



21-16 The Pandemic's Long Reach South Korea's Fiscal and Fertility Outlook

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INTRODUCTION

South Korea was one of the first countries affected by the COVID-19 pandemic in early 2020. A combination of high societal discipline and competent and prompt government actions on mass testing capacity and technologically enabled tracing and quarantines helped South Korea to quickly control the pandemic. Consequently, South Korea did not need to enter into full economic lockdown in early 2020 and needed only much smaller fiscal stimulus than most other advanced economies in the Group of Twenty (G20) and the Organization for Economic Cooperation and Development (OECD). Although risks still exist given the relatively low COVID-19 vaccination levels in South Korea, the pandemic has not materially altered South Korea's character as a small government and very low public debt country.

The limited fiscal impact of COVID-19 is fortuitous for South Korea, as the pandemic coincided with the country's dramatic demographic transition to a future of rapidly shrinking working-age population and accelerating overall aging. A still extremely high effective age of retirement and a relatively modest targeted public pension benefit net replacement rate, combined with—by South Korean historical standards—a significant increase in net inward migration after 2015, at least temporarily shields the South Korean economy from the full effects of its rapid population aging.

But the problem is there. South Korea recorded the lowest total fertility rate (TFR) of any advanced economy in the world in 2020, at only 0.84 per woman. Unless fertility rates rise, the country will not escape large and negative economic effects from what will be a rapidly declining total and working-age population.

This Policy Brief shows the great difficulties South Korea will face in trying to engineer a fertility rebound. South Korea has now entered a period of forgone, rather than merely postponed, pregnancies, as fertility increases among older

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women no longer make up for declines among younger cohorts. The plummeting marriage rate in South Korea, combined with the absence of a rise in out-of-wedlock births as has occurred in most other OECD countries, poses a potent obstacle to any fertility rebound. The Policy Brief also shows that unless the dramatically uneven sharing of unpaid household work in South Korea—where women carry out 85 percent of total tasks—is rectified, marriage to local men is likely to prove unappealing for many highly educated South Korean women.¹ The Policy Brief concludes with several proposed policy reforms for South Korea, but it must be clear that the direct role of government action in increasing the South Korean fertility levels is likely to be modest.

SOUTH KOREA'S POST-PANDEMIC DEMOGRAPHIC OUTLOOK

By almost all metrics, South Korea has managed the COVID-19 pandemic skillfully. Through a combination of timely government actions and discipline, seven-day average infection levels never rose above 20 per million,² and South Korea has recorded no excess mortality since the start of the pandemic (figure 1).

Reflecting its competent health management of the virus, South Korea's fiscal response to the pandemic has been more modest in scope than that of other G20 members and most Asian countries (figure 2).

South Korea provided only 4.5 percent of GDP in outright fiscal stimulus in the five first quarters of the pandemic (January 2020–April 2021), far below the levels in most other advanced G20 members, Japan, Hong Kong SAR, or Singapore. It provided roughly 10 percent of GDP in pandemic-related financial liquidity support, including equity injections, loans, asset purchases, debt assumptions, and other contingent liabilities.

The pandemic has consequently not materially altered South Korea's fiscal situation. Compared with its advanced economy and regional peers, South Korea remains in a comparably solid position (table 1). Even the lingering effects of South Korea's slowly accelerating COVID-19 vaccination program—only about 9 percent of the population had been fully inoculated in late June 2021³—are unlikely to alter this outcome. South Korea's economy never fell into a deep economic hole in 2020–21, so even if its complete emergence from the virus' effect is drawn out a bit, the macroeconomic setback appears limited.

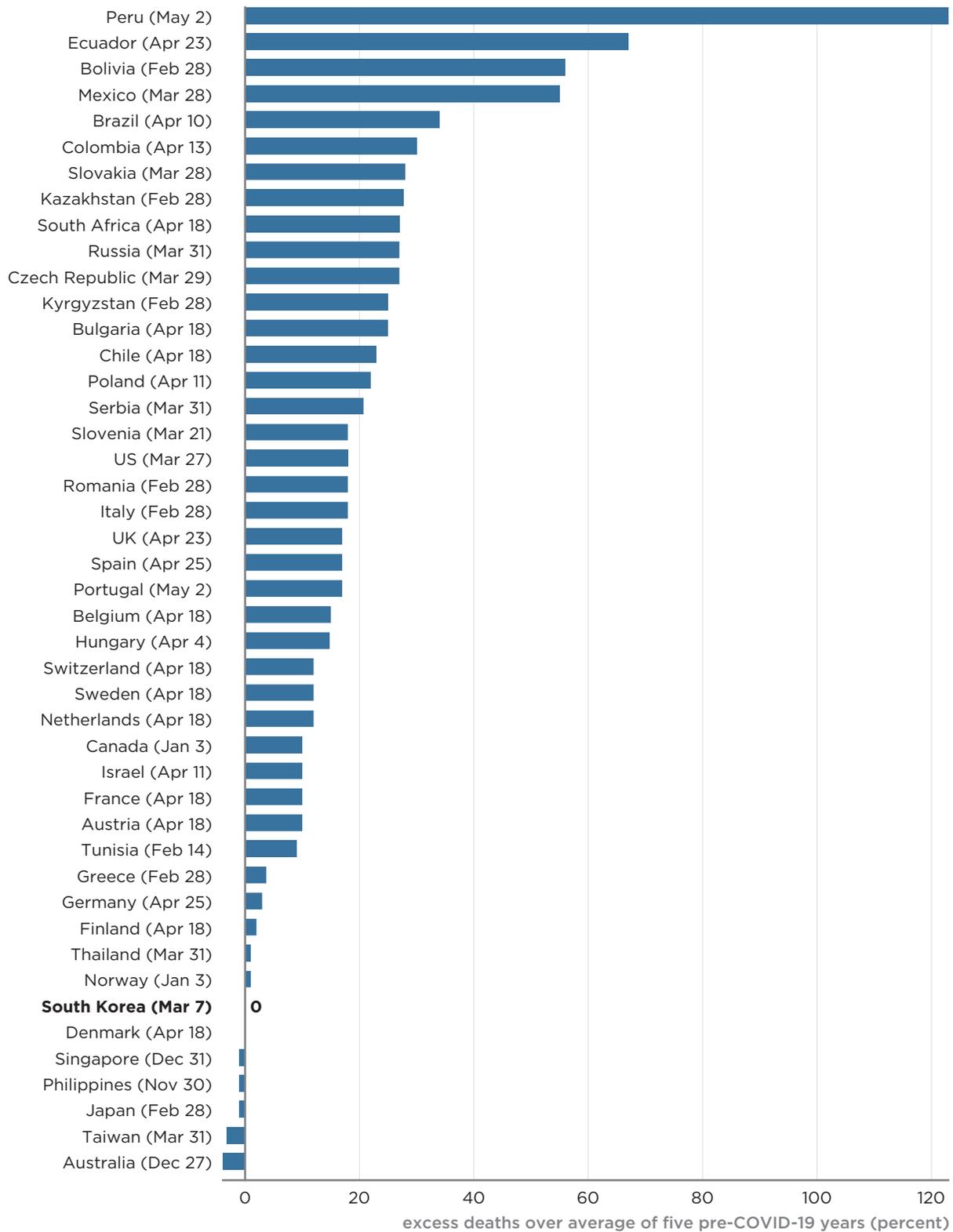
South Korea's fiscal deficit is projected to remain low. At just 25 percent of GDP (up from about 20 percent in 2018), the general government revenue share is smaller than essentially all other advanced economies and fully a quarter less than the US level. Net general government debt is also very low—though rising rapidly—at about a quarter of GDP after the pandemic. The COVID-19 pandemic has hence

1 This Policy Brief does not address the unique circumstances facing South Korea associated with reengagement or reunification with North Korea. The probable labor shortage from the declining working-age population could plausibly be alleviated by full or partial access to North Korean labor if there were political détente on the Korean peninsula. These issues lie outside the scope of this Policy Brief. I am indebted to my colleague Marcus Noland for pointing out this unique facet of South Korea's long-term demographic development to me. For discussion of the economic and distributional impact of inter-Korean labor market integration, see Noland (2000) and Noland, Robinson, and Wang (2000).

2 Data on South Korean COVID-19 cases are from [Our World in Data](#) (accessed on May 25, 2021).

3 South Korean COVID-19 vaccination data are from [Our World in Data](#) (accessed on June 28, 2021).

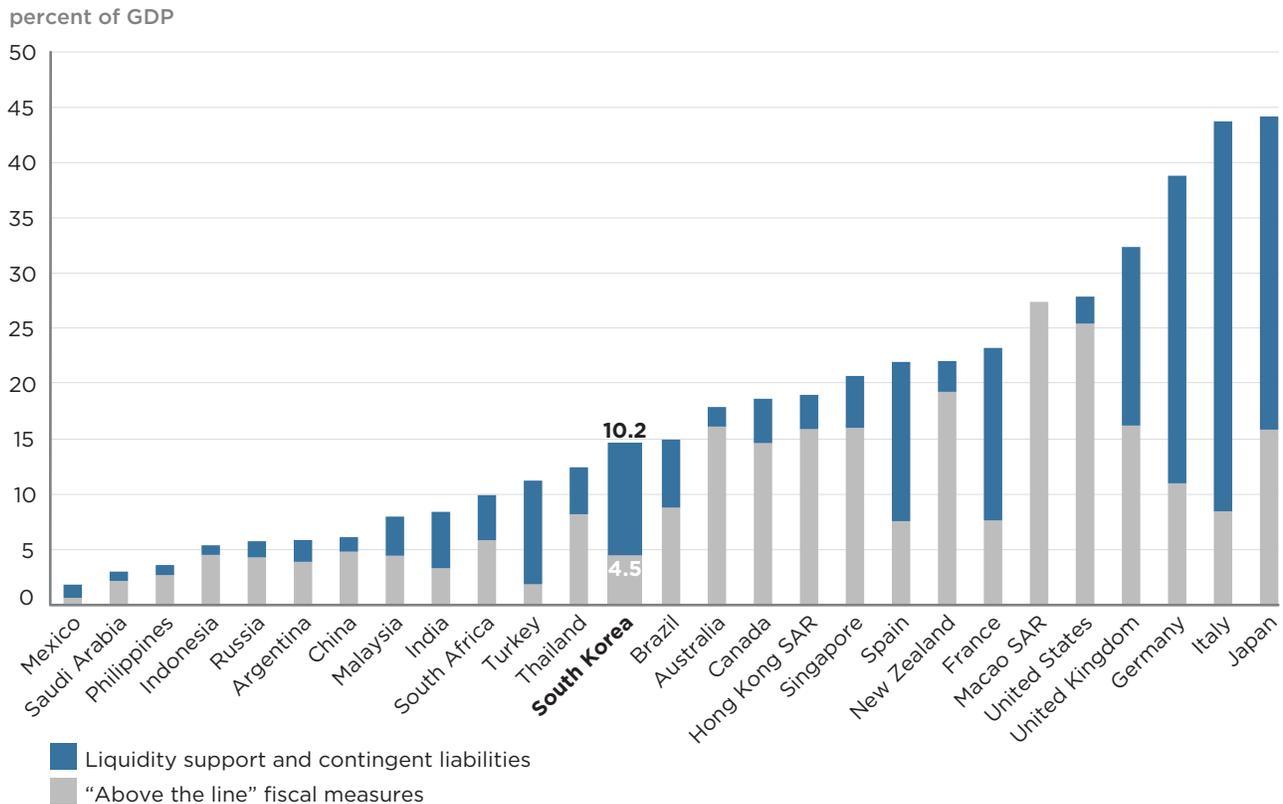
Figure 1
Excess mortality associated with the COVID-19 pandemic



Note: Figures show excess deaths in period beginning after 100 confirmed COVID-19 cases were detected through 2021 (or latest available from 2020) dates shown in parentheses.

Source: *Financial Times Coronavirus Tracker* (accessed on May 31, 2021).

Figure 2
Fiscal measures taken in G20 and selected Asian economies in response to COVID-19 pandemic, January 2020–April 2021, by type of measure



Source: IMF Fiscal Monitor, April 2021.

not materially changed South Korea's economic character as a very small-government country with a low level of public debt. For a country that faces rapid population aging and is forecast to experience accelerating net debt levels in the medium term,⁴ a policy preference to keep present government debt levels low is understandable. The unique political situation facing South Korea with a possible North Korean regime collapse "into Seoul's arms and reunification" an ever present real world possibility further pushes for contemporary fiscal restraint. Virtually any outright reunification scenario, or just a material political détente with Pyongyang would, as highlighted by first West Germany's "Ost Politik" versus East Germany in the 1970s and then reunification after 1990, comes at dramatic fiscal costs to South Korea. The country's political situation is hence akin to Seoul having a massive "contingent political liability" on its books.⁵

South Korea stands on the cusp of a dramatic demographic shift, which the pandemic may have accelerated. It is certain to challenge its small government sector status.

4 The April 2021 IMF *World Economic Outlook* database projects that South Korean net general government debt levels will more than double, from 18 percent in 2020 to 39 percent by 2026.

5 See Noland (2012) for an in-depth discussion.

Table 1
**Key fiscal metrics in South Korea and selected major economies, 2018, 2020,
 and 2022 (projected)** (percent of GDP)

	2018	2020	2022p
<i>General Government Overall Balance</i>			
South Korea	2.6	-2.8	-2.4
Euro area	-0.5	-7.6	-3.3
Singapore	3.7	-8.9	3.1
Hong Kong SAR	2.3	-10.0	-0.1
Japan	-2.7	-12.6	-3.8
G7	-3.4	-13.2	-5.0
United States	-5.4	-15.8	-6.1
<i>General Government Revenue</i>			
South Korea	22.9	22.8	22.9
Euro area	46.4	46.4	46.5
Singapore	17.6	17.7	18.8
Hong Kong SAR	20.7	19.7	21.9
Japan	34.3	34.1	34.0
G7	35.7	35.7	36.2
United States	30.0	30.3	31.2
<i>General Government Expenditure</i>			
South Korea	20.4	25.6	25.3
Euro area	46.9	54.1	49.8
Singapore	13.9	26.6	15.6
Hong Kong SAR	18.4	29.7	22.0
Japan	37.0	46.7	37.8
G7	39.2	48.9	41.2
United States	35.4	46.2	37.3

	2018	2020	2022p
<i>General Government Net Debt</i>			
South Korea	9.6	18.2	26.8
Euro area	70.4	80.8	81.8
Singapore	—	—	—
Hong Kong SAR	—	—	—
Japan	151.2	169.2	171.0
G7	86.5	104.9	108.5
United States	81.7	103.2	109.5

— = data not available

Source: IMF *World Economic Outlook* database, April 2021.

In about 2015, South Korea's total dependency ratio bottomed out at 36.2—that is, almost three Koreans of working age for every child and senior requiring sustenance.⁶ It has since risen to 38.6. However, according to the South Korean government's medium population forecast, it will rise to 53 (less than two working-age people for every person needing sustenance) by 2030 and to breach 100 (a 1:1 relationship between working-age people and people needing sustenance) by 2055.

Korea's working-age population peaked in 2018, at 37.6 million. It will fall precipitously until dropping below 20 million by the early 2060s (figure 3). The total South Korean population is projected to peak at just under 52 million in the late 2020s, before falling steadily toward 40 million by the mid-2060s.

South Korea's high effective retirement age—the highest in the OECD, at 72.3 years—means that on average, its retirees can look forward to just over 11 years in retirement, less than half the expected life in retirement in France (figure 4).

The average net replacement rate for pensions in South Korea is just over 40 percent of pre-retirement earnings.⁷ The low replacement rate and high retirement age make the per capita fiscal burden of old age retirement in South Korea among the lowest in the OECD. However, the gradual passing of South Korea's elderly

6 The total dependency ratio (as opposed to the old-age dependency ratio, which includes only seniors in the numerator) is the ratio of people 0–14 and 65 and older to people 15–64.

7 The net replacement rate is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking into account personal income taxes and social security contributions paid by workers and pensioners.

self-employed rural farming population is likely to see the very high average South Korean effective retirement age decline over time, as workers employed in the manufacturing and services sectors retire at an earlier age.⁸

Figure 3
Actual and projected population of South Korea, by age group, and total dependency ratio, 1960–2067(p)



Note: Projections (p) are from KOSIS' medium-variant population forecast.

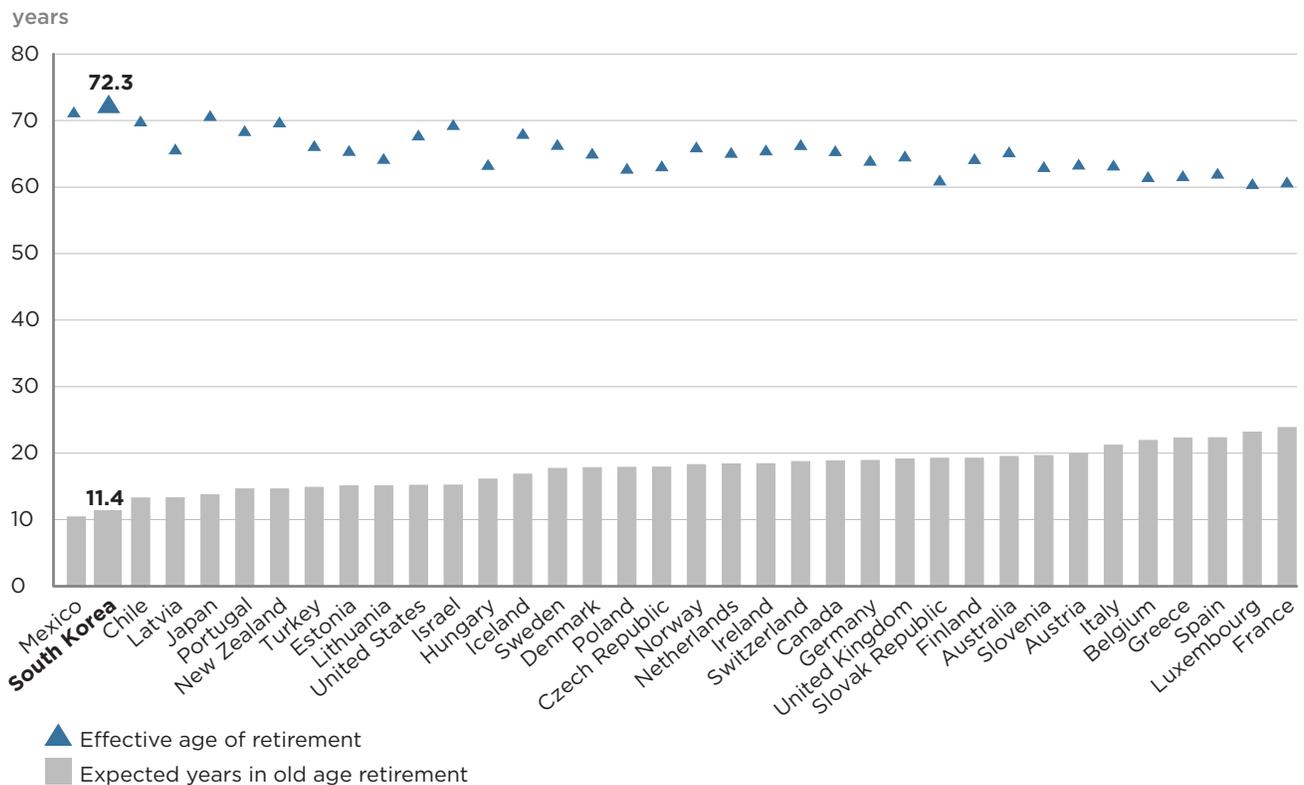
Source: Korean Statistical Information Service (KOSIS), [Statistical Database](#) (accessed on May 31, 2021).

A second factor—a historically unprecedented increase in net inward migration—is also mitigating the effects of population aging. Reliable data are available starting only in 2000; they show that net inward migration after 2005 and particularly after 2013 accounts for the bulk of the recent population growth (figure 5). Net inward migration to South Korea between 2013 and 2020 averaged almost 0.2 percent of total population a year. If sustained in the years after 2020, this level would marginally surpass the assumed future net migration level in the government's high population forecast. It would hence represent a positive surprise relative to the assumed level of inward migration to South Korea assumed

8 South Korea began including farmers in its a national pension system only in 1995. Its defined benefit design means that pension levels for elderly South Korean farmers are very low, because of their short vesting period. At the same time, income from continued farming activities (typically rice produced via contracted machine services) remain high, thanks to price support and direct payments requiring continued farm production. South Korean farmers hence often lack the financial ability or incentive to retire except when physically unable to continue working. The existence of a limited non-means-tested basic old-age pension exacerbates this situation.

in the medium population scenario shown in figure 3. Future political tension with China, given its role as an important country of origin for inward migration to South Korea, raises questions about the sustainability of the recent inward migration increase.

Figure 4
Effective retirement age and expected years in retirement for men in OECD economies, 2018



Note: Expected years in retirement are obtained by subtracting 65 years from the effective retirement age and then subtracting the resulting number of years from the life expectancy at 65.

Source: Organization for Economic Cooperation and Development (OECD), [Effective Retirement Age Data](#) (accessed on May 31, 2021) and [Net Pension Replacement Rate Data](#) (accessed on May 31, 2021).

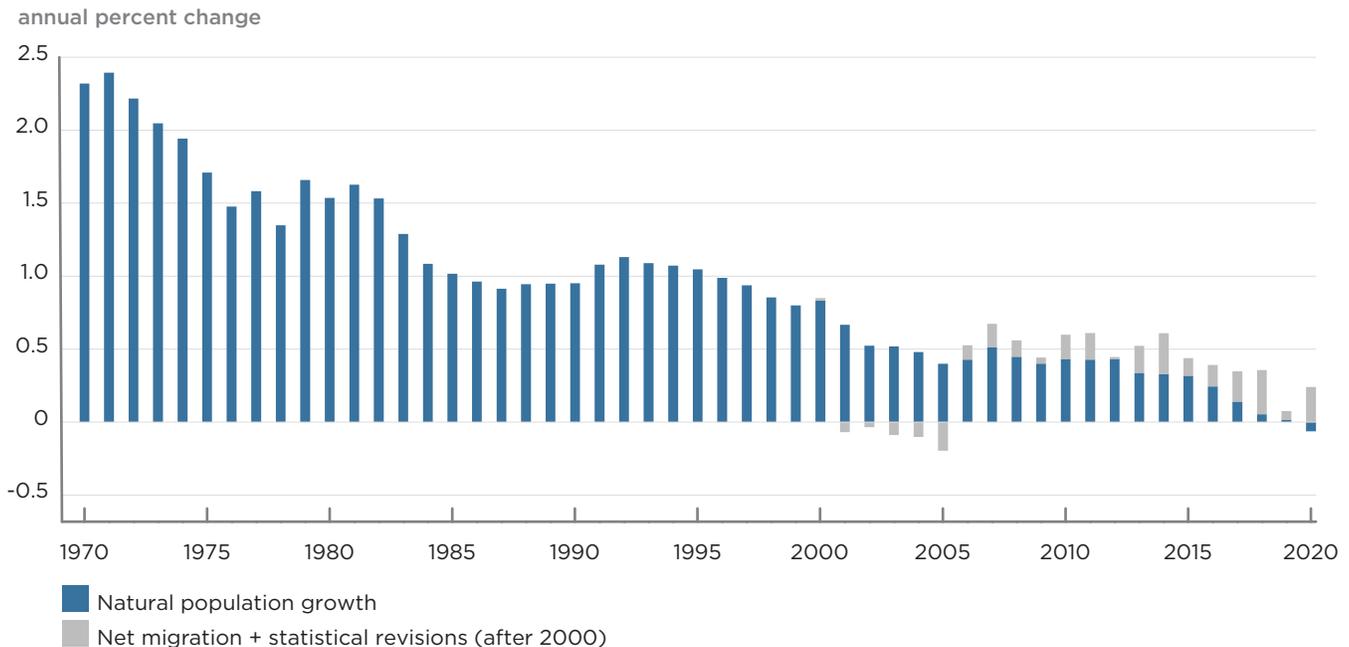
Long-term population forecasts incorporate assumptions about a country’s net migration and its mortality and fertility levels. To date, the pandemic has had no discernable short-term effect on South Korean mortality levels (figure 1 shows zero excess deaths compared with prior years), and net migration levels through the fourth quarter of 2020 held up at close to recent historically high levels. South Korea does, however, face a near unprecedented situation for a major economy on the third driver of future population trends—fertility levels. In 2020, the total fertility rate (TFR) fell to a historically low level of just 0.84.⁹ This level is below the assumed level in the government’s medium-scenario population forecast (0.90),¹⁰

9 TFR estimates the number of children a woman would bear if she were to pass through the childbearing years bearing children according to the schedule of age-specific fertility rates during the time period in question (typically one year).

10 It is not, however, as low as the 0.81 level assumed in the low-scenario forecast for 2020.

more than a third lower than Japan's TFR of 1.35 in 2020, and only just over half of the United States' (historically low) TFR of 1.64. If sustained, a fertility level this low would lead to faster population decline than shown in figure 3.¹¹

Figure 5
Population growth in South Korea, by source, 1970–2020



Note: Net migration data for 2020 are for 12-month period ending in October 2020.

Source: Korean Statistical Information Service (KOSIS), [Statistical Database](#) (accessed on May 31, 2021).

SOUTH KOREA'S FERTILITY OUTLOOK

South Korea has the lowest fertility levels in the G20 and among any major country in the world (only the latest available projected data for “city enclave” Macao SAR at 0.78 for 2021 is lower in table 2), having endured a decline of nearly a third between 2010 and 2020 and nearly 10 percent between 2019 and 2020 (table 2).

Regional differences in TFR are significant. The latest data reveal that they bear relatively little relation to the intensity of the COVID-19 pandemic. Europe experienced smaller long-term and pandemic-period TFR declines than the Anglo-Saxon countries and Asia, for example. The Anglo-Saxon world no longer exhibits higher fertility than Northern or Eastern Europe.

Meanwhile, Japan—frequently referred to as a very low fertility country—is now among the highest-fertility high-income countries in Asia. To date, it has not suffered any discernable negative pandemic fertility impact. Its situation stands in contrast to South Korea and other high-income Asian economies, including Singapore, Taiwan, Macao SAR, and Hong Kong SAR, all of which now exhibit TFR levels near or below 1.

¹¹ The population forecast's medium scenario assumes a rebound in South Korea's fertility levels to 1.27 by 2040.

Table 2
Global total fertility rates, by region, 2010 to latest available

Region/country		2010	2015	2019	2020	Latest available data for 2021Q1	Long-term change, 2010–20	“Pandemic change,” 2019–latest available
Northern Europe	France	2.03	1.96	1.86	1.82	1.7	-10%	-9%
	Denmark	1.87	1.71	1.7	1.67	1.72	-11%	1%
	Sweden	1.98	1.85	1.7	1.66	1.64	-16%	-4%
	Belgium	1.84	1.69	1.57	1.56	—	-15%	-1%
	Netherlands	1.79	1.66	1.57	1.55	1.6	-13%	2%
	Germany	1.42	1.5	1.54	1.52	—	7%	-1%
Southern Europe	Portugal	1.39	1.31	1.43	1.41	—	1%	-1%
	Greece	1.48	1.33	1.34	1.37	1.41	-7%	5%
	Italy	1.41	1.35	1.27	1.24	—	-12%	-2%
	Spain	1.37	1.33	1.24	1.2	1.13	-12%	-9%
Eastern Europe	Romania	1.59	1.62	1.65	1.71	—	8%	4%
	Hungary	1.26	1.44	1.53	1.6	1.62	27%	6%
	Serbia	1.64	1.61	1.62	1.59	1.59	-3%	-2%
	Slovenia	1.57	1.57	1.62	1.56	1.58	-1%	-2%
	Croatia	1.55	1.4	1.47	1.49	1.56	-4%	6%
	Bulgaria	1.57	1.53	1.59	1.56	—	-1%	-2%
	Russia	1.57	1.78	1.5	1.5	1.53	-4%	2%
Anglo-Saxon Five Eyes	United States	1.93	1.84	1.7	1.64	—	-15%	-4%
	New Zealand	2.17	2	1.72	1.61	—	-26%	-6%
	Australia	1.95	1.8	1.66	1.6	—	-18%	-4%
	England/Wales	1.93	1.82	1.65	1.6	—	-17%	-3%
	Canada	1.63	1.56	1.47		—	-10%	0%

Region/country		2010	2015	2019	2020	Latest available data for 2021Q1	Long-term change, 2010–20	“Pandemic change,” 2019–latest available
Asia Upper End	Mongolia	2.60	3.01	2.99	2.91	—	12%	-3%
	Malaysia	2.17	2	1.78	1.7	—	-22%	-4%
	Japan	1.38	1.45	1.36	1.35	—	-2%	-1%
	China	1.63	1.67	1.7	1.3	—	-20%	-24%
	Thailand	1.5	1.52	1.51	1.27	1.15	-15%	-24%
Asia Lower End	Singapore	1.21	1.24	1.14	1.1	1.03	-9%	-10%
	Taiwan	1.08	1.18	1.05	1	0.9	-7%	-14%
	Macao	1.19	1.14	0.93	0.89	0.78	-25%	-16%
	Hong Kong	1.21	1.2	1.05	0.86	—	-29%	-18%
	South Korea	1.23	1.24	0.92	0.84	—	-32%	-9%

— = data not available

Sources: National vital statistics databases and health authorities.

South Korean TFR levels dropped to unprecedentedly low levels in 2020. But perhaps more ominously, the scale of the fertility rebound assumed in the South Korean government’s medium-scenario population forecast—a rebound to a long-term TFR of 1.27 by 2040 (still leaving it below Japan’s current level)—is of a magnitude only very rarely witnessed among middle- and high-income countries bearing any resemblance to South Korea’s level of economic development (table 3).

Almost all large fertility rebounds in nondeveloping countries have been in former Communist countries (Russia, Belarus, and Eastern Europe). This group of countries experienced fundamental political and economic upheavals, and their populations suffered a dramatic decline in living standards, in the 1990s. As many of these countries eventually stabilized economically, could look forward to EU membership (2004) and associated economic growth, or enjoyed an extraordinary commodity price boom (Russia), strong rebounds in fertility after temporary postcommunist postponement become more frequent.¹²

12 The South Korean financial crisis in and immediately after 1997 had much less societal impact than the postcommunist countries’ experiences and essentially no effect on fertility levels. South Korean fertility levels fell steadily in the late 1990s, from 1.63 in 1995 to 1.54 in 1997 and 1.43 in 1999.

Table 3
Historical examples of TFR rebounds of the magnitude assumed in South Korea among middle- and high-income countries

Country	TFR rebound (number of hypothetical births)	TFR rebound range	TFR rebound percent increase	Observed rebound period (South Korea = assumed)
South Korea	0.43	0.84-1.27	51%	2020-2040p
Russia	0.62	1.16-1.78	53%	1999-2015
Czech Republic	0.58	1.13-1.71	51%	1999-2018
Bulgaria	0.57	1.09-1.66	52%	1997-2009
Latvia	0.52	1.22-1.74	43%	2001-2016
Sweden	0.52	1.61-2.13	32%	1983-1990
Denmark	0.51	1.38-1.89	37%	1983-2008
Romania	0.51	1.27-1.78	40%	2002-2016
Belarus	0.49	1.23-1.72	40%	2003-2015
Sweden	0.48	1.50-1.98	24%	1999-2010
Lithuania	0.47	1.23-1.70	38%	2002-2015
Estonia	0.44	1.28-1.72	34%	1998-2010
Slovenia	0.42	1.20-1.62	35%	2003-2016

p = projected; TFR = total fertility rate

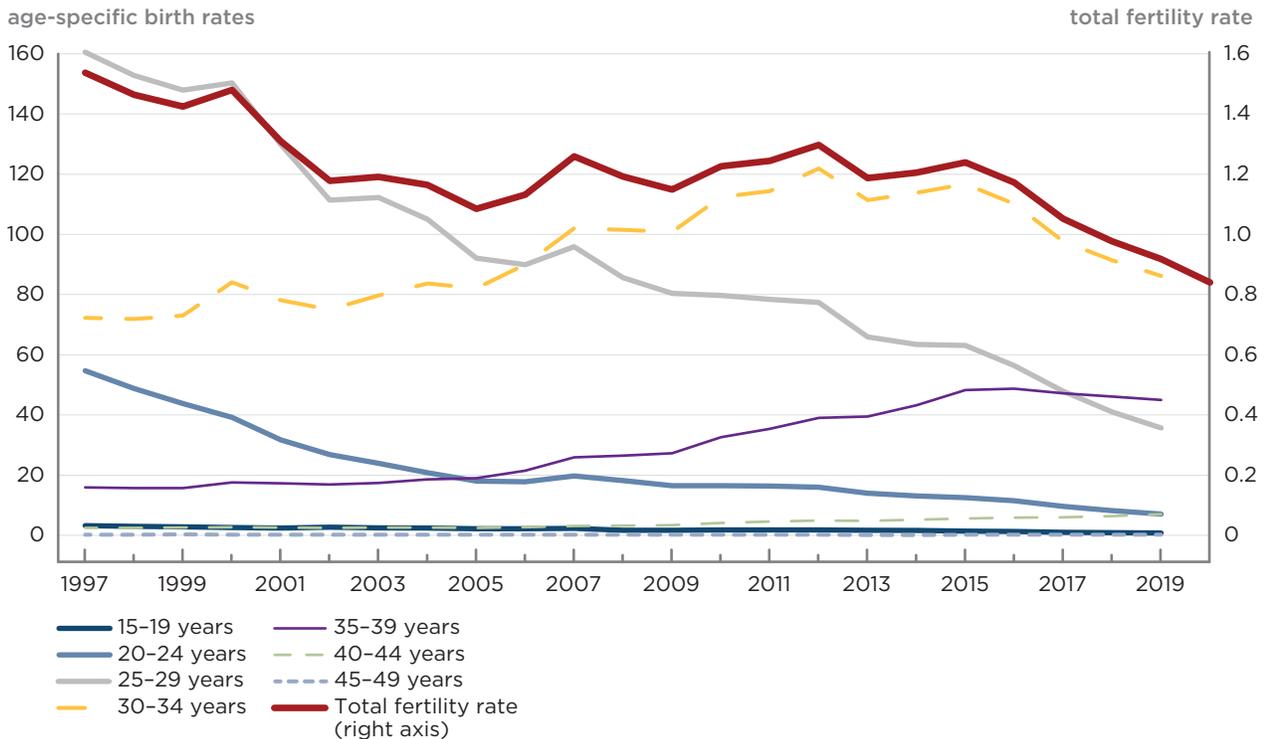
Sources: National vital statistics databases and health authorities.

The only two non-postcommunist countries that have witnessed fertility rebounds of the magnitude South Korea is assuming are Denmark and Sweden (twice), two Scandinavian countries with social welfare state services, childcare availability, parental support, and social norms that are very different from South Korea. Moreover, neither Denmark nor Sweden ever fell to the TFR levels South Korea did during the last two decades. In short, if South Korea's TFR is to rebound to the levels currently assumed in the medium population forecasts, it would represent a nearly unprecedented fertility event in any middle- or high-income country.

Countries that experienced dramatic economic and societal change (such as the collapse of Communism after 1989) or that suddenly benefited from widely available effective contraception (as did many Western countries in the 1970s) see fertility levels temporarily plummet and then rebound again, as many

women postpone pregnancies but ultimately have children at a later age. This phenomenon occurred in South Korea in the early 2000s, as TFR stabilized at about 1.2 between 2000 and 2015 (figure 6).

Figure 6
Age-specific birth rates and total fertility rate in South Korea, 1997–2020

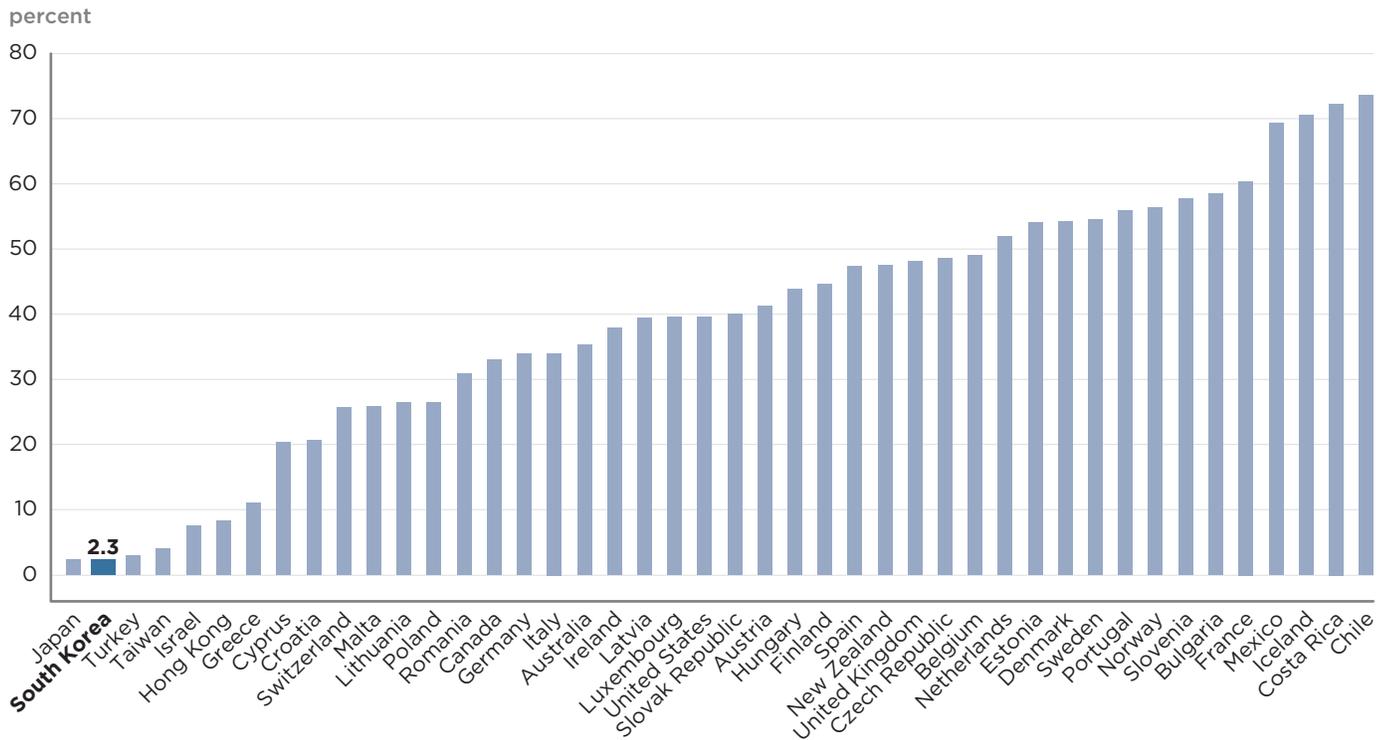


Source: Korean Statistical Information Service (KOSIS), [Statistical Database](#) (accessed on May 31, 2021).

Birth rates among South Korean women aged 20–24 fell quickly to very low levels in the early 2000s, and rates among the traditionally most intense childbearing age (25–29) fell consistently over the last two decades. Until about 2015, women 30–34 and 35–39 made up for this decline. This postponement began reversing itself after 2015, however, as fertility among women 30–34 and 35–39 fell. Fertility among South Korean women 40 and older has continued to rise, but it does so at levels that are too low to counter declines among younger women. Since 2015, South Korea hence appears to have shifted from postponed pregnancies to forgone pregnancies. If this trend is sustained, recovery will prove more difficult.

South Korea (like other Asian countries) faces a particular challenge in returning to higher fertility levels because of lack of easy access to healthcare, the fact that only children born into families with two parents receive schooling and other full rights (bestowed upon children born into families with both parents), and very strong conservative social norms discourage having children outside of marriage. Indeed, South Korea and Japan have the smallest shares of children born out of wedlock in the world, at just 2.3 percent (figure 7).

Figure 7
Share of children born out of wedlock, by country, 2019 or latest available



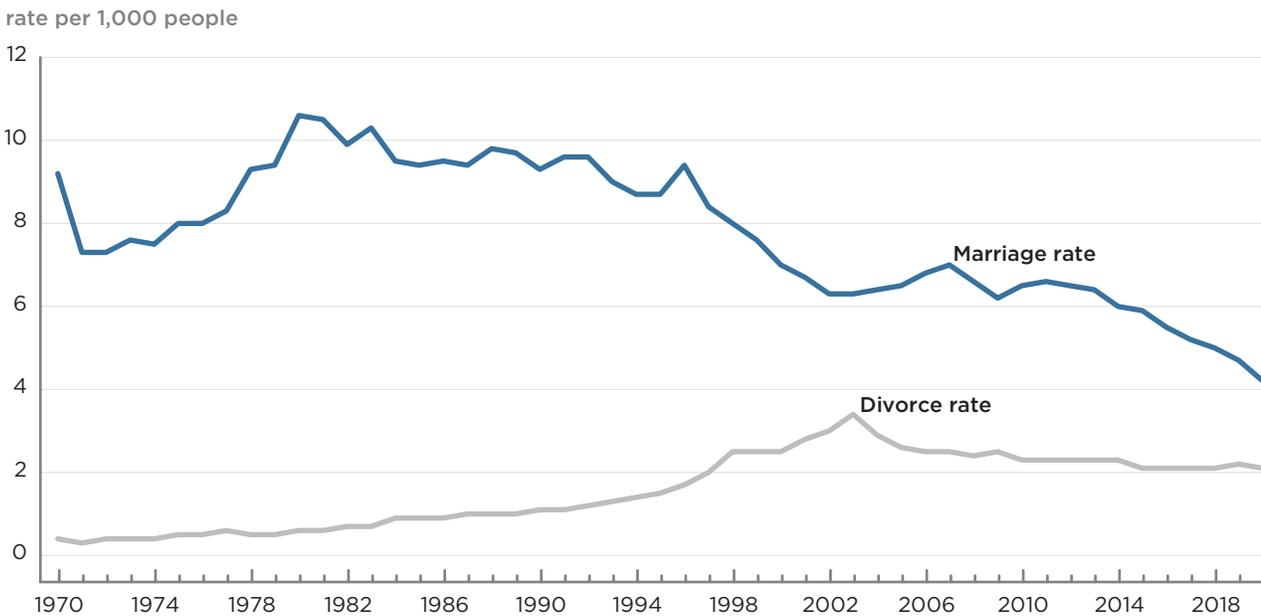
Sources: Organization for Economic Cooperation and Development (OECD), [Children Out of Wedlock Data](#) (accessed on May 31, 2021); Yang (2019); Gietel-Basten and Verropoulou (2018).

South Korea hence will not benefit in quantitative fertility terms from any material increase in the number of children born to unmarried couples, single-parent households, or same-sex couples. The first of these categories is crucial for maintaining fertility levels in most OECD countries. Given the extremely strong societal aversion to having children outside marriage in South Korea, the accelerating decline in marriage rates is of concern (figure 8).

In 2020, almost half as many marriages were dissolved in South Korea as were formed, significantly reducing the number of young South Koreans in a societally acceptable position (that is, married) to have children. The gradual increase in divorce rates up to 2003 is associated with changes in South Korean divorce law that make it easier to obtain a divorce and the increased financial independence of many South Korean women.¹³ A level of granted divorces at roughly 50 percent of the level of new marriages entered into is not uncommon in OECD countries, but it does not restrict family formation elsewhere to the degree that it does in South Korea.

¹³ South Korean divorce rates have fallen slightly since the spike in 2003, but remain much higher today than historically in the 20th century as a share of marriages entered into.

Figure 8
Marriage and divorce rates in South Korea, 1970–2020



Source: Korean Statistical Information Service (KOSIS), [Statistical Database](#) (accessed on May 31, 2021).

An important aspect of family formation in South Korea is the cost of education borne by the household sector in a country with one of the highest levels of educational attainment in the OECD. Total annual household educational expenditure in South Korea is more than \$3,000 per full-time equivalent student across all educational levels (figure 9).

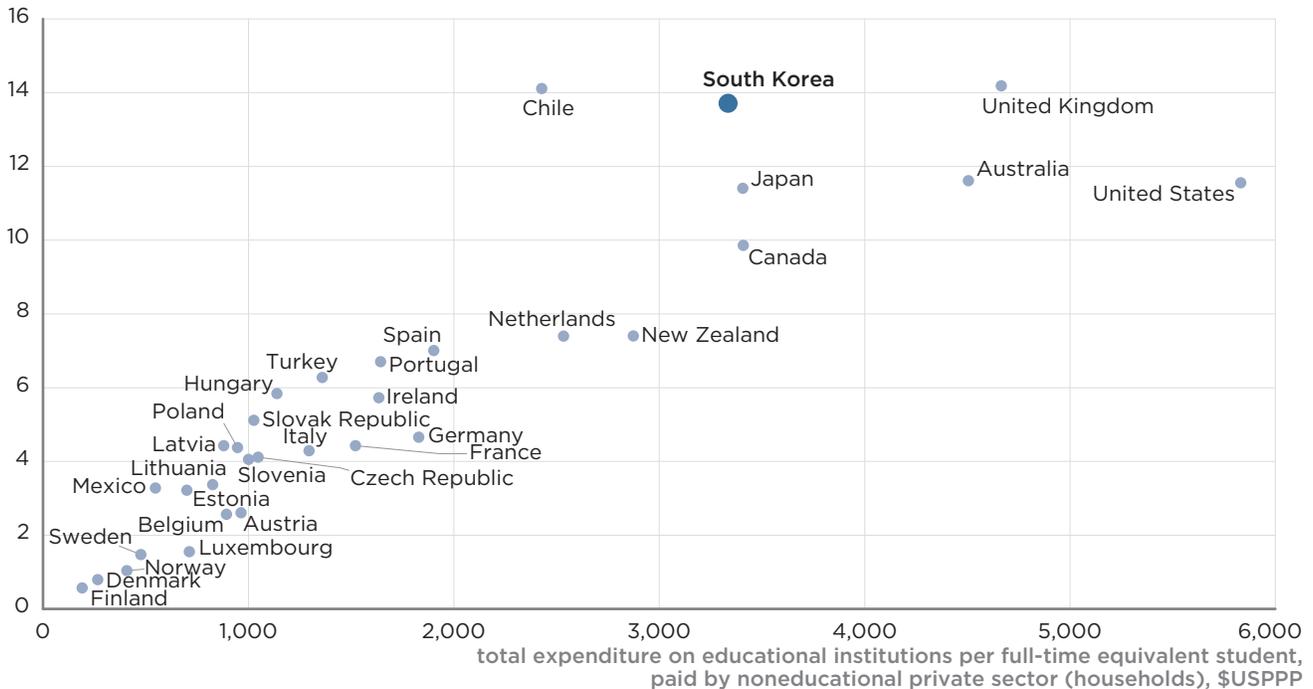
South Korean households spend far more than most OECD countries on education; about the same as Japan and Canada; and less than the United Kingdom, Australia, and the United States. South Koreans have lower levels of disposable household income than these countries, however. As a percent of disposable income, they spend more than any OECD countries except Chile and the United Kingdom. The private cost of education in South Korea poses a sizable financial obstacle to having more than one child.

Private educational costs in South Korea are high, but not uniquely so compared with other OECD countries.¹⁴ And unless young South Koreans' motivation to marry is driven entirely by the desire to start a family, the high private cost of education is unlikely to play a major role in the recent significant decline in South Koreans' propensity to marry, even if they may reduce the propensity to ultimately have multiple children.

¹⁴ South Korea substantially increased public investment in early childcare in recent years. The most recent OECD data suggest that the private costs of preschool childcare in South Korea are about half the OECD average levels. See OECD, [Net Childcare Costs](#).

Figure 9
Total household expenditure on education per full-time equivalent student in OECD countries, 2017

household expenditure on education as percent of disposable income



\$USPPP = US dollars at purchasing power parity

Note: Figures are for primary to tertiary education.

Source: Organization for Economic Cooperation and Development (OECD), [Educational Finance Indicators](#) (accessed on May 31, 2021).

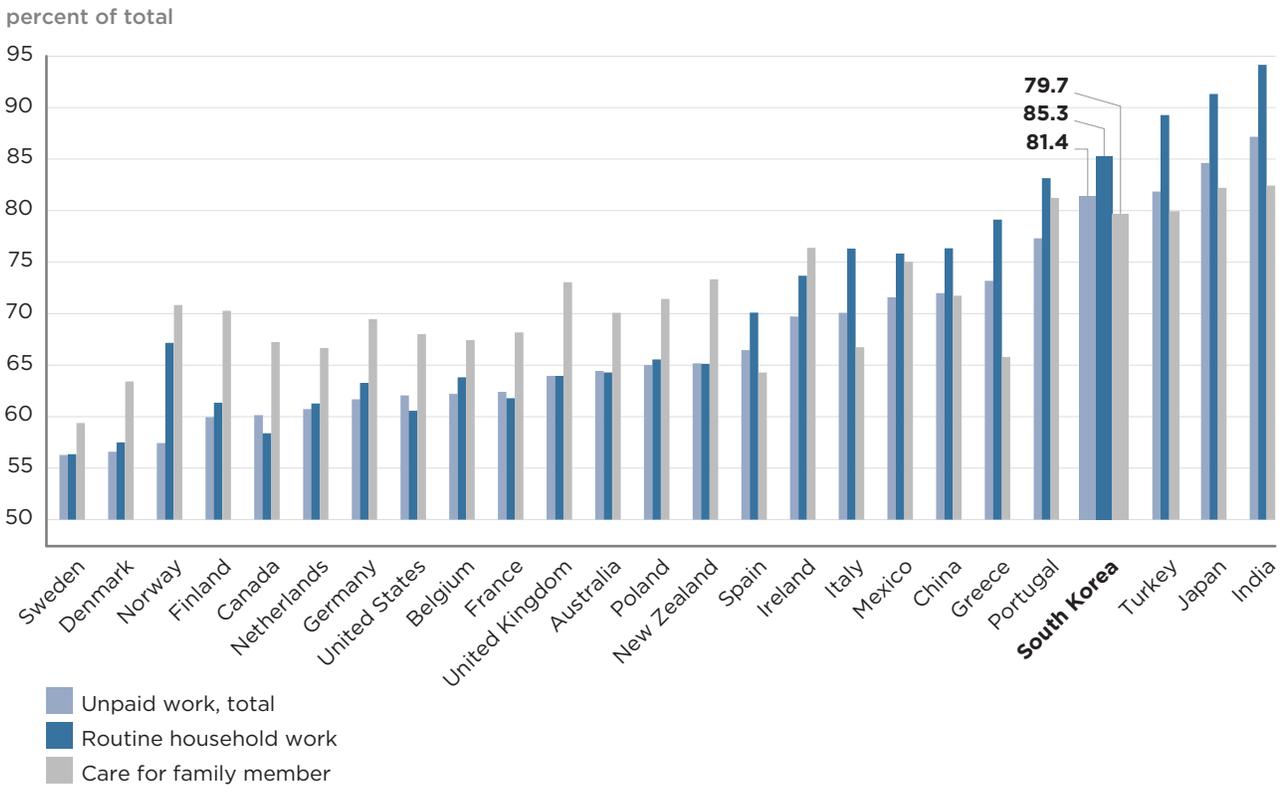
By a significant margin, South Korea has the largest share of tertiary educational attainment among women 25–34 in the OECD (76 percent in 2019).¹⁵ Increasingly, South Korean women in this age bracket are fully financially independent. Many university-educated South Korean women may be hesitant to marry, given that they remain overwhelmingly responsible for unpaid and routine household work and family member care, bearing more than 85 percent of this burden (figure 10).

Until the still rising discrepancy between South Korean women's educational attainment and their share of unpaid work is ameliorated by South Korean men taking on a larger share of the burden, the propensity of young South Korean women to marry (at least Korean men) seems unlikely to recover. In addition, the extremely high tertiary educational attainment among South Korean women, which significantly surpasses the attainment of South Korean men, will create an ongoing market mismatch, posing significant permanent obstacles for the marriage prospects of lower-educated South Korean men. In a country where cultural preference for male children generated a gender ratio of 112 men per 100

¹⁵ See OECD, [Education at a Glance 2020](#).

women aged 20–39 in 2020,¹⁶ the marriage probability for lower-educated South Korean men seems destined to remain low. Marriage-based migration into South Korea should continue to offer new opportunities for marriage-mismatched South Korean men and women.

Figure 10
Share of unpaid work, routine household work, and care for family members carried out by women, by country, 2016 or latest available



Source: Organization for Economic Cooperation and Development (OECD), [Gender Data and Time Use Database](#) (accessed on May 31, 2021).

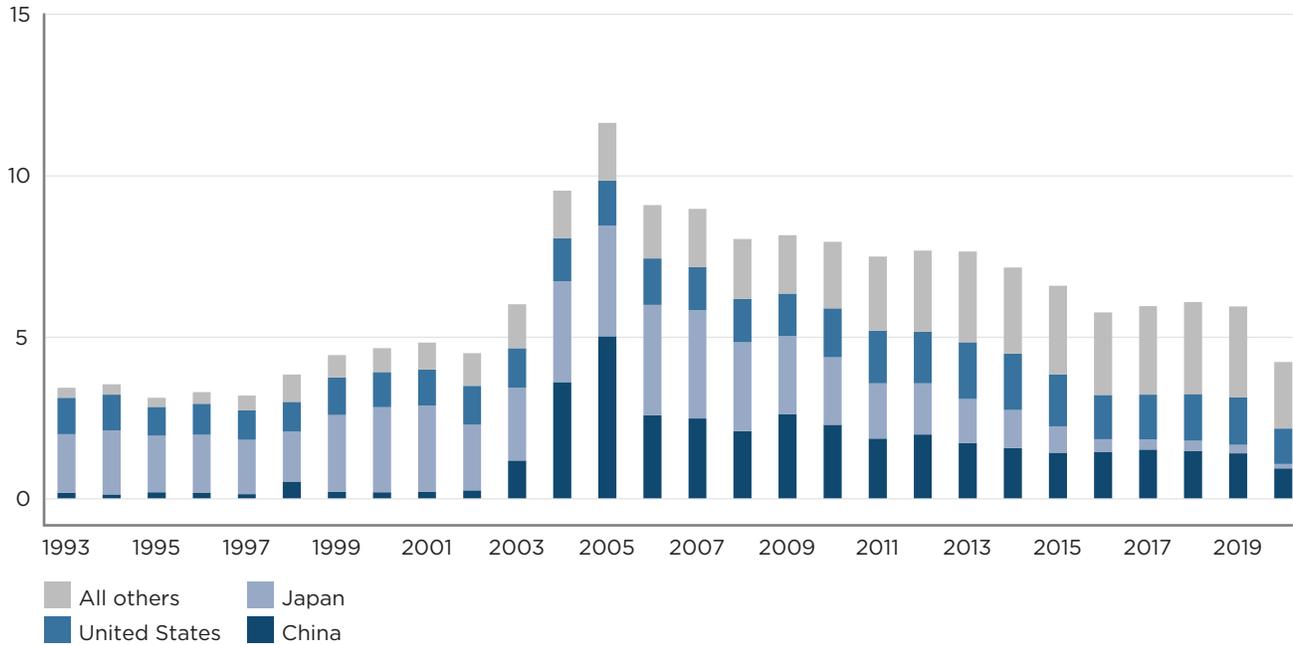
Historically, inward migration of foreign spouses to South Korea came from countries with sizable ethnic Korean populations—Japan, China, and to a lesser extent the United States. By 1993–94, the level of inward migration of foreign husbands was roughly equivalent to the inflow of foreign wives, at just over 3,000 a year. However, by 1995 a rapid increase in inward migration of ethnic Korean women from China saw the rough gender balance overturned. Since the late 1990s, significant inflows of wives from Vietnam, the Philippines, and Thailand have meant that two to three times as many women as men have entered South Korea through marriage (figure 11).

16 Data from KOSIS (Korean Statistical Information Service), [Statistical Database](#) (accessed on May 31, 2021).

Figure 11
Number of Koreans married to foreign spouses, by nationality of spouse, 1993–2020

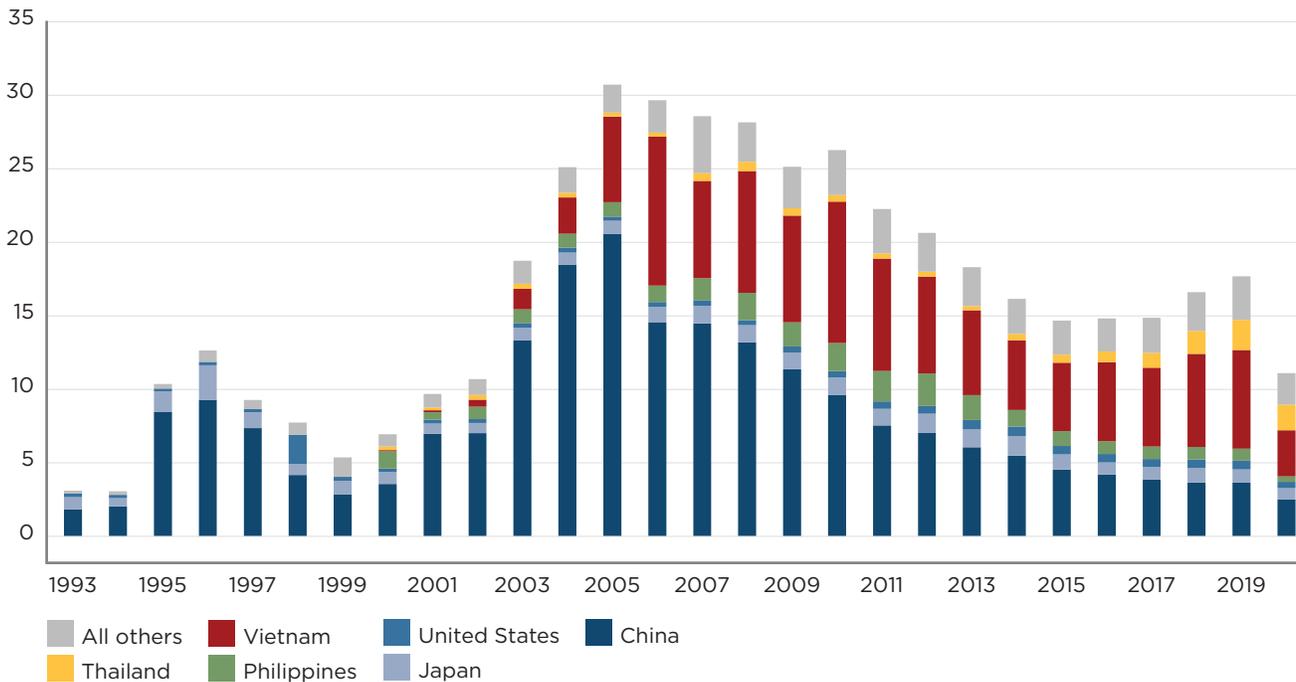
a. By nationality of foreign husband

number of foreign spouses (thousands)



b. By nationality of foreign wife

number of foreign spouses (thousands)



Source: Korean Statistical Information Service (KOSIS), [Statistical Database](#) (accessed on May 31, 2021).

The total number of “foreign marriages” peaked at 42,356 in 2005 but had dropped to just over 20,000 in pre-pandemic 2019. However, due to the overall decline in the number of marriages in South Korea, as a share of the total number of marriages also declining significantly in South Korea over this period, the share of “foreign marriages” in South Korea dropped only from 13 percent in 2005 to 10 percent by 2019. A “foreign share” of often over 10 percent of all annual marriages in South Korea will, assuming a fertility rate inside such marriages approximating that of wholly Korean ones, add materially to the overall fertility levels in South Korea, as most Koreans hence married would likely not have married locally. In recognition of the already material family-based inward migration to South Korea and the need to ensure as many children born as a result stay in South Korea, birthright citizenship should be granted to all children born in South Korea to one or two foreign parents with long-term residency.

CONCLUDING REMARKS

South Korea has handled the COVID-19 pandemic resolutely and competently, with no excess mortality recorded and only limited economic lockdown and associated fiscal expenses required. The pandemic has hence not altered South Korea’s character as—by OECD standards—a very small-government and low-debt country.

The pandemic coincided with the beginning of South Korea’s demographic descent, as the country’s working-age population declined in absolute terms for the first time in 2019. In several areas, Korea is well positioned to address the fiscal effects of what will be rapid and precipitous population aging.

The South Korean workforce has the highest effective retirement age in the OECD. The high age is partly related to the very high retirement age of South Korea’s self-employed farming workforce; the effective retirement age is lower in the secondary and tertiary sectors. Combined with the relatively low targeted net replacement rate in the national old-age pension system, it reduces the fiscal burden from an aging population.

In the last five to seven years, South Korea significantly increased the level of net inward migration, albeit from historically very low levels. If politically sustainable, higher levels of inward migration by younger foreign workers—in, for instance, the otherwise aging agricultural sector—will continue to offer South Korea an at least temporary economic counterweight to accelerating population aging.

In the long run, however, South Korea’s economic prospects continue to be dragged down by the lowest TFR among the world’s major economies (0.84 in 2020). South Korea and the rest of ultra-low-fertility Asia have suffered a larger pandemic-related decline in fertility than other parts of Asia and regions of the world. South Korea’s TFR is now so low that a rebound to the long-run level assumed in medium-variant population forecasts would represent a virtually unprecedented fertility event among middle- and high-income countries.

South Korea has now entered an era of forgone rather than postponed pregnancies as increases in age-specific fertility rates among older women no longer make up for declines among younger cohorts. South Korea’s plummeting marriage rate poses a potent obstacle to any fertility rebound, absent a rise in out of wedlock births, which are discouraged by both social norms and the legal treatment of children born out of wedlock.

Another potential factor reducing fertility is the high private costs of education in South Korea. These costs are not uniquely high, however; similar cost levels have not caused fertility to drop to South Korean levels elsewhere in the OECD.

South Korea's extraordinary female educational attainment—more than three-quarters of women 25–34 now graduate from university and into a relatively high degree of financial independence—combined with the worst high-income country male-to-female unpaid (household) work split in the world outside Japan pose an ongoing structural impediment to a rebound in marriage frequency. The very small number of low-educated South Korean women today, compared with a much larger number of men 20–39 with lower education (thanks to cultural preferences for male children and lower average educational attainment) creates a structural “marriage mismatch” between men and women in South Korea. The prospects for low-educated South Korean men to marry local women are dire and will continue to be so.

South Korea's dramatic descent into record low TFR levels will not be easily reversed. The country has already invested resources in family-oriented childcare social services. Although such public investments could be increased, recent experience from Japan, where fertility levels remained stable during former Prime Minister Shinzo Abe's “Womanomics drive,” suggests that the fertility-boosting impact of more public money channeled toward family-related social services will be muted. Higher levels of public social investments in daycare services in South Korea would help, as would reductions in the private cost of higher education, but they are not likely to reverse the country's fertility slump.

In recent years, several other Asian governments have tried various methods of direct government financial incentives and government social nudging to encourage higher marriage and local fertility levels. However, table 2 makes clear that such measures in high-income Asian countries, including the quite hands-on approaches tried in for instance Singapore, have failed to reverse declines to TFR levels of about 1. So while the South Korean government could start offering financial incentives of an unprecedented magnitude to the population for having more children, the regional scope of the dramatic TFR slowdown suggests such measures would likely fall short.

Overall, there appears to be no obvious public spending way for South Korea's government to secure a fertility rebound. Presumptions that working women also carry nearly the entire household work burden appear to discourage marriage; the decline of marriage, combined with social norms and laws that discourage out of wedlock births, contributes to declining fertility. Any change in societal norms is likely only to occur over an extended period of time, making any near-term fertility rebound in South Korea nearly impossible to engineer. The explicit role of government policy in shifting societal norms in advanced economies like South Korea is unclear and possibly muted.

The South Korean government could take several immediate actions to try to facilitate such a longer-term shift and increase national fertility rates:

- *Immediately end remaining legal discrimination against children born out of wedlock or into nontraditional families.* Such legal changes must be accompanied by broad information campaigns aimed at both civil servants and the general public to highlight the beneficial effects of enshrining

these children's rights and the full rights of South Korean women in all workplace legislation during and especially upon returning to the workforce after pregnancy.

- *Seek to ensure that recent high levels of marriage-based inward migration are maintained and preferably expanded.* In particular, the government should encourage the marriage of foreign husbands to highly educated Korean women. South Korea's international migration rules must pose no obstacles to Korean nationals seeking a foreign spouse, and children born with one or even two foreign long-term residing parents in South Korea should have access to de facto birthright citizenship. Such explicit family-based inward migration must complement employment-based inward migration aiming to stabilize the size of the workforce in sectors facing labor shortages.
- *Acknowledge that any near-term shift in fertility levels is unlikely and commence the structural adjustment and downsizing of South Korea's early childcare and educational institutions accordingly.* It is too late to avoid a lasting baby bust.

REFERENCES

- Gietel-Basten, Stuart, and Georgia Verropoulou. 2018. *The Changing Relationship between Marriage and Childbearing in Hong Kong*. *PLoS One* 13, no. 3.
- IMF (International Monetary Fund). 2021a. *Fiscal Monitor*, April. Washington.
- IMF (International Monetary Fund). 2021b. *World Economic Outlook database* (accessed on May 31, 2021).
- Noland, Marcus. 2000. *Avoiding the Apocalypse: The Future of the Two Koreas*. Washington: Institute for International Economics.
- Noland, Marcus. 2012. Korea's Growth Performance: Past and Future. *Asian Economic Policy Review* 7: 20-42.
- Noland, Marcus, Sherman Robinson, and Tao Wang. 2000. Modeling Korean Unification. *Journal of Comparative Economics* 28: 400-421.
- Yang, Wen Shan. 2019. *Evaluating the Impact of Taiwan's Fertility Policy*. *Taiwan Insight*. University of Nottingham (accessed on May 31, 2021).



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