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# On the Cost of Catastrophes: Are Recessions as Bad as Wars, Famines and Pogroms? The Numbers Tell a Surprising Story

José A. Tapia Granados<sup>1</sup>

# Introduction

John Weeks is an economist specializing in development economics and macroeconomic issues. He has taught for many years at the School of Oriental and African Studies in London, where he is Professor Emeritus. He has posted in his blog scathing critiques of the economic policy applied by the conservative-liberal government in the United Kingdom. In "A Brighter Economic Vision for the British Economy," he pointed out the collapse in investment as the key factor to be tackled in dealing with the depression of the British economy (Burke, Irvin, and Weeks 2011). To remedy the problem, Weeks and his co-authors proposed a quintessential Keynesian idea, a National Investment Bank. They suggested the bank could be formed by using the government's majority shareholdings in Lloyds-TSB and RBS, two major British banks that were bailed out in the 2008 financial crisis:

RBS could therefore simply be instructed to invest in those sectors prioritized by the government for an increase in investment, e.g. housing, transport, infrastructure and education. The jobs bonanza created by this investment would sharply increase taxation revenues and lower welfare payments. The consequent improvement in government finances could be used to pay down the deficit or to increase investment further, or some combination of the two.

In a blog post early in September 2011, Weeks commented on the cost of natural and unnatural catastrophes, where he maintained that to match "the devastation, suffering and dead-weight loss of the Great Depression of the 1930s and the recent Financial Crisis, we move into the league of wars, famines and pogroms."

The purpose of this note is to explain why an assertion like that is not only misleading but quite wrong. Furthermore, statements presenting economic downturns



<sup>&</sup>lt;sup>1</sup>jatapia@umich.edu.

as the unique or even the major problem of our "free enterprise system" exemplify a Keynesian view that glosses over major aspects of the exploitative and irrational character of our economic system.

#### Human Well-being, Expansions, and Recessions

First of all, equating recessions or depressions with wars, famines or pogroms is wrong, because while both are social catastrophes, wars, famines and pogroms also involve major loss of human life and the associated exacerbated physical and psychological suffering. In wars and pogroms, human suffering and death are a direct consequence of voluntary human actions—which adds moral perversity to the calamity. That is not what typically happens in recessions, depressions, or more generally, in the various economic crises that recurrently occur in our capitalist economy.

Of course, it would be absurd to deny that recessions cause a lot of suffering. In spite of mainstream economists like Robert Lucas, who deny the reality of involuntary unemployment,<sup>2</sup> the reality of recessions is that millions become involuntarily unemployed and poverty rates rise. According to estimates of the International Labor Organization, 34 million people lost their livelihoods in the global downturn between 2008 and 2009; in 2009 there were 212 million unemployed individuals in the world. Many studies show that beyond the loss of income that may or may not be partially compensated by unemployment insurance schemes, joblessness entails considerable distress and unhappiness (Winkelman and Winkelman 1998). During financial crises, which are common during recessions, personal savings may evaporate as consequence of bank failures (as happened just a few years ago in Argentina), and homes are often lost when mortgage payments go unpaid. To a large extent, all ills of economic downturns result from the fact that many businesses-mostly small firms but also mid-size enterprises and some big corporations-go bankrupt, which raises unemployment. During economic downturns, most businesses are subject to falling, or at least stagnant, demand for their products and the consequent drop in revenue. In order to avoid bankruptcy, firms cut costs, which often means laying off workers. The global economic downturn that began in 2007 is rife with stories of massive human suffering due to millions of people throughout the world having lost their livelihoods.

Human deaths, which in wars, famines, and pogroms can number in the hundreds, thousands, or millions, are not a characteristic of economic downturns, either in small recessions or even big depressions. In fact, mortality rates are higher even "into the league of wars"—during periods of economic expansion than they are

<sup>&</sup>lt;sup>2</sup>Lucas and other mainstream economists argue that the labor market, like all other markets, works efficiently; therefore, unemployment is always voluntary. In other words, anyone not working is unemployed because he or she chooses not to work.

during downturns. This fact is not obvious, and to explain it some demographic concepts are needed. They are explained in what follows.

# Mortality and Life Expectancy at Birth

Calculation of life expectancy at birth assumes that a group of individuals followed from birth to death lives year-to-year and dies at the age-specific rates of death that are prevailing in a society at a given time. An age-specific death rate, or age-specific mortality rate, is the observed proportion of people at a given age that dies in a given year. For instance, in 2008 in Sweden, there were 272 deaths out of 107,757 children below age one, resulting in an age-specific mortality rate at age zero of 272/107,757 = 0.0025 = 0.25 percent. Among 107,531 children of age 1, there were 24 deaths and therefore the age-specific mortality at age 1 was 24/107,531 =0.00022 = 0.022 percent. Similarly, among 1807 elderly Swedes aged 98, there were 662 deaths, so that mortality rate at age 98 was 662/1807  $\approx$  36 percent (all these are real data from the Human Mortality Database). These numbers reflect the fact that mortality rates are relatively high during the first year of life (particularly in poor countries and among people with low incomes or low levels of education), very low during childhood and adolescence, and then rise with age, getting closer to 100 percent as age increases. Using all the age-specific mortality rates observed in a particular year in a given population, we can calculate the average lifespan of a hypothetical sample of individuals that were exposed successively to all the agespecific rates of death. The resulting number is called life expectancy at birth—often abbreviated by demographers as  $e_0$ . According to United Nations figures, in 2009 life expectancy at birth was 83.0 years in Japan, 81.1 in Spain, 80.8 in Norway, 79.5 in Greece, 79.4 in the United States, 72.7 in Brazil, 62.9 in Togo, and 44.3 in Afghanistan. Using the age-specific mortality rates from a given age forward, we can also compute life expectancy at that age, say 40 or 60 (that is,  $e_{40}$  or  $e_{60}$ ). Though "longevity" is sometimes used as a synonym for life expectancy at birth, demographers dislike the term; for brevity "life expectancy" will be used here with the understanding that it always refers to  $e_0$ , that is, life expectancy *at birth*.

Social researchers have often used life expectancy to measure the level of health in a society. In fact, many consider it the best indicator of health in a society. Life expectancy is also an important index to consider in quantifying the degree of social wellbeing at a particular time in a given nation, region, state, province, or city. It yields more useful information than the decades-old and increasingly discredited consideration of income—proxied by GDP per capita. Furthermore, mortality-based measures in general and life expectancy in particular are increasingly used as major indicators of the general level of social wellbeing in a society. Life expectancy can also be used to compare health between social and demographic groups. It is almost always higher in females and in groups of higher income, education, or social class. According to U.S. Centers for Disease Control and Prevention (CDC) figures, life expectancy in 2007 was five years greater for both females compared with males (80.4 vs. 75.4) and whites compared with African Americans (78.4 vs. 73.6). Since the last decades of the past century, life expectancy in the United States has dropped below countries with similar or even lower GDP per capita (e.g., Japan, Greece, Sweden and France), a fact that is often highlighted as an indicator that something is not going well in the country that spends the most in the world on health care. Similarly, the dramatic drop in life expectancy due to a rapid rise in adult mortality rates that occurred in the countries of the old Soviet bloc after the centrally planned economy was dismantled in the early 1990s is often considered one of the most telling indicators of the heavy social cost of that transition (Cornia and Paniccià 2000; Stillman 2006). Rates of cardiovascular disease, suicides, homicides, alcohol abuse, and even a resurgence of infectious diseases all increased substantially at that time.

#### Life Expectancy, Mortality, and Economic Growth in Britain

Figure 1 shows British GDP and sex-specific life expectancy in England and Wales from 1890 to 1990. The graph illustrates the long-term improvement of the health of English and Welsh citizens, as measured by life expectancy; it nearly doubled for both males and females during the 100 years represented in the graph. Of course, since women tend to die less frequently than males at all ages, life expectancy for males is lower than life expectancy for females throughout the whole period. But for both males and females, the improvement was not a steady growth.



Figure 1. Life expectancy at birth (LEB), in years, for males and females in England and Wales, and British Gross Domestic Product (in tens of billions of 1990 International Geary-Khamis dollars), 1890–1990.

Source: LEB from Human Mortality Database, GDP from Maddison (2003).

Male life expectancy dropped in a dramatic fashion in the 1910s, during the years of World War I. The explanation is that between 1914 and 1918 close to 1 million British males died in the trenches in France and other fronts of the war. Since females in England and Wales were almost completely spared of the direct consequences of World War I, life expectancy continued increasing in the female population during the war years. However, female life expectancy significantly dropped in 1918. This was a consequence of the world flu pandemic, which some scholars consider an indirect consequence of the war (Ewald 1994). The flu pandemic that spread across the globe in 1918–1919, killing between 50 and 100 million people, affected mostly young adults of both genders. For males the consequences of the flu pandemic cannot be separated from the direct consequences of the war; male life expectancy dropped significantly between 1913 and 1918. The only significant drop in life expectancy for females was in 1918, with the other years during that period showing only minor oscillations.

During World War II something similar but not identical happened. Starting in 1939, life expectancy dropped sharply for males as a consequence of the war deaths. The trough in the curve of male life expectancy extends to the end of the war in 1945. In 1946, life expectancy for males started to rise again. Life expectancy dropped for females in England and Wales during the early years of World War II. The additional female deaths occurred because of German bombing of London and other British cities. But this produced a minor effect on female life expectancy, which soon started rising again.

In terms of years of life expectancy lost, the consequences of both World Wars are easily quantifiable. Male life expectancy was 51.7 years in 1913, immediately before World War I, and during the war plunged to 37.2 in 1917 and 33.4 in 1918. However, female life expectancy rose from 55.9 in 1913 to 57.2 in 1917, before nose-diving to 20.3 in 1918 due to the flu pandemic. Male life expectancy fell during World War II from 61.8 in 1939 to 55.7 in 1945, while female life expectancy climbed in the same period from 66.2 to 68.7. In brief, while females in England and Wales gained life expectancy during both wars, males lost at least 14.5 years of life expectancy (1913 to 1917, flu pandemic excluded) or as much as 31.4 years (1913 to 1918, flu pandemic included) in World War I. The impact of World War II was much lower, reducing male life expectancy by only 6.1 years.

Comparing life expectancy before and after the World Wars, we see a dramatic difference. After 1945 growth in life expectancy is steady, while there were major oscillations before 1914 (Figure 1). Specialists agree that the large oscillations of death rates during the 19<sup>th</sup> century were due to epidemics of infectious diseases, but since the world flu pandemic of 1918, there has not been another outbreak of that scale. For both males and females in England and Wales, life expectancy steadily rose from the end of World War II until the present without any major disruption.

Figure 1 also shows the growth of British GDP, which measures in money terms the output of the economy of the United Kingdom. In Britain, as in other countries, GDP has grown exponentially—that is, the slope of the curve gets closer and closer to the vertical. However, there are departures from the general trend. Both World Wars stimulated GDP growth. But immediately after World War I, starting in 1918, GDP decreased for several years; the same occurred at the end of World War II, when GDP started falling in 1944 and continued downward for four years. Though the Great Depression in the early 1930s was noted in Britain (Figure 1 shows the GDP drop in the early 1930s) and unemployment rose sharply in that period, it was a minor downturn compared with the big depressions in the U.K. after both World Wars (Capie and Wood 1997). Indeed, the GDP figures in the graph reveal that the economic contraction of the early 1930s was not very different in severity to the recessions of the early 1970s and early 1980s.

The comparison of the curves of life expectancy and GDP in Figure 1 does not reveal any obvious link between both variables. The periods of recession marked by troughs in the GDP curve do not seem to be associated with any special evolution of the life expectancy curves for males or females. Only epidemics and wars seem to have slowed progress in the health of the population in Britain between 1890 and 1990. However, a slightly more sophisticated statistical analysis reveals a relationship between life expectancy and GDP: both variables are inversely correlated when they are measured in terms of annual growth. The annual gain in life expectancy (both for males and for females) and the annual rate of economic growth correlate negatively (Table 1). That means that years of greater economic growth are years of smaller gain in life expectancy. In other words, the greater the economic growth in a particular year, the smaller the progress in health as measured by declines in mortality during that year.<sup>3</sup> The negative correlation between gain in life expectancy and GDP growth

	Sample 1891–1990		Subcomplo
	Full sample N=100	War years excluded <sup>a</sup> N = 88	1946 - 1990 N = 45
Males Females	$-0.47^{***}$ $-0.31^{***}$	$-0.53^{***}$ $-0.38^{***}$	$-0.47^{**}$ -0.17

Table 1. Correlations (Pearson coefficient) between the annual increase in life expectancy at birth in England and Wales and the annual growth of the British GDP in the period 1891–1990 and subsamples of that period.

<sup>a</sup> 1914–1918 and 1939–1945

\*\*\* Correlation statistically significant at a 99.9 percent level of confidence.

\*\* Correlation statistically significant at a 99 percent level of confidence.

<sup>&</sup>lt;sup>3</sup>Amartya Sen (2001) also noticed that decades of higher GDP growth in Britain were decades of smaller gain in life expectancy. However, he did not contribute much on possible explanations of that phenomenon.

is stronger for males. Because the negative correlation is statistically significant at very high levels of confidence for almost all subsamples, it is highly unlikely that this is just a chance finding. This shows that the health of the British population advanced faster in recession years rather than in years of economic booms.

#### Health in the 1920s and the 1930s in the United States

Though the 1920s started in the U.S. with a depression in which unemployment rates sharply increased and GDP growth was negative for two years (Figure 2), most of the decade was characterized by runaway economic growth. After all, it was to the 1920s that the label of "roaring" was first applied to a decade. The decade ended with the start of the Great Depression, which was followed by a recovery in the mid-1930s before the so-called Roosevelt recession in 1938. The evolution of mortality rates and life expectancy in the United States during the 1920s and the 1930s shows quite clearly that if we must put any of these periods "into the league of wars," it is not the Great Depression, but the prosperity of the 1920s. Let's see why this is the case.



Figure 2. Life expectancy at birth (years, right scale), unemployment rate (percentage unemployed among the civilian labor force, left scale), and economic growth (annual percentage growth of real GDP, left scale), United States, 1920–1940. Source: Tapia Granados and Diez Roux (2009).

During the early 1930s, the economy went through the severe contraction we know as "the Great Depression." GDP growth was into negative territory for four consecutive years, and unemployment rates skyrocketed (Figure 2). At the same time, there were major increases in life expectancy (because of decreases in death rates) for the population at large, particularly for African American males (Figure 3). When the economy recovered in the mid-1930s and unemployment rates quickly declined, life expectancy rates dropped sharply before rising again during the so-called Roosevelt recession of the late 1930s.

In the 1920s life expectancy for the general population had wide oscillations (Figure 2). Considering the period of strong economic growth between the depression of 1920–1921 and the start of the Great Depression in 1929, we note that life expectancy of the U.S. population at large declined from 61 in 1921 to 57 in 1928, a loss of 4 years. In the same period, non-white males lost 8 years of life expectancy, dropping from 52 to 44 (Figure 3). This period, which Lord Keynes celebrated with awe as a "wonderful outburst of productive energy" (Keynes 1987, 349), saw mortality increase for the entire population, particularly for non-white males. It was not only *The Great Gatsby* that was killed by the prosperity of the 1920s.



Figure 3. Life expectancy at birth (years), for males and females, and whites and nonwhites in the United States, 1920–1940 Source: Tapia Granados and Diez Roux (2009).

For the U.S. population, the health impact of the prosperity of the twenties, a loss of 4 years of life expectancy, was of the order of magnitude of the impact of World War II on males of England and Wales, a loss of 6 years. But for nonwhite males, the impact of the roaring decade—a loss of 8 years of life expectancy—was even greater than the impact of World War II on males of England and Wales.

Statistical analysis has shown that all throughout the period 1920–1940, economic growth was directly linked to the evolution of death rates, with a positive relation between GDP growth and mortality, so that mortality decreased during years of depression and increased when the economy was buoyant (Tapia Granados and Diez Roux 2009); consequently, life expectancy rose dramatically each time the economy went into a slump, and it decreased when the economy accelerated (Figure 2).

That pattern, observed in the United States in the 1920s–1930s, was not an exception; it was also present throughout the century (Tapia Granados 2005a). And the association of periods of greater economic growth with greater mortality has also been observed in recent years using statistics from all 50 U.S. states (Miller, Page, Stevens, and Filipski 2009; Ruhm 2000).

Economists use the term business cycle to refer to the repeated alternation of periods of economic expansion (variously named upturns, booms, recoveries, or prosperity) and economic contraction (recessions, depressions, slumps, crises) observed in market economies. The term "procyclical" refers to variables (such as profits, prices, nominal wages, or interest rates) that tend to increase in expansions and decrease in recessions. The term "countercyclical" means the opposite, and the unemployment rate is the typical countercyclical variable, since unemployment rises in expansions.

Research has shown that during recent decades mortality has had a procyclical oscillation, moving upward in expansions and downward in recessions, not only in the United States but also in countries like Germany, Sweden, Spain, Japan, Argentina, Mexico and the 28 countries of the Organization for Economic Cooperation and Development (OECD) taken as a panel. Some of this research is still controversial, but the weight of evidence for the general case seems overwhelming.<sup>4</sup> Upturns in death rates are typically associated with economic expansions. This means that life expectancy will tend to oscillate countercyclically, in parallel with the unemployment rate (see Figure 2).

<sup>&</sup>lt;sup>4</sup>Besides the references formerly cited, see Abdala, Geldstein, and Mychaszula (2000), Gerdtham and Ruhm (2006), Gonzalez and Quast (2010), Neumayer (2004), Tapia Granados (2005b; 2008), and Tapia Granados and Ionides (2011). For some contrary findings, see Gerdtham and Johannesson (2005) and Svensson (2007; 2010).

## Is Unemployment Good for Health?

If mortality declines during recessions, when unemployment rises, it might be that to be unemployed is good for health. Though this could be true in particular cases-when the lost job was particularly stressful or harmful-it does not seem to be the general case. Contrarily, research has shown that compared with those employed, unemployed individuals of the same age, income, and level of education tend to have worse health and higher mortality risk, particularly because of cardiovascular disease, suicide, and other causes of death. Though issues of bidirectional causation can be present in this relation, most researchers believe that to be unemployed is indeed harmful for one's health.<sup>5</sup> That being the case, the fact that mortality drops during recessions when unemployment rates are rising has to be explained by processes that affect the population at large, which, during recessions, is probably exposed to conditions or involved in behaviors that promote heath. But this is the same as saying that during expansions something is going on that is harmful for health. Possible factors harming health during booms are higher work loads (Sokejima and Kagamimori 1998), greater consumption of noxious substances, increased exposure to atmospheric pollution, risk of injuries, and reduced exercise, social interaction and sleeping time, all factors that could be associated with lower levels of immunity (Eyer 1977). Although many of these mechanisms are hypothetical, there is solid evidence that during economic expansions we tend to do more overtime, engage in binge drinking more frequently, smoke more, sleep less, drive more, eat more unhealthy foods, exercise less, and have less social interaction with friends and relatives. All of which probably harms health.

# The Mortality Cost of an Economic Recovery

It has been estimated that in the U.S., each percentage point decrease in the unemployment rate translates into a 0.5 percent increase in mortality rates (Miller et al. 2009; Ruhm 2000). Considering that 2.4 million deaths occur each year in the U.S., the mortality effect of a macroeconomic expansion would be about 12,000 more deaths per year and per percentage point decrease in the national unemployment rate. That implies that an economic recovery in which the unemployment rate would fall from the level of around 9 percent registered in mid-2011 to 4 percent—an achievement that many would consider a major victory over the forces of evil—would be associated with some 60,000 extra deaths (that is, 12,000 times 5). But 60,000 deaths are of the order of magnitude of the U.S. death toll in the Vietnam War. It seems that John Weeks is right in comparing macroeconomic effects on health with wars. However, the correlation is with expansions, not recessions.

<sup>&</sup>lt;sup>5</sup>The literature on individual unemployment and health is massive. Some interesting references are Bartley (1988), Bartley and Ferrie (2001), Sullivan and Wachter (2009), and Turner (1995). For issues of bidirectional causation, see Martikainen and Valkonen (1996a, 1996b) and Valkonen and Martikainen (1996).

## The Keynesian View

The view that recessions or depressions are the major or perhaps only problem of our "free enterprise system" was largely linked to the emergence of Keynesian economics in the 1930s. It was a movement of economics toward reality after decades in which economists had seen economic crises as impossible occurrences or just consequences of astronomical influences (Morgan 1990). Even in the middle of the Great Depression, periods of economic contraction were considered as "residues" that economic theory could not explain. This was the view maintained by Lionel Robbins (1945) in his famous treatise, *An Essay on the Nature and Significance of Economic Science*.

After decades of hegemony of anti-Keynesian views such as those of Milton Friedman or Robert Lucas, the influence of Keynesian thought in economics is today quite limited. However, the Great Recession has brought Keynesianism to the forefront again. The Memorial Nobel Prize in Economics has recently been given to economists such as Joseph Stiglitz and Paul Krugman, who define themselves as Keynesian, and even some famous non-economists have been converted into the Keynesian creed (Posner 2009). But seeing economic slumps as the major or the unique problem of our society and economic system reveals a very limited scope. That's even more true today, when we know that the biggest problems looming in the future are not likely to be economic downturns or debt crises.

Conservative economists and politicians harp about the humongous debts that our descendants will inherit as a consequence of profligate spending by governments. Keynesians have often emphasized that we need short-term solutions and fixes for the economy, in the same way that a person bleeding severely needs a tourniquet.

But national debts disrupt the ability to produce goods and services only if social institutions are maintained. In the worst case, debts go unpaid and only the owners of debt lose purchasing power. Reinhart and Rogoff (2009) point out that this has often happened in history. Future generations will face much greater problems if we leave them a planet with seriously depleted natural resources or an environment in which production and life is difficult. That is precisely the scenario that we are creating when the imperative of capital—*growth über Alles*—is promoted by any means and over every other alternative. Despite the fact that the economic profession remains so divided on so many issues, it is unfortunately mostly in agreement that growth must be the key target of economic policy. This includes not only mainstream economists but also most heterodox post-Keynesian and even Marxists, who share the view that economic growth is the necessary requisite for a healthy economic and social environment in which it will be possible to deal with all the major issues.

The real dangers for humanity in the 21<sup>st</sup> century are major wars or the disruptions due to the depletion of natural resources and environmental destruction

as a result of unsustainable economic activities. With respect to environmental destruction, considerable evidence shows that periods of economic prosperity are more harmful than recessions, one recent example being that the growth of atmospheric concentrations of  $CO_2$  significantly slowed during the Great Recession (Friedlingstein et al. 2010). It is difficult to say if the risk of war is greater in expansions or in recessions, but judging by recent cuts in military expenditures in many countries, it seems economic expansions are much more favorable to the expansion of armies and weaponry.

Economic downturns conceptualized as the worst of all ills is a view that fits very well with the nearsighted perspective of the business community. Wesley C. Mitchell, the American economist who invested his life in studying business cycles, thought that in a money economy like ours "the quest for money profits by business enterprises is the controlling factor among the economic activities" (Mitchell 1941, preface). Nevertheless, Mitchell also emphasized that there are times when avoiding bankruptcy is the major goal of business enterprises, since

to make profits and to avoid bankruptcy are merely two sides of a single issue one side concerns the wellbeing of business enterprises under ordinary circumstances, the other side concerns the life or death of the same enterprises under circumstances of acute strain (Mitchell 1941).

Since the views of the business community are the predominant views in our society, it is not surprising that periods in which business firms are "under circumstances of acute strain"—that is, recessions—are considered the worst of all evils. However, in many important aspects—particularly in the ability of our economic activities to enhance or to damage population health or the environment in which we live—expansions are indeed much worse than recessions. Of course, wars are much worse than any of the former. Indeed, if there was something really bad originating from the Great Depression of the 1930s, it was the Second World War that followed. Despite the fact that many millions were killed and World War II was the occasion of major savagery, with the bombing of civil populations at large and nuclear weapons being used for the first time in history, some saw and many still see the war as a great time, because it brought back *full employment*.

There is a saying is Spanish, *las comparaciones son odiosas*, comparisons are odious. Yes, indeed, they can be.

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