

**THE
AGE
OF
DECAY**

**HOW AGING AND SHRINKING
POPULATIONS COULD USHER IN
THE DECLINE OF CIVILIZATION**

SHAMIL ISMAIL


Quickfox

What others say about the book

“Peeling back the layers of life in a rapidly depopulating world, the unique writing style reveals a complexity that catapults you into a future scenario that cannot be ignored.”

—**Dr Pali Lehohla, Head of Statistics South Africa (2000–2017) and Chair of the UN Statistics Commission(2008-2009)**

* * *

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—**Darrell Bricker, co-author of *Empty Planet: The Shock of Global Population Decline***

* * *

“Most countries’ declining birth (fertility) rates are now well below the sustainability level, with several adverse economic implications. In this tautly written and well-researched book, Shamil Ismail focuses on whether there will remain enough essential workers to maintain our urban infrastructure, or whether the lonely old (with little family support) will be living in crumbling dwellings. Malthus must be turning in his grave!”

—**Professor Charles Goodhart, London School of Economics; co-author of *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival***

* * *

“The lockdowns in our economies were perhaps the only times in our lives that we truly appreciated our dependence on the workers we rarely notice. Shamil Ismail’s welcome focus on this critical and inelastic portion of the workforce—essential workers—requires a refinement in the definition of the dependency ratio. If an increasing portion of a shrinking workforce is required to look after the elderly and another rising share to maintain Ismail’s focus—essential work—the effective labour force available to generate economic growth as we know it just got smaller.”

—Manoj Pradhan, *Talking Heads Macroeconomics*; co-author of *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*

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To Echi, Ansaar, Imraan and Sakeena

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INTRODUCTION



On 15 November 2022, the global population passed the eight billion mark. The milestone was reached without much fanfare and elicited only minor news coverage. The world was too preoccupied with more pressing current news such as the war in Ukraine and surging inflation. Yet, it had taken a mere eleven years to add a billion people to the seven billion on the planet in 2011, and less than fifty years for the population to double from the four billion alive in 1974. As the growth rate of the human population exploded, we became more aware of the impact of human activity on the environment. More people need more things—food, clothing, consumables and assets—which require an ever-expanding industrial base to produce. The effects that these escalating activities may have on climate change are becoming evident. Summer heat waves drag on longer with new record temperatures, storms are more intense, and floods have become more devastating. Some may be justifiably concerned that this rate of human population growth cannot be sustained.

However, in recent decades a long-term trend has gathered pace that not only renders such concerns unnecessary, but could also dramatically change our societies and our quality of life. Reproduction, one of the most basic of human functions, is on the wane. Around the world, birth rates have declined as populations transitioned from large families in rural settings, to smaller families in urban areas. The

trend itself is not new—it started more than a century ago, in the late 1800s. Initially, though, this development proved to be positive. With fewer children, more of the family’s resources could be allocated to each child and, over time, standards of living improved. But in many developed countries, the fertility rate (that is, the average number of children born to a female) has now fallen well below the replacement rate, which is the rate required to maintain a population. We have not yet seen the effects of this too-low fertility rate in declining global population, mostly because life expectancy has increased (which means there are more older people who can offset the decline in the number of young people). At a country level, immigration has propped up the ranks of shrinking domestic labor markets. However, a handful of countries are already experiencing a decline in their total population—in 2021, Italy’s population fell by 253,000 and Japan’s by 726,000, while China’s population dropped by 850,000 in 2022.

A decline in the total population may not be a concern for most people. Many may think that a smaller population would reduce the strain on the environment. Imagine if we could gently transition towards a more ecologically sustainable population level—the outcome could be quite beneficial. But this is, unfortunately, not that simple. Such a transition will be incredibly challenging and will fundamentally disrupt our current way of life because we have built systems and infrastructure that cannot scale down commensurately with our population decline.

Like most people, I was alarmed by the disruptions caused in the early stages of the COVID-19 pandemic in 2020—supermarkets running low on stock as supply chains faltered, or chronic patients unable to get routine medical check-ups—the pandemic showed how vulnerable our modern societies are to systems breakdowns, especially when they are caused by a shortage of essential workers. This made me wonder—is there a minimum level of essential workers needed to keep a society functioning? How would the trend of declining populations square up against this minimum essential

worker requirement? What would happen if we passed the tipping point when there are not enough essential workers to deliver the basic services we have become accustomed to?

This book explores what would happen when declining populations result in countries reaching a tipping point where they have too few essential workers to keep their societies functioning optimally. Labor shortages, which are already evident in some developed countries, will worsen as more countries scramble to fill the ranks of their essential workforce. To make matters worse, the future generations that will have to deal with these challenges may be ill-prepared, given the current path of social development in developed countries, as this book will show. There are several other implications that can only be appreciated once we evaluate the impact on the most primary level—the effect it will have on our daily lives and activities.

Issues at the top of our minds now, such as over-consumption, pollution and environmental sustainability, will fade in significance as we have to deal with new challenges such as a lack of consumption and declining living standards. While we slate over-consumption, the modern economy has evolved to be dependent on growth—growth in sales and profits means more products and services must be provided by a growing workforce and sold to an expanding customer base. When the feedstock of such growth—the number of people—starts to diminish, consumption will naturally decline, and shrinking consumer markets will decimate economies.

The phenomenal progress and technological advancement that we have achieved over the past few centuries may make us overconfident in our ability to deal with the challenges that lie ahead. We expect that solutions will be provided by technological advances such as artificial intelligence and robotics, but this may not be the panacea we hope for. Most importantly, though, past achievements that improved the quality of our lives—notably the complex infrastructure and systems that support our societies—will come undone if there are not enough essential workers to maintain it.

With hindsight, we will come to realize that we peaked as a civilization between 1990 and 2020. It was as if the COVID-19 pandemic sounded the bell to the end of an era—a time when life was generally good and things were working fine. But now we will start to traverse the slippery slope downward. When are we likely to see the first major signs of this new reality? Which countries will be first impacted, and by when? What can we expect the world to look like in the decades to come? And what will this mean for the future of our children and our grandchildren? This book attempts to answer these intriguing questions and will, hopefully, allow us to prepare for the incredible transformation that lies ahead.

* * *

CHAPTER 1

WAKING UP TO A HARSH REALITY



As usual, Eva woke up at 5am. There was no particular reason for her to wake up so early, but having retired only a year ago at the age of 75, the habit is difficult to break. She ambles sleepily to the kitchen to prepare a cup of tea. The cat is still fast asleep in the corner, oblivious to any of the existential concerns that agitate people on a day-to-day basis.

As Eva waits for the water to boil, she stares out of the window at the surrounding cityscape. The previously gleaming buildings have lost their luster in the moonlight. But even in the harsh light of day, they are not their former selves. Years of neglect and being left vacant have caused many to be almost derelict. The vacancies, in turn, decimated the property market—who would want to buy a residence in a building or a suburb where half of the homes are abandoned?

She turns her head to the ceiling. The water is still dripping but it seems to be quicker now. The apartment above hers is vacant. No one has lived there since Mr Alpert passed on five years ago. Last week, a pipe burst in that apartment, but none of the residents of the building wanted to contribute to repairing it. They say it is not their

responsibility, and as they are not affected by it, they just ignore it. Eva tried to call a plumber, but their rates are exorbitant. The shortage of labor has caused wages to skyrocket. Eva lives on a fixed pension and barely manages as it is. Instead, she does the next best thing and empties the bucket under the drip when it fills.

The kettle whistles as the water reaches boiling point. Eva slowly pours a cup, savoring the fragrance wafting up from her teacup. Shuffling to her living room, she contemplates how the disrepair in her apartment building simply mirrors that of the rest of the city. The same neglect can be seen in the city's infrastructure. Roads are crumbling and water leaks run for days or weeks before being repaired. Maintenance crews are understaffed and lower tax revenues make basic maintenance a luxury these days. Signs of decay are everywhere...

Throughout our history, we have almost always had growth, progress and development. Sometimes growth slowed, sometimes it paused and, occasionally, it contracted. But in the fullness of time, we have, invariably, always progressed toward better living conditions. From the Stone Age to the Bronze Age and into the Iron Age, extending into the Renaissance, and then the Industrial Revolution—each era provided us with technological advances that have improved our quality of life. Driven by the desire to innovate and improve our conditions, humans have succeeded in molding our environment for our convenience. We have flattened forests for farmlands, built highways to speed up transport, and consumed fossil fuels voraciously to drive our civilization forward. Today, we find ourselves in the Information Age, where we harness the power of information technology in remarkable ways to advance civilization along a new developmental path.

But this could be the last stage of growth for us. Several trends are coalescing that compromise this growth, ushering in a new era that will be characterized by continuous contraction and decline. The

change will not be brought about by any external threat—it is driven by our choices and changes in preferences. The change will not come about suddenly. It is already creeping up on us slowly, being hardly noticeable at first. It will steadily gain pace and its consequences will snowball as it progresses. The Age of Decay has already commenced.

The main cause of the impending transition is the rapid decline of fertility rates around the world. In the 1970s, when the global population passed the four billion mark, there was a generally held view that the global population was exploding and that Earth would not be able to sustain such an escalation in numbers. The book *The Population Bomb*¹, published in 1968, became a bestseller with sensational predictions that hundreds of millions of people could starve to death by the 1970s. A report published in 1972 by the Club of Rome titled *The Limits to Growth*² concluded that if growth trends in the world population, together with industrialization, pollution, food production problems, and resource depletion continued unchanged, then the limits to growth on the planet would be reached at some point within the next 100 years. The report predicted that this would result in a sudden and uncontrollable decline in both population and industrial capacity. These alarming scenarios echoed the 18th century Malthusian theory, which held that the rapid rise in population would result in mass starvation in some parts of the world, leading, ultimately, to economic decline. Fortunately, these apocalyptic scenarios did not come to pass. Instead, more and more countries will come to experience declining populations in the decades ahead, not by starvation or due to a lack of resources—rather, through the choices and circumstances of individuals choosing to have fewer or no children at all.

Almost as soon as *The Population Bomb* and *The Limits to Growth* were published, the rate of population growth started to slow. Annual global population growth peaked at 2.1% in 1970, but had eased to 1.8% by 1980. By the year 2000, it was at 1.3%, and two decades later it had decreased to 1.1%. The corresponding demographic data have

shown a precipitous decline in fertility rates, especially in developed countries where women have been exposed to more educational and career opportunities, which competed with child-rearing as a defining purpose in life. The latest United Nations forecasts show that the world population is not on a continuous upward trajectory, and definitely not heading towards unsustainable levels of population. Instead, the growth trend may taper off in the next few decades, and then start to reverse.

While the forecasts show the global population only peaking several decades from now, and then decline by the end of the century, the global data mask significant variations in population trends between countries and regions. Low fertility rates in some regions are offset by higher rates elsewhere. Viewed at the level of individual countries, though, the impact of declines in population will be evident in a few countries within the next decade. From there, the situation will quickly worsen, initiating a trend that will be difficult, if not impossible, to reverse. The handful of countries that will initially experience these challenges may find them relatively easy to deal with, but a cascading effect will be set in motion when several countries grapple with similar labor and consumer shortages.

Indeed, the generations to come will face some incredible challenges, unlike anything we have experienced in modern history. But their challenge won't be unique. After all, ancient civilizations have fallen, including the empires of the Romans, Mayans, Byzantines and Sumerians. These empires fell for a variety of reasons—be it battle losses, civil strife, and the splintering of the populace into smaller factions. The difference this time around is that our decline is by choice. We choose to thin out our numbers voluntarily, and the consequences will be far-reaching.

Can we avoid this future? The forecasts and predictions in this book may seem grim, but there are opportunities too. The most exciting potential development is that the 22nd century could become the “African Century”. Unlike most of the rest of the world, many African

countries will still boast fertility rates well above the replacement rate for the next few decades. The continent could therefore become the primary source of surplus labor supply, and would play a vital role in filling the growing labor gaps in the West. Therefore, it would be in the interest of the developed countries to invest in education and training on the African continent, as they could draw on this skills base when their own labor pool thins out.

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