

EMPTY PLANET
The Shock of Global Population Decline
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Reviewed by
DR. KRIEG TIDEMANN
Assistant Professor of Economics,
College of Business,
Niagara University

In considering the dynamics and putative impacts of a depopulating world, *Empty Planet: The Shock of Global Population Decline* [Crown Publishing Group, New York, 2019] is simultaneously provocative and measured. Written for a general audience, authors Darrell Bricker and John Ibbitson weave a narrative that combines demographic trends with illuminating qualitative evidence taken from interviews conducted in cities spanning all six continents. A mixture of data analysis and qualitative narratives structures *Empty Planet* as a series of interconnected regional case studies, with the notable exceptions of the first two chapters surveying historical population growth and the Malthusian intellectual tradition.

Through these case studies, Bricker and Ibbitson articulate two primary claims about the future of global population. First, they assert that Malthusian concerns over global overpopulation buttressed by United Nations (UN) population estimates should be tempered. Rather than global population reaching a UN forecasted maximum of 11 billion people by 2050, they extend support for a relatively lower peak of 8 – 9 billion (United Nations 2019). Second, they offer conjectures over the importance of declining global population to socioeconomic phenomena integral to global welfare. These include the importance of declining population to macroeconomic performance, technological innovation, international relations, and the climate crisis.

One of the strongest elements of *Empty Planet* is seen in its ability to accessibly explain and critique the underlying assumptions that underpin existing UN population forecasts. Using the framework of Demographic Transition Theory, Bricker and Ibbitson illuminate how declining or negative population growth results from four distinct but reinforcing trends: urbanization, female empowerment, increased educational attainment, and the rising cost of investment in child rearing. Ultimately, a less agrarian society that recognizes the transformative returns to education and allows woman an equal voice in their fertility choices will elect for fewer children, especially as the real costs of child

*Email: ktidemann@niagara.edu

rearing are increasing. This trajectory underlying declining regional and global birthrates is not at the heart of the demographic debate waded into by Bricker and Ibbitson in *Empty Planet*. Rather, they serve as proponents for an alternative population forecast constructed by demographers affiliated with the International Institute for Applied Systems Analysis' (IIASA) World Population Program.

The disagreement between the UN and IIASA forecasts centers on assumptions over the speed of birthrate reductions in the developing world (particularly in Asia and Africa). Underlying this disagreement is the assertion that globalization and societal change will lead the current developing world to undertake a transformation to below replacement fertility rates at a pace faster than past transitions in developed countries (Lutz, Butz, and Samir 2014; Lutz et al., 2018). Bricker and Ibbitson's contribution centers on presenting qualitative interviews from women and families in nine countries that anecdotally demonstrate a global convergence of opinion in favor of smaller families. To some extent, time since publication has offered evidence consistent with *Empty Planet*, with the UN revising downwards its population forecasts in 2019 (United Nations 2019). Yet, for two reasons, one should remain cautious in adopting wholesale the book's Conclusions. First, the narrative of *Empty Planet* focuses on a high convergence rate calibration of the IIASA model that differs from the preferred specification of the IIASA demographers themselves. Additionally, given the importance of Africa in global population forecasts, evidence still suggests that birthrates in African developing societies remain consistently above comparable states (Kebede, Goujon, and Lutz 2019; Bongaarts 2017).

While the demographic claims made in *Empty Planet* elevate an alternative yet hypothetically plausible perspective that current forecasts overstate the potential trajectory of global population growth, it is the second set of claims hypothesizing the impact of a shrinking world that are arguably more portentous. The importance of transitioning to a world of population decline centers on its economic, political, and ecological impacts. While the authors do share provisional ruminations over the effects of declining population, the discussion of these consequences by Bricker and Ibbitson is speculative and varies in its persuasiveness.

Empty Planet's predictions for a declining population future appear most conceivable in its discussion on the implications for statecraft and geopolitics. The book clearly identifies the challenges and opportunities facing different polities around the globe in adapting to slowing population growth. Developing states that experience persistent birth rates above replacement, like India and Nigeria, are presumed to rise in global economic and political stature by virtue of their rising populations and productive capacities (Hawksworth, Audino, and Clarry 2017). In contrast, states with growing imbalances in their age-population pyramids face a future defined by diminished geopolitical influence and rising fiscal demands to care for their elderly citizenry. These states, developed or developing, still face opportunities to overcome internal demographic decline through immigration. Yet, as the authors discuss using case studies set in Europe and East Asia, the prospect of immigration and its evolutionary implications for national identity are frequently too unpalatable to the demotic whims of many non-immigrant societies. Their

claims are measured and may offer perspicacious admonitions to perspectives regarding the trajectory of states disproportionately impacted by population decline such as China, whose aspirations may be hindered by rapid population contraction beginning around 2031 (Wang 2016). Nonetheless, their geopolitical assertions are less prognostications than observations about the demographic reality already confronted by societies with below replacement population growth.

In contrast, other projected implications enumerated in *Empty Planet* do represent predictions for a future shrinking world. Bricker and Ibbitson forecast a future of stagnant or declining economic growth amid reduced consumer demand for goods. Reinforcing the economic torpidity of a shrinking global customer pool, an aging world is also understood by the authors to be less innovative and dynamic. Nonetheless, they do acknowledge that a shrinking world does not only portend a series of pallid consequences. They highlight the egalitarian triumph of the rising gender equality underpinning diminished birthrates and offer sanguine recognition of depopulation's perceived benefits in confronting the ecological catastrophe of climate change. While these assertions appear persuasive within the contextual framework and engaging rhetorical structure crafted by Bricker and Ibbitson, their propositions falter on three principle dimensions.

First, their assertions may overstate the social and economic costs of a depopulating world. *Empty Planet* portrays a future of slow economic growth and development as coterminous with falling living standards and diminished prosperity. This portrayal of a diminished economic future does not adequately transmit the predictions of economic models that interrogate the likely future of declines in global population. For instance, recent work incorporating negative population growth into endogenous or semi-endogenous growth models finds that declining population is meaningful for economic development (Jones 2020, Sasaki and Hoshida 2017). However, its importance is in constraining the potential value of per capita incomes compared to the traditional result of exponential growth with an expanding population. From this vantage point, the world portrayed by *Empty Planet* certainly would represent a decrease in potential per capita income, but this loss would be hypothetical to that unrealized counterfactual. Humanity's lived experience would be marked by global convergence to a steady state per capita income, presumably above that currently enjoyed by those in the developing world. If the examples of Japan, South Korea, and other Western European states offer a preview of this theoretical result, as societies already experiencing a depopulated present, it is not self-evident that this is a lamentable future. Future societies may struggle with the psychological costs of lost economic dynamism and diminished ambitions over the promise of the future. However, this is a claim about the rate of evolution for humanity's material welfare rather than the actual level of per capita income itself.

Second, their arguments would benefit from elaborating on the mechanics underlying their predictions. While Bricker and Ibbitson justify *Empty Planet's* advocacy for the IASA forecast by championing the plausibility of birthrates in the developing world plummeting more rapidly than current UN projections, scant explication is granted for its claims on innovation and climate. Both cases are hamstrung by the book's understandable

focus on population totals rather than the equally relevant per capita contributions of these individuals. On technological progress, a society in 2050 or beyond that is both older and smaller in membership may be less innovative. It could also be more innovative given that rising levels of educational attainment will diminish global education inequality, unlocking the potential for many to whom such opportunities remain presently unattainable (Galor and Weil 2000). It would have been useful for the authors to address this ambiguity by at least briefly explaining why declining or negative population growth implies a less inventive future. This is particularly the case given stagnant levels of total factor productivity growth in our contemporaneous age of rapidly expanding global population (Cardarelli and Lusinyan 2015, Porter and Stern 2001). Existing research also implies no significant relationship between an aging society and innovation (Acemoglu and Restrepo 2017). A similar paucity of detail also exists for the purported climate benefits of the population shock. One may readily accept the author's determination that a decline in population will reduce global emissions. However, this remains true to the extent that a rising global middle class does not follow the historical emissions patterns of their counterparts in much of the developed world (Satterthwaite 2009).

Finally, their discussion may benefit from a clearer delineation of how these phenomena will temporally develop through the remainder of the 21st Century. This is primarily relevant to their invocation of the climate benefits posed by shrinking or negative population growth. Even if a less populated Earth implies a planet with reduced per capita carbon and pollutant emissions, the timing of this transition is of manifest importance. Per the scientific consensus over the need for rapid action to avoid irreversible damage, it is critical to clearly delineate when the benefits of depopulation occur (Masson-Delmotte et al., 2018). It is this dimension where the book's primary thesis of reaching a period of depopulation faster than expected is most meaningful. Arriving at the global population peak earlier and with a lower count of total inhabitants than currently projected would magnify the climate benefits of declining population (McBain et al., 2017). However, Bricker and Ibbitson only offer cursory acknowledgements to this implication. Their arguments would benefit from elaborating on this point, such as devoting a standalone chapter that considers the differential climate impacts implied by either the UN or IIASA forecasts.

Overall, *Empty Planet* remains an engaging depiction of a phenomena with manifest importance for global development. At its best, Bricker and Ibbitson's qualitative interviews ground the implications of declining population growth in the lived experiences and voices of those directly impacted. Nonetheless, supposing this testimony piques curiosity over the defining features of living in a depopulated future, *Empty Planet* often elides opportunities to articulate the world historical consequences of the demographic transition motivating their work.

References

- Acemoglu, Daron, and Pascual Restrepo.** 2017. "Secular stagnation? The effect of aging on economic growth in the age of automation." *American Economic Review* 107, no. 5: 174-79.
- Bongaarts, John.** 2017. "Africa's unique fertility transition." *Population and Development Review* 43: 39-58.
- Cardarelli, Roberto, and Lusine Lusinyan.** 2015. *US total factor productivity slowdown: evidence from the US states*. International Monetary Fund Working Paper 15116. <https://www.imf.org/external/pubs/ft/wp/2015/wp15116.pdf>.
- Galor, Oded, and David N. Weil.** 2000. "Population, technology, and growth: From Malthusian stagnation to the demographic transition and beyond." *American Economic Review* 90, no. 4: 806-828.
- Hawksworth, John, Hannah Audino, and Rob Clarry.** 2017. "The Long View: How Will the Global Economic Order Change by 2050." *PWC*. <https://www.pwc.com/gx/en/world-2050/assets/pwc-the-world-in-2050-full-report-feb-2017.pdf>.
- Jones, Charles I.** 2020. "The End of Economic Growth? Unintended Consequences of a Declining Population." National Bureau of Economic Research Working Paper W26651.
- Kebede, Endale, Anne Goujon, and Wolfgang Lutz.** 2019. "Stalls in Africa's fertility decline partly result from disruptions in female education." *Proceedings of the National Academy of Sciences* 116, no. 8: 2891-2896.
- Lutz, Wolfgang, William P. Butz, and KC Samir, eds.** 2014. *World Population and Human Capital in the Twenty-First Century*. Oxford: Oxford University Press.
- Lutz, Wolfgang, Anne Goujon, KC Samir, Marcin Stonawski, and Nikolaos Stilianakis, eds.** *Demographic and human capital scenarios for the 21st century: 2018 assessment for 201 countries*. Luxembourg: Publications Office of the European Union. 2018.
- Masson-Delmotte, T. W. V., P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P. R. Shukla, A. Pirani et al.,** 2018. "Global warming of 1.5 C.: An IPCC special report on the impacts of global warming of 1.5 C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global." *World Meteorological Organization, Geneva*.
- McBain, Bonnie, Manfred Lenzen, Mathis Wackernagel, and Glenn Albrecht.** 2017. "How long can global ecological overshoot last?." *Global and Planetary Change* 155: 13-19.
- Porter, Michael E., and Scott Stern.** 2001 "National Innovative Capacity" *Global Competitiveness Report* 2002: 102-118. https://www.hbs.edu/faculty/Publication%20Files/Innov_9211_610334c1-4b37-497d-a51a-ce18bbcf435.pdf
- Sasaki, Hiroaki, and Keisuke Hoshida.** 2017. "The effects of negative population growth: an analysis using a semi-endogenous R&D growth model." *Macroeconomic Dynamics* 21, no. 7: 1545-1560.
- Satterthwaite, David.** 2009. "The implications of population growth and urbanization for climate change." *Environment and Urbanization* 21, no. 2: 545-567.
- United Nations, Department of Economic and Social Affairs, Population Division.** 2019. "World Population Prospects 2019: Highlights." https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf.
- Wang, Feng.** 2016. "China's Population Destiny: The Looming Crisis." Brookings Institution. <https://www.brookings.edu/articles/chinas-population-destiny-the-looming-crisis/>