005.0014>.

48 Raworth, K. “A Safe and Just Space for Humanity,” p. 5.

“Generally, economic growth is looked at from the monetary-financial level. And what Kate’s work does to that is bring light to the question of “at the expense of what?” - which is typically at the expense of people and planet resources that we will never see or know. Doughnut economics illuminates those externalities and helps redefine positive growth. It redefines economics for the benefit of all.”

– Nicole Hagerman Miller

By incorporating social, ecological, and both global perspectives and contexts, the doughnut model’s holistic strategy builds a foundation that enables policymakers and communities to rebuild in service of people’s needs and to the benefit of communities as a whole. In a sudden-onset disaster, this mindset could shift priorities and create a better understanding of the ramifications of certain policies and actions. And policymakers would be making decisions with a better and more holistic understanding of the impacts of those decisions.

Post-COVID-19 Economic Recovery

As a humanitarian crisis, the COVID-19 pandemic has affected millions of people around the world through deteriorating health, loss of employment, financial hardships, limited access to educational opportunities, and mental health strain or stress. The pandemic reinforced an awareness that public health is tightly related to our planet’s health, thus reinforcing why it is so important to start respecting our planetary boundary.⁴⁹ As one interviewee expressed, there is a conscious awakening that the conversations between social and environmental justice are one and the same.

What will the implications be of moving to a more digitally operated landscape? Some interviewees raised questions such as: What happens when people are working from home? What are the costs of the empty buildings? What does that mean for the communities, for the environment and for businesses? The digital impact due to the pandemic has massive ramifications, the extent of which is not yet fully understood.

49 Oni, Tolu. “COVID-19 Shows the Link between Human and Planetary Health.” World Economic Forum, 22 April 2020. <https://www.weforum.org/agenda/2020/04/on-earth-day-heres-what-covid-19-can-teach-us-about-improving-our-planetary-health/>

As a result of the pandemic, the world has experienced a rapid digital transformation. However, as one interviewee noted, this has negative effects such as higher psychological stress for many. With increases in such stress, one's surroundings can have a positive or negative effect. Green spaces have played a pivotal role, as they have a positive effect on people's mental health.⁵⁰ With the lockdowns and digitally focused work during the pandemic, people's need for accessible green spaces and nature within the city was strongly exemplified. By stressing the need to integrate the natural ecosystem in our economic planning for cities, the doughnut model again shows how it builds a more resilient community and world.⁵¹

Some cities, eager to recover and resume "normal" activities, are prepared to try new approaches to economic recovery. For example, Amsterdam adopted the doughnut model as the mechanism for post-COVID-19 economic recovery.⁵² Since the pandemic is ongoing at the time of writing, it is too early to observe the results of Amsterdam's COVID-19 economic recovery adoption.

“Technology can help to demonstrate what is possible with doughnut economics. But I don't think technology nor policy are the primary drivers of the doughnut model. I believe the key driver is the collective agreement from the community of the future they desire - ideally one where people and the planet are thriving. The doughnut demonstrates how all the initiatives are in support of the community's vision. For sure, policy and technology can help activate those initiatives and quicken the transformation. But it is the mindset shift, supported by funding and the capacity to activate, that makes all the difference.”

– Nicole Hagerman Miller

50 Burnett, Hannah, Jonathan Olsen, and Rich Mitchell. "Parks and Green Spaces Helped Us Get through Lockdown – but Not Everyone Has Equal Access," 21 July 2021. Accessed 11 July 2021. <https://theconversation.com/parks-and-green-spaces-helped-us-get-through-lockdown-but-not-everyone-has-equal-access-157308>

51 Interview with Nicole Hagerman Miller, 24 June 2021.

52 "Amsterdam to Embrace 'Doughnut' Model to Mend Post-Coronavirus Economy," 8 April 2020. <https://www.theguardian.com/world/2020/apr/08/amsterdam-doughnut-model-mend-post-coronavirus-economy>

What Now? Conclusion



Doughnut economics is growing organically around the world. There are many advantages to implementing this model, but there are also drawbacks and challenges that policymakers will have to navigate. The doughnut model redefines economic growth by offering a holistic perspective that includes the well-being of people across the globe and the health of our only home, planet Earth.

Part of our focus was trying to understand the importance of technology within the doughnut model, but it became clear that the most important aspect is the community's mindset towards and engagement in a more transformative and circular economy. Yet, technology clearly will play a strong enabling role. From quickly sharing implementation stories around the world, to exposing necessary data, to connecting community members, to building innovative solutions, technology will be a key to the transition.

As some economies begin to shift towards doughnut economics, we can forecast that there will likely be several implications for the humanitarian sector. Since the model focuses on long-term, nature-based solutions, we can assume that it will build resilience and therefore should ease the effects of a sudden-onset disaster and the related economic recovery.

The humanitarian sector needs to become familiar with the model and related contingencies. It will need to adjust how and what goods and services are delivered. It will need to adjust its framework on how it engages the community. It will need to consider local government policy and global implications of (in)action. It will need to know about and leverage local and global data. It will need to think and act locally and globally.

We set out with an initial theory that the doughnut model of economics may be having an immediate impact on disaster response and related technologies. However, it became clear that we are in the very early days of the model, and that change will be more about people's mindsets and Government policy. How the model develops and how it affects the humanitarian sector over time are very much unknown. Only time will tell.

Appendix



Doughnut Economic Action Lab (DEAL)

Kate Raworth leads the DEAL team, which aims “to help create 21st century economies that are regenerative and distributive by design, so that they can meet the needs of all people within the means of the living planet.” The DEAL team is a relatively small team of ten people.⁵³ When approached by policymakers, the DEAL team provides frameworks, workshops and a connection to a global network of changemakers. The team identifies local organizations that have the interdisciplinary skills needed to transform cities into doughnut economies and encourages cities to produce their own portrait frameworks, similar to figure 2. The team strongly believes in ensuring its tools and frameworks are open and available online to the public, enabled through the use of technology. The DEAL team is constantly evolving in the way it communicates and engages with people.⁵⁴ The network of changemakers consists of people sharing their adaptation experiences and the lessons learned. According to the team, individual changemakers are leaning into this network to learn about the model’s success stories and the efficient measures and policies used, as well as the methods that proved ineffective.

For more visit [DEAL](#), [Kate Raworth](#)

Resources

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