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THE HUMAN COSTS OF A FAILING GLOBAL DEBT SYSTEM

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June 2023

Inaction in a Time of Strife: Mounting Costs

The number of countries in default is at its highest since the early 2000s.[1] Additionally, there is a record number of countries at risk of default.[2] These default events come with staggering costs, which are not limited to a monetary measure. They are strongly associated with declines in living standards, poverty increases, and a deterioration in health outcomes.[3] Worst of all, these impacts are often felt most strongly among vulnerable populations, such as children, the elderly, and the poor. Further, they appear to increase over time if the default is not cured.

Numerous countries including Ghana, Lebanon, Sri Lanka, and Zambia are facing these costs today. The decisions and events linked to these defaults cannot be undone and, undoubtedly, much ink will be spilled in dissecting them. But while those are now in the past, the hardships that follow default can still be attenuated. The first step in doing so is substantively moving forward on debt relief. Indeed, while many defaults have devastating social costs, some appear to be much less detrimental.

Among the factors determining the severity of costs associated with debt defaults, the swiftness of resolution appears to be an important determinant. This is intuitive to see: While a country is *in default*, improvements in living standards remain suppressed and these costs accumulate over time. For example, Uruguay's 2003 default took only one year to be resolved and the country saw growth return immediately. In the following years, Uruguay's recovery especially benefited the country's poorest. In contrast, the resolution of neighboring Argentina's default in 2001 took significantly longer—more than five years[4]—and the country saw

1 Farah-Yacoub, Graf von Luckner, and Reinhart (2023, forthcoming)

2 World Bank Group, World Development Report 2022: *Finance for an Equitable Recovery*, Chapter 5: "Managing Government Debt."

3 See *The Social Costs of Sovereign Default*, Farah-Yacoub, Graf von Luckner, Ramalho and Reinhart (2022), World Bank Policy Research Working Papers

4 Depending on how one decides to mark its end, it can be argued that this default lasted until November 2005 when the first and most substantial debt exchange with bondholders materialized; June 2010 when the second exchange took place; or 2014 when Argentina settled with a particularly "persistent" set of holdout creditors. The most often agreed-upon end point is the 2005 restructuring as it settled a substantial amount of the claims.

the poverty rate jump from 38 percent in October 2001 to 53 percent in May 2002.[5] Other costs continued to mount, albeit at a slower rate after that point.

It is worth noting that relative to historical durations both defaults can still be considered as swiftly resolved cases. Since the end of World War II, default spells have lasted eight years on average, with a median duration of five years.[6] The ad hoc nature of the restructuring procedure that follows a sovereign default means that every default is idiosyncratic. Yet, one rule stands out: **the longer it takes to resolve a default, the more costly it is to those least responsible for it.**

How do we measure the cost?

One of the largest studies of the effects of sovereign defaults is our 2022 paper, *The Social Costs of Sovereign Default*. In it, we applied a synthetic control method (SCM),[7] which works by finding a group of countries that were consistently similar to the defaulting country before the default. These similar countries are used to construct a counterfactual or synthetic control, which can then be used to estimate what would have happened had the country of interest not defaulted by comparing their outcomes. The method relies on the idea that a country may be approximated as a mix of other countries. So, if we considered making a synthetic Switzerland, it would probably be better approximated as a mix of France, Germany, and Italy than by any of these individually. The difference between the actual data and the data from the synthetic control can hence be read as the effect of the default.

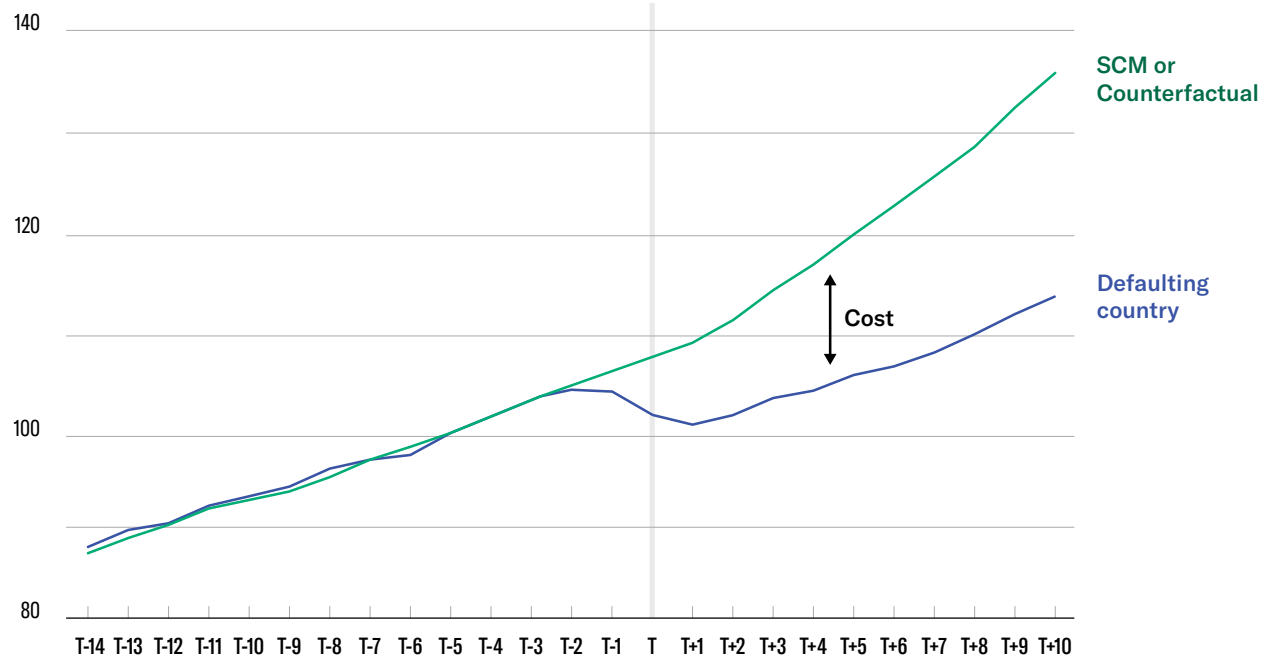
5 World Bank Group, World Development Report 2022: *Finance for an Equitable Recovery*, Chapter 5: "Managing Government Debt," Box 5.4.

6 External sovereign debt restructurings: Delay and Replay, Graf von Luckner et al. (2021)

7 *The Social Costs of Sovereign Default*, Farah-Yacoub, Graf von Luckner, Ramalho, and Reinhart (2022), World Bank Policy Research Working Papers

To make averages across synthetic control group studies comparable, the base year is set at four years before the default (T-4 from the default year T).[8] All results are relative to that base year. Figure 1A below shows the result of aggregating synthetic control method results from 131 defaults since 1900 and highlights the staggering economic collapses that typically follow a sovereign default.

Figure 1A. Real GDP per capita: Defaulters v. Counterfactuals



Source: *The Social Costs of Sovereign Default*, Farah-Yacoub, Graf von Luckner, Ramalho, and Reinhart (2022)

Note: Effect of default on real GDP per capita. Based on 131 defaults since 1900, where data exists and that are not filtered because of coinciding armed conflict.

8 For example, in the case of Argentina's 2001 default, the base year would be 1997.

The cumulative nature of a default's cost

A default impedes a government's access to international capital markets, hampers private domestic firms from accessing efficiently priced capital, and renders trade with counterparties abroad more expensive and even logistically challenging.[9] The longer this goes on, the higher the costs—particularly when compared to an alternative scenario in which all of these are accessible. The channels through which sovereign defaults and the accompanying financial and economic crises impose damage to a population are manifold. For example:

- **Defaults often coincide with high inflation rates.** These are often driven by central bank financing that erodes real incomes especially for wage earners. Further, the governments' financial hardship typically leaves little room to increase public servants' wages without relying on central bank financing that in turn accelerates inflation.
- **Sovereign defaults often coincide with banking crises, often called a "Doom Loop."** Most commonly, this happens because domestic banks lend savings deposited in the bank to the sovereign. Depositors thus find themselves unable to access their savings at the time they need them. In Lebanon, withdrawals from banks have been all but impossible since 2020. Greece was also marked by extreme withdrawal limits in 2015.
- **Defaults typically coincide with recessions and their increases in unemployment, which are often felt most immediately by low-wage earners and the informal sector.**[10] Even where social safety nets exist, they can be ineffective when needed most. It is often the case that the finances of the government agency that provides social insurance are often closely integrated with that of the government, leading to payment difficulties. Similarly, to the case of wages, inflation and often associated central bank financing may erode social security further. One can best see these effects in the often observed jump in poverty rates following default. For instance, Indonesia's 1998 default saw the share of the population living below the international poverty line of USD 2.1 a day from 48 percent to 63 percent.

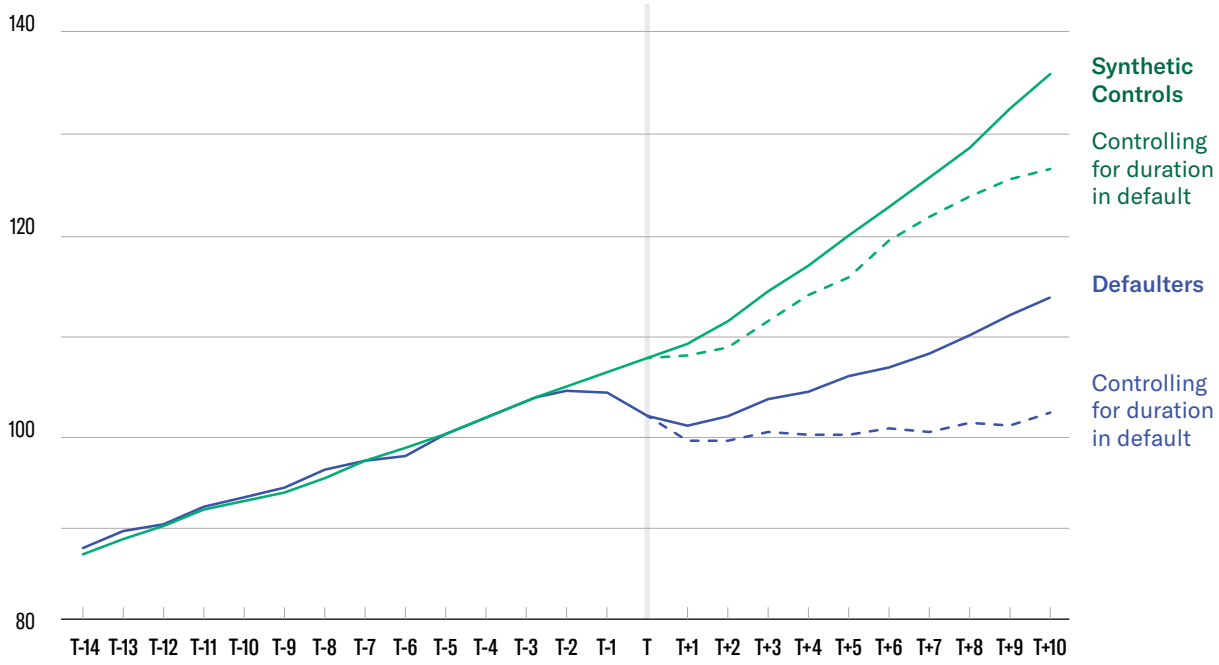
9 For example, letters of credit are a common fixture of international trade. When the sovereign is blocked from international capital markets, private firms in the domestic economy face higher costs to access this type of foreign credit.

10 See for example Humphrey, J., 1996. "Responses to Recession and Restructuring: Employment Trends in the Sao Paulo Metropolitan Region," 1979–87. *The Journal of Development Studies*, 33(1), pp. 40–62. for a case study on Brazil.

Remaining in default for longer exacerbates these effects. Using the findings from *The Social Costs of Sovereign Default* project's data on GDP per capita, infant mortality, and life expectancy, we find a regrettable positive correlation between a default's duration and its costs.[11] Defaults often come with persistent economic scarring, which can impose a drag on growth long past a default's cure. Anecdotal evidence of factors that lead to capital erosion—including emigration of highly qualified workers and postponed investment in infrastructure—reinforce this point.

For growth to return post default, debt crises must first be resolved. Whereas Figure 1A above suggests that growth returns three years post default, though at lower rates than in the counter factual, it is important to note that such recovery must not be taken for granted. When rather than in Figure 1A or in black below, we instead only consider countries that remain in default in a given year, we find a different picture: In absence of a default-spell ending debt restructuring, countries stagnate around their respective nadir, the bottom they hit in the years immediately post default.

Figure 1B. No Recovery Without Resolution

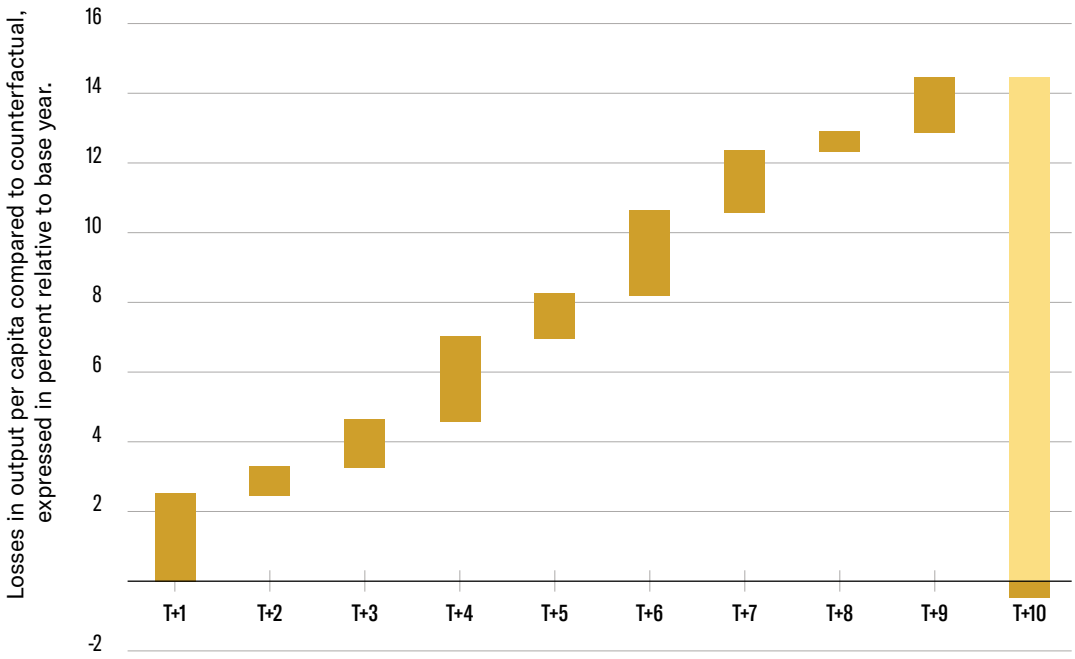


Source: *The Social Costs of Sovereign Default*, Farah-Yacoub, Graf von Luckner, Ramalho, and Reinhart (2022). Authors' calculations.

11 Whereas the cost estimates from the synthetic control method can be understood as causal effects, under a set of plausible assumptions (see Farah-Yacoub, Graf von Luckner and Reinhart [2022] for a detailed discussion), here we concentrate on these effects' correlation with the default duration, a relationship that is likely reciprocally endogenous. Note that in order to arrive at a coherent comparison, the statistics in this policy note compare the effect measured at 10 years post default, regardless of the duration of a default, unless we state otherwise.

As indicated in figure 1B, the cost accrues over time. We found that in the first year of default, the gap in real output per capita jumps by 2.5 percentage points (of the counterfactual's output per capita or relative to "what could have been"). This gap continues to grow by an average of 1.5 percentage points over the following eight years (through T+9) and finally begins to stabilize in the last year of the decade (T+10),[12] thus making the total gap over a decade roughly 14.5 percentage points wide. This means, hypothetically, that if a defaulting country shows an actual GDP per capita of about US$ 18,000 in year 10 after default, our results suggest this could have been about US$ 21,000 without the default.[13] Figure 2 below shows how these costs evolve over time. These calculations take into consideration the duration of defaults, therefore the costs at T+2 are calculated using only countries with defaults lasting two years, T+3 only using countries with defaults lasting three years, and so on.

Figure 2. The Evolution of Output Costs Over Time



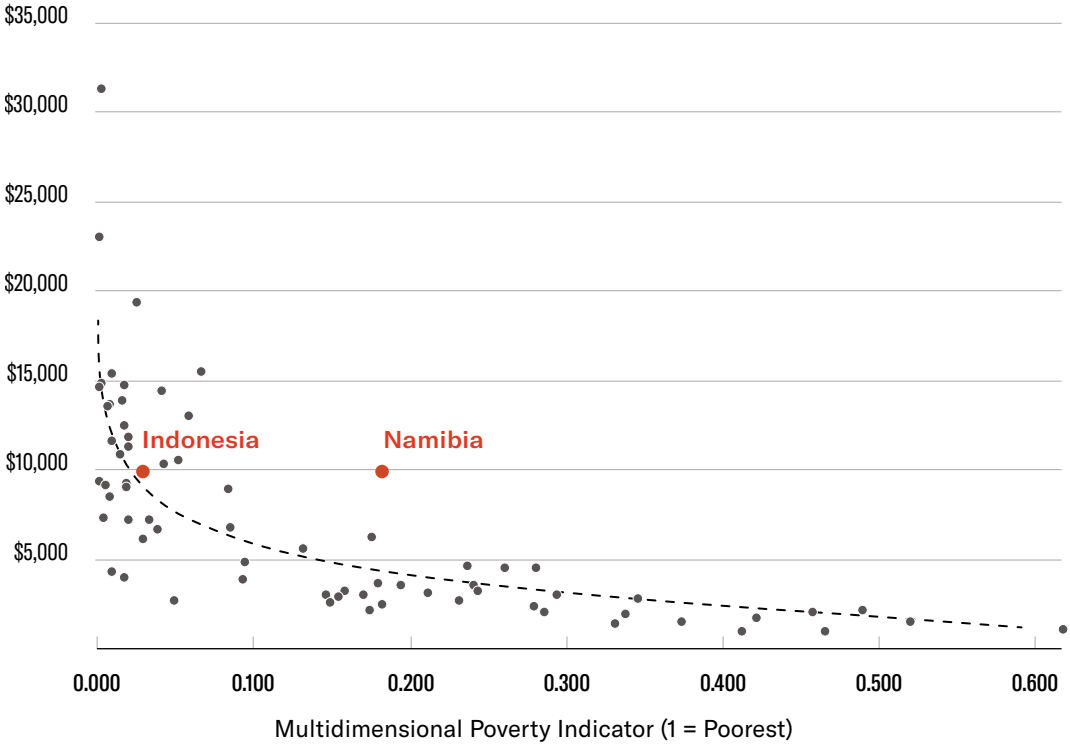
Source: *The Social Costs of Sovereign Default*, Farah-Yacoub, Graf von Luckner, Ramalho, and Reinhart (2022). Authors' calculations.

12 Notice the small negative marginal loss in Figure 2 at T+10. This is because some growth finally returns in countries that have been in default for a decade and the gap relative to the synthetic control stabilizes.

13 These are all rough estimations with rounding for explanatory purposes.

Despite being widely used, GDP remains an abstract measure. It says nothing about the distribution of resources inside an economy. After all, at least in theory, an economy might grow while the piece of the pie going to the poorest shrinks. In the last decade, the development literature has paid increasing attention to this question and devoted resources to measure poverty beyond its monetary dimension. One of the most comprehensive measures developed is the Oxford Poverty and Human Development Initiative's (OPHI) multidimensional poverty indicator (MDPI), which Figure 3 below plots against the country's respective GDP per capita in constant purchasing power parity (PPP) dollars for the appropriate year(s).[14] It shows that significant heterogeneity can prevail despite similar levels of income, even when adjusting for relative purchasing power across countries and time. Consider Namibia and Indonesia for the 2012-2013 period. Their PPP$ GDP per capita figures were similar, and probably statistically indistinguishable, at around PPP$ 9,900 and PPP$ 9,800 respectively. Yet, Namibia's multidimensional poverty index was about 9 times higher than Indonesia's (highlighted in red in Figure 3).

Figure 3. GDP per capita in PPP$ v. MDPI



Sources: Global Multidimensional Poverty Index (MPI) Databank 2022 developed by Ayush Patel using data by Alkire, Kanagaratnam, and Suppa (2022a and 2022b); IMF World Economic Outlook.

14 OPHI's MDPI is not produced on a time series basis. Here we draw on OPHI's 2018 MDPI for which the survey data used ranges between 2006-2016. While there may be some concerns over time variance and comparability, these are mitigated by the use of constant PPP dollars and the fact that the time period in question represents the great moderation for developing countries. The point remains: While there is a relationship between monetary poverty and multidimensional poverty, it is far from perfect.

Therefore, an analysis of the social costs of default must consider outcomes based on other welfare indicators, not just GDP. For instance, life expectancy, though globally correlated with income, also directly relies on access to health services and education. Similarly, infant mortality—the rate of newborn babies that do not live to see their first birthday—crucially relies on health care and education linked to maternal wellbeing.

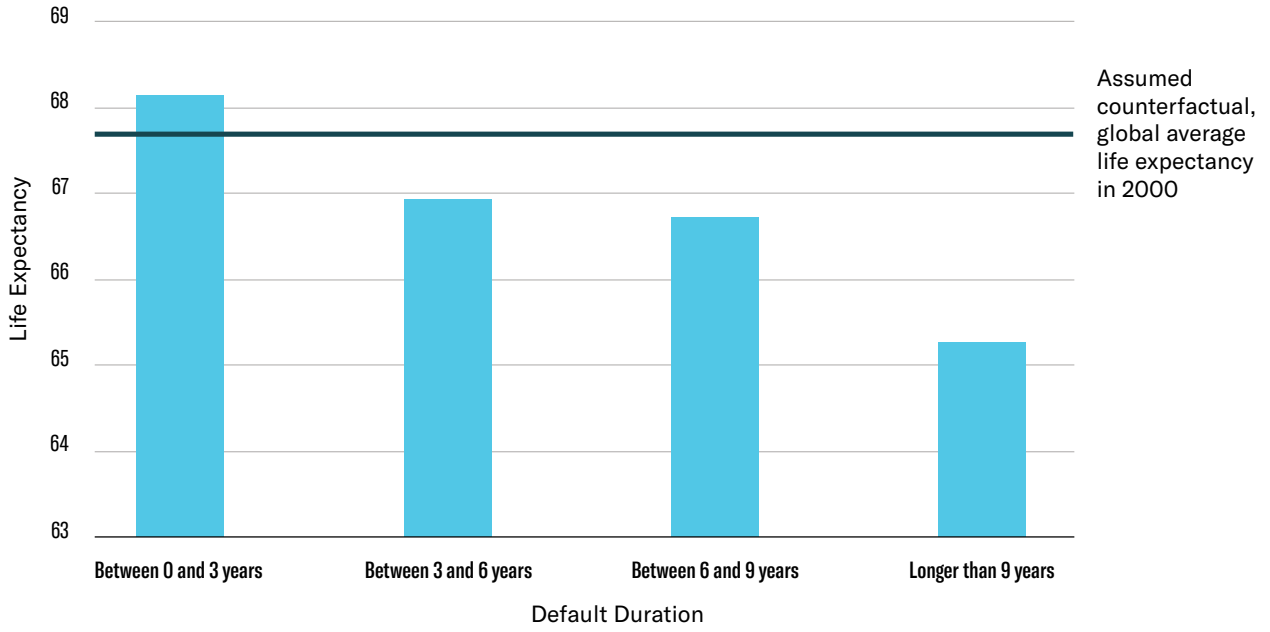
When sudden declines in real disposable income force poorer individuals to focus their limited resources on the most crucial expenditures, such as food and shelter, expenditure is quickly moved away from purchases that would increase the chance of a healthy life in the long run or investments such as prenatal care. And **whereas health and education services are at least in some countries provided at no cost by governments to those unable to afford them, these safety nets are more likely to fail in moments of need; for example, during the kind of crisis that coincides with a sovereign default.**

The data confirms this intuition. **On average, 10 years after default, life expectancy is 1.5 percentage points lower to how this figure could have improved in the absence of a default over the same period.** Using the world average life expectancy in the year 2000 (73.3 years), this equals 1 year, 2 months and 12 days of lifetime lost for each person on average. Examples help illustrate this relationship: Whereas in most countries life expectancy post default continues to increase, though slower than before, in extreme cases we see reversals: Prior to Zambia's first and up to 2020 last default during the 1980s global debt crisis, the average Zambian had an (already short) expected life span of 53 years. Ten years later the expected age at death had dropped to 45 years.[15] Of course, this does not mean that the lives of the elderly are the only ones being shortened. This change may be coming from people dying at younger ages and thus driving the average down.

15 The Zambian case also illustrates the usefulness of a synthetic control. Of course, other factors such as the spread of lethal diseases coincided with this period. But these would have affected Zambia's neighbors in a similar fashion. Through the synthetic control, we can isolate effects that are caused potentially by Zambia's inability to invest in preventive health-care measures/provide health care more broadly.

This cost does not come at once. As is illustrated in Figure 4 below, life expectancy in defaulting countries declines more when defaults last longer. **With every year that a default resolution is delayed, the population's health declines further and with it, life expectancy.** This is worrying given today's relatively high incidence of sovereign defaults. Zambia, for instance, is already approaching the third anniversary of its default despite the government's demonstrated willingness to satisfy its creditors' policy reform demands.

Figure 4. Correlation of Default Duration and Life Expectancy Outcomes



Note: Based on relative average effects by displayed ranges; illustrated assuming a stable homogeneous counterfactual equal to the world-average life expectancy in 2000 of 67.7 years. Source: World Bank; Authors' calculations.

The price infants pay stands out as one of the most disheartening findings in analyzing the data. On the back of the successful promotion of maternal health facilities, prenatal care, and public health more broadly, the world has seen a steady decline in infant mortality over the past 60 years. Yet, this trend has at times been disrupted in individual countries, when the provision of health care or availability of medication crucial for mothers and infants is suddenly disrupted. This divergence from the global trend can often follow a sovereign default—especially when the resolution is protracted. For instance, around the onset of its ongoing default, Venezuela saw the number of pregnant women at risk double over the course of 5 years due to a lack of timely prenatal care.[16] Further, **recent studies on**

16 Espejo De La Crisis Humanitaria Venezolana, Encovi (2017), https://www.proyectoencovi.com/libros

Mexico's debt crisis in the 1980s have shown that while for some parts of society, infant mortality kept declining during the crisis; the parents' income suddenly became a crucial determinant of a newborn's chance of survival.[17] Again, this highlights how the poorest are hit hardest by the consequences of default.

On average, **since 1960, countries that defaulted saw an increase of 10 percentage points (relative to their counterfactual and base year) in infant deaths** 10 years post default. Relative to Zambia's infant death rate in 2016 of 48.7 deaths per 1,000 births, this would mean for every 1,000 newborn children, five more children would die in 2030. Based on a crude calculation using Zambia's birth rates in 2016, **that translates to an additional 3,079 infant deaths per year by 2030.**

But the infant mortality gap of 10 percentage points discussed above does not consider different durations of default or, conversely, the swiftness of resolution. As with life expectancy, protracted default resolution correlates with an increasing number of additional infant deaths. For defaults resolved within three years, the gap is 2.2 percentage points. **For defaults lasting more than three years, the same gap rises to a staggering 11.4 percentage points.**

17 See Frank, R. and Finch, B.K., 2004. "Los Años de la Crisis:An Examination of Change in Differential Infant Mortality Risk within Mexico." *Social Science & Medicine*, 59(4), pp. 825-835; and also Bronfman, M., 1992. "Infant Mortality and Crisis in Mexico." *International Journal of Health Services,* 22(1), pp. 157-167.

Conclusions

The picture above makes clear that the need for coordinated and decisive action is urgent. Human and economic costs will continue to mount with each passing month for Ghana, Sri Lanka, Zambia, and other countries.

At the same time, another group of countries are in clear debt distress and likely to require assistance with debt restructuring even if they have not yet defaulted. The uncertainty around a procedure to restructure unsustainable debt will only add to the costs of defaults. As has been suggested in the literature, just like postponing crisis resolution, postponing defaults beyond the point of no return can further exacerbate the cost to both sovereigns and creditors.

The cost of longer durations of default must thereby not be misunderstood as a reason to push for "quick and dirty" solutions where default is resolved by postponing repayment without effectively reducing the debt overhang. Such solutions might work in the short term but will end up causing much greater costs to all parties involved. Decisively resolving sovereign defaults is not only beneficial to the borrower,[18] as repeated defaults increase the cumulative losses for creditors ex-post. A poorly crafted debt resolution merely kicks the can down the road, ultimately increasing the debt relief that will be needed. Additionally, the economic scarring discussed above along with the continued debt overhang and heightened risk of redefaulting stand in the way of recovery.

Indeed, the experience of the last substantial wave of defaults in the 1980s strongly suggests that when the can is kicked, we tend to see it again after a short walk later. This leads to incurring additional social costs. In fact, on average over the last century, defaults required two restructurings to reach debt sustainability. Perhaps it is wishful to think that this time can be different—that it can be better managed—but our understanding of these economic phenomena has come further since then. The least that is owed is a collective attempt to heed the call of what we presently know. If ignorance was ever an excuse, it hardly constitutes one now. The global community ought to keep in mind that inaction here does not merely result in some reduced monetary value, but in lives worsened, shortened, and in many cases hardly even started.

18 *External Sovereign Debt Restructurings: Delay and Replay*, Graf von Luckner, Clemens, et al. (2021); "Sovereign Bonds Since Waterloo," Meyer, J., Reinhart, C.M. and Trebesch, C. (2022), *The Quarterly Journal of Economics*, 137(3), pp.1615-1680.

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