EXITS FROM THE FOUR-LANE HIGHWAY TO NATIONAL DEVELOPMENT:

WHAT ARE THE RISKS TO SUSTAINED ECONOMIC GROWTH?

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ABSTRACT

Sustained rapid economic growth is empirically necessary and sufficient for reducing poverty, meeting basic needs, and achieving high levels of nearly any measure of human progress. And there are strong arguments and evidence that achieving and sustaining very high levels of economic productivity has depended on countries achieving strong, market-supporting, sufficiently inclusive institutions. However, matching up theory and evidence about economic growth and institutions in the medium run (years to decades), in which, in a play on Keynes's famous phrase, we are *not* all dead, with the very long-run historical trajectory, in which we *are* all dead, is difficult. It is clear that having "low quality" institutions is not a barrier to initiating an episode of rapid economic growth, as the unprecedented growth of the People's Republic of China (PRC) since 1978 amply illustrates. Indeed, since the 1990s many Asian countries have embarked on very rapid growth, but in many cases these growth episodes have not only been initiated but they have also been accompanied by very weak (or negative) changes in state capability. This lack of progress in reaching the "good institutions" which are strongly associated with countries with high levels of prosperity and measures of social progress in the long-run creates the conditions in which sustained economic growth is at risk. It is possible that the feedback loops from economic growth to "institutions" like state capability will be a key factor in determining whether Asian countries will sustain rapid growth and reach high-income status or whether this growth will peter out, or worse, come to a sudden stop or reversal.

Keywords: Economic Growth, State Capability, Rule of Law,

JEL Codes: O1,O4, K4,H1

EXITS FROM THE FOUR-LANE HIGHWAY TO NATIONAL DEVELOPMENT:

WHAT ARE THE RISKS TO SUSTAINED ECONOMIC GROWTH?[1]

INTRODUCTION

National development has commonly been conceived of as a fourfold transformation of countries (or regions) moving towards: (i) a higher-productivity economy; (ii) a more responsive polity; (ii) a higher administrative capability of public sector organizations; and (iv) social identities and norms supporting equal treatment of all citizens. Francis Fukuyama popularized the phrase "getting to Denmark" as a description of this fourfold development process. In his famous article "The End of History," Fukuyama (1989, 1992) argued that the competition among alternative of systems in the 20th century (absolutism, fascism, Bolshevism) would soon be over. It seemed that rapid progress along all four lanes of the highway of national development (economic growth, liberal democracy, strong "Weberian" bureaucracies, and social equality) was inevitable.

The decades since the 1990s have been very good for economic growth in the developing world generally, as the global pattern of growth has (finally) moved towards unconditional convergence (Patel, Sandefur, and Subramanian 2021;Kremer, Willis, and You 2021). The Asia region's growth performance has been exceptionally good since 1990 as growth has spread beyond Japan to the four leading "dragons" of the 1960s/70s (the Republic of Korea; Taipei,China; Singapore; and Hong Kong, China) and to Indonesia, Malaysia, and Thailand to ultimately include in rapid growth not only the two population giants (India and the PRC) but also Viet Nam and Bangladesh. A recent study of growth accelerations (Gootjes et al. 2024) identifies 13 countries in Asia with post-1990 growth acceleration episodes (alphabetically, with dates of the episode): Bangladesh (2003–2023), Bhutan (1994–2012), Cambodia (1999–2019), the PRC (2000–2014), India (2003–2019), Indonesia (2002–2019), the Lao PDR (1994–2018), Malaysia (2010–2018), Myanmar (1992–2018), Nepal (2008–2019), the Philippines (2010–2019), Sri Lanka (1990–2016), and Viet Nam (1991–2019).

However, while speeds in the economic growth lane of the four-lane development highway have been fast and accelerating, progress in other dimensions of national development has been lagging. Andrews, Pritchett and Woolcock (2016) documented that, across a variety of empirical measures of the concept of "state capability," there have been decades of stagnation: a "big stuck" at low to moderate levels. Most developing countries, at least since 1996 (the first year of the World Governance Indicators), have actually experienced (modest) negative trends in terms of state capability and very few countries have been on track to achieve the levels of state capability of even the weakest developed countries (e.g., Portugal). A 2020 update of the "big

[1] This paper was written for the Asian Development Bank Institute Annual Conference 2024, which had the following theme: Can Asian Economies Forge a High-Income Future and Avoid Burnout? An initial draft was presented at the conference on 27 November 2024. I would like to thank the ADBI as the host and the organizer Daniel Suryadarma and the discussant Professor Hal Hill for their inputs and forbearance.

stuck" analysis found that not much had changed: The "big stuck" remained stuck (Pritchett 2020).

This raises the question of the joint dynamics of different dimensions of national development. Francis Fukuyama's phrase "getting to Denmark" is about more than growth, it is a metaphor for the developed countries that top the list of measures of not just GDP per capita but also of national development (Pritchett 2022) and omnibus measures of social progress (e.g., the Social Progress Index)[2] and happiness (e.g., the World Happiness Report 2024 (Helliwell et. al 2024))[3]. These countries are ranked highly on state capability and there is a quite strong cross-national association between GDP per capita and State Capability. But in the last two decades many countries have made very rapid progress in GDP per capita but slow, zero, and even negative progress in State Capability. There is strong evidence that something labeled "good institutions" (usually at a minimum implying rule of law, freedoms, and being "open") have historically been strongly associated with sustained economic progress in reach high income levels (see, among many others, Mcloskey and Carden 2020, North, Wallis, Weingast 2009, Acemoglu, Johnson, Robinson 2001, Acemoglu and Robinson 2012). This raises the question of whether sustained economic growth taking countries to "high income" levels of GDP per capita is compatible with low and stagnating levels of State Capability. Will stagnating State Capability ultimately act as a drag on countries moving beyond middle-income status?

The recent events in Bangladesh highlight the concern that episodes of rapid growth which are accompanied by weak performance in governance can produce political backlash, irregular regime change, and potentially (yet to be seen) lower economic growth. While growth in Bangladesh has been referred to as "miracle" growth, there is a strong sense of a large imbalance between trends in growth and trends in governance and "institutions," often referred to as the "Bangladesh paradox" (Raihan, Bourguignon, and Salam 2024). Bangladesh has managed to create an extended episode of rapid growth (and progress in other social indicators), but by 2024, even before the protests that resulted in the resignation of Prime Minister Hasina began, it was clear to many observers that the path of rapid growth with deteriorating institutions was unlikely to be sustained. While some were proclaiming Bangladesh a "miracle" rather than a paradox, Bangladesh exhibits clear warning signs of state fragility. The Fragile States Index 2023 listed Bangladesh as "high warning," ranking it between Equatorial Guinea and Iran. The Rule of Law Index ranked Bangladesh 127th out of 140 countries. World Press Freedom ranked it 163rd out of 180. In the Corruption Perceptions Index it was 149th out of 180. Freedom House ranked Bangladesh as "partly free" with a score that placed it only just ahead of Togo and behind Mauritania. By 2023, Bangladesh had experienced one of the largest declines in the Freedom House measure over the previous 10 years (on a par with the decline in Myanmar and Tajikistan over this period). While possible, it became increasingly difficult to envision another ten or 20

[2] Denmark is number three on the 2020 Social Progress Index and the top 25 are all developed countries, except for two new European entrants (Slovenia and Estonia) and Chile at number 25.
[3] Denmark is the second country in the 2020–2022 ranking of happiness, and of the top 25 all but two are traditionally "developed" countries (Costa Rica is 23, Singapore is 25).

years of economic progress while these many other aspects of state capability and governance of "national development" deteriorated.

1) State Capability and the "Big Stuck"

1.1) The Empirical Measure of State Capability

The concept of state capability is rooted in the ability of state organizations to fulfill their purposes through effective implementation of the laws, policies, and tasks for which they were created. Max Weber's definition of a "state" is a political organization that "successfully upholds a claim to the monopoly of the legitimate use of physical force." Charles Tilly (1990) famously claimed that "war made the state and the state made war" as he argued that the capability to make war led to other state capabilities, like the collection of taxes. Besley and Persson (2009) identify legal and fiscal capacity as central, complementary aspects of state capacity. While there is a wide variety of measures of state capability, they are generally quite highly correlated across countries (Drumm 2015) and tend to reflect similar trends (Pritchett 2020)[4].

The World Governance Indicators (Kaufmann, Kraay, and Mastruzzi 2005) from 1996 to 2022[5] reported on six measures of governance through a statistically sophisticated amalgamation of available indicators. For this paper I use as the measure of State Capability (SC)[6] the simple average of four World Governance Indicators: Government Effectiveness, Rule of Law, Control of Corruption, and Regulatory Quality. The raw WGI indicators are on a normed scale of zero and hence have positive and negative values; I rescale my State Capability measure so that the lowest value of any country over the 1996–2022 period has the value of 1 and the highest raw value of any country takes the value of 100.

This measure of State Capability is not intended as a measure of the broader concept of governance. In particular, "state capability" is not a measure of "electoral democracy," nor (more broadly) the ideal of "state legitimacy," nor does the measure of state capability reflect respect for either "negative" or "positive" human rights, nor a measure of "freedom." As such, I do not include in State Capability the WGI measures for "voice and accountability," nor "political stability." These other aspects of governance are important, but conceptually distinct, and need an analysis in their own right.

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[4] Pritchett (2020) presents an analysis of the "big stuck" using four different indicators of "state capability" (WGI SC, the "quality of government" indicator, the "public service" indicator from the Fund for Peace, and the Bertelsmann Transformation Index ranking for "steering capability" and "resource efficiency") and finds that, while there are differences from country to country, the overall results on levels and trends are quite robust.

[5] The WGI are originally generated only every other year and so there are only data for 1996, 1998, 2000, and 2002 and then every year since 2002, so I create values for each of the four indicators for 1997, 1999, and 2001 with a simple linear interpolation.

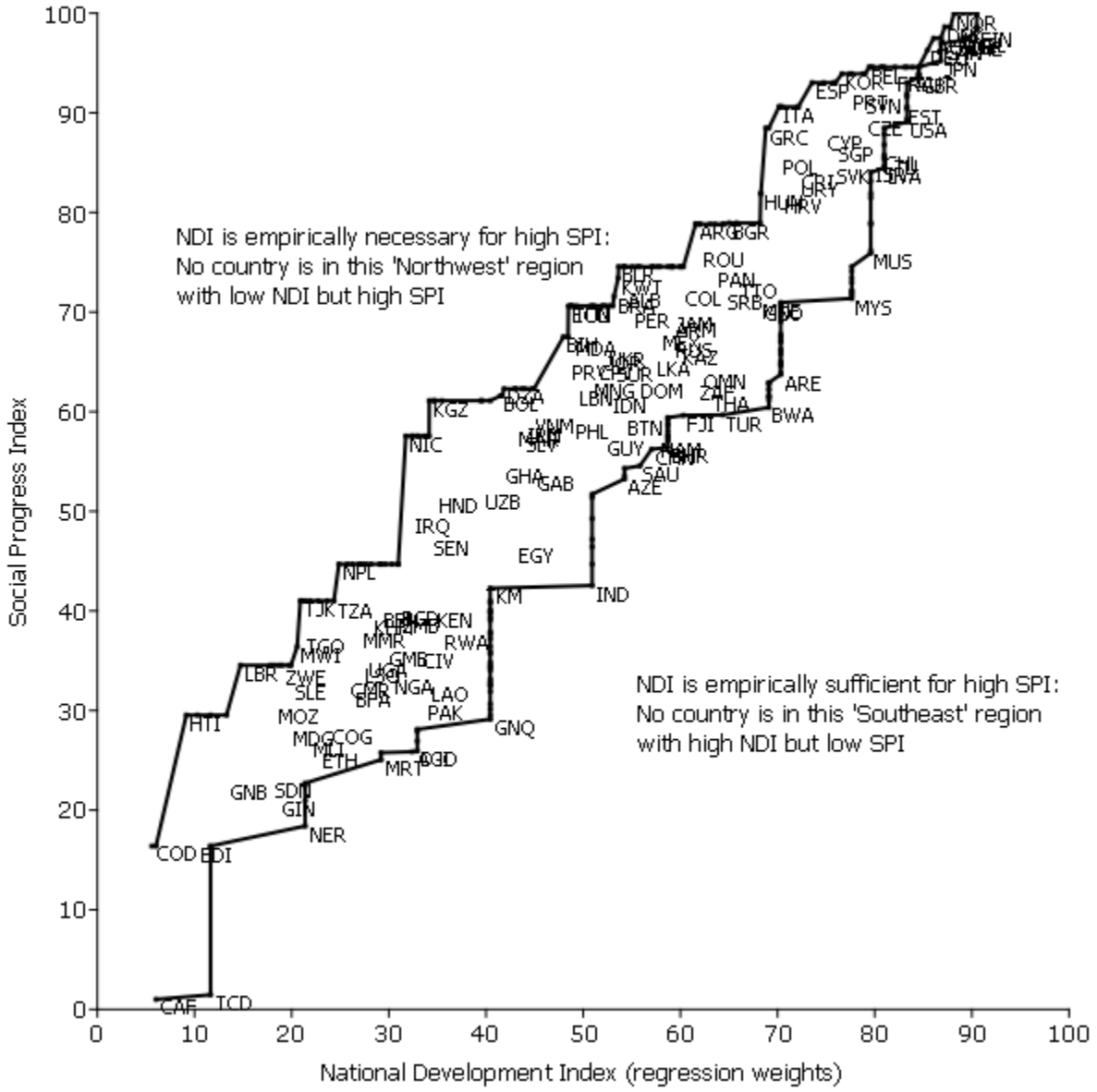
[6] Hereafter the capitalized words "State Capability" or the abbreviation SC should be taken to refer to this particular empirical measure.

The main drawback of using the WGI for time series is that the global value for each indicator is normed to zero for each year and hence, by definition, the global trend is zero. I don't regard this as an empirically compelling objection to the present analysis, for three reasons. One, the underlying indicators of the WGI are not rescaled year by year and hence do have trends and these raw indicators are broadly compatible with zero overall progress. Two, a comparison of the WGI State Capability Index with other measures of state capability that are not normed each year, such as the "Quality of Government" indicator from the International Country Risk Guide, gives roughly similar results on trends; in fact, the Quality of Government measure over the same period has a slight downward trend, so if anything, the zero trend enforced by year-to-year norming in the WGI may *overstate* progress (Pritchett 2020). Three, the challenge of the "big stuck" is that countries are not making progress relative to other countries with high capability, so one can reinterpret all of the trends below as being "relative to high capability in that year" and hence, for instance, a country with a negative trend is falling behind the capability of other countries, without any major substantive change in implications.

1.2) State Capability Is Positively Associated with High Human Well-being

The reason for focusing on the joint dynamics of economic growth and state capability is that they are both closely and reliably associated with higher levels of human well-being. Figure 1, from Pritchett (2022), shows the association of the Social Progress Index, built up from 52 direct physical indicators of well-being (and this index includes no economic or money metric indicators, so there is no "double counting" or built-in association with economic measures), and an index of national development, which is a regression coefficient weighted average of GDPPC, State Capability (as measured here), and a POLITY-based measure of democracy. High levels of national development are *empirically necessary* for high levels of social progress (no country achieves high levels of Social Progress without high national development) and are *empirically sufficient* (no country achieves high levels of national development without achieving high levels of Social Progress).

Figure 1: National Development Is Empirically Necessary and Sufficient for High Levels of Social Progress

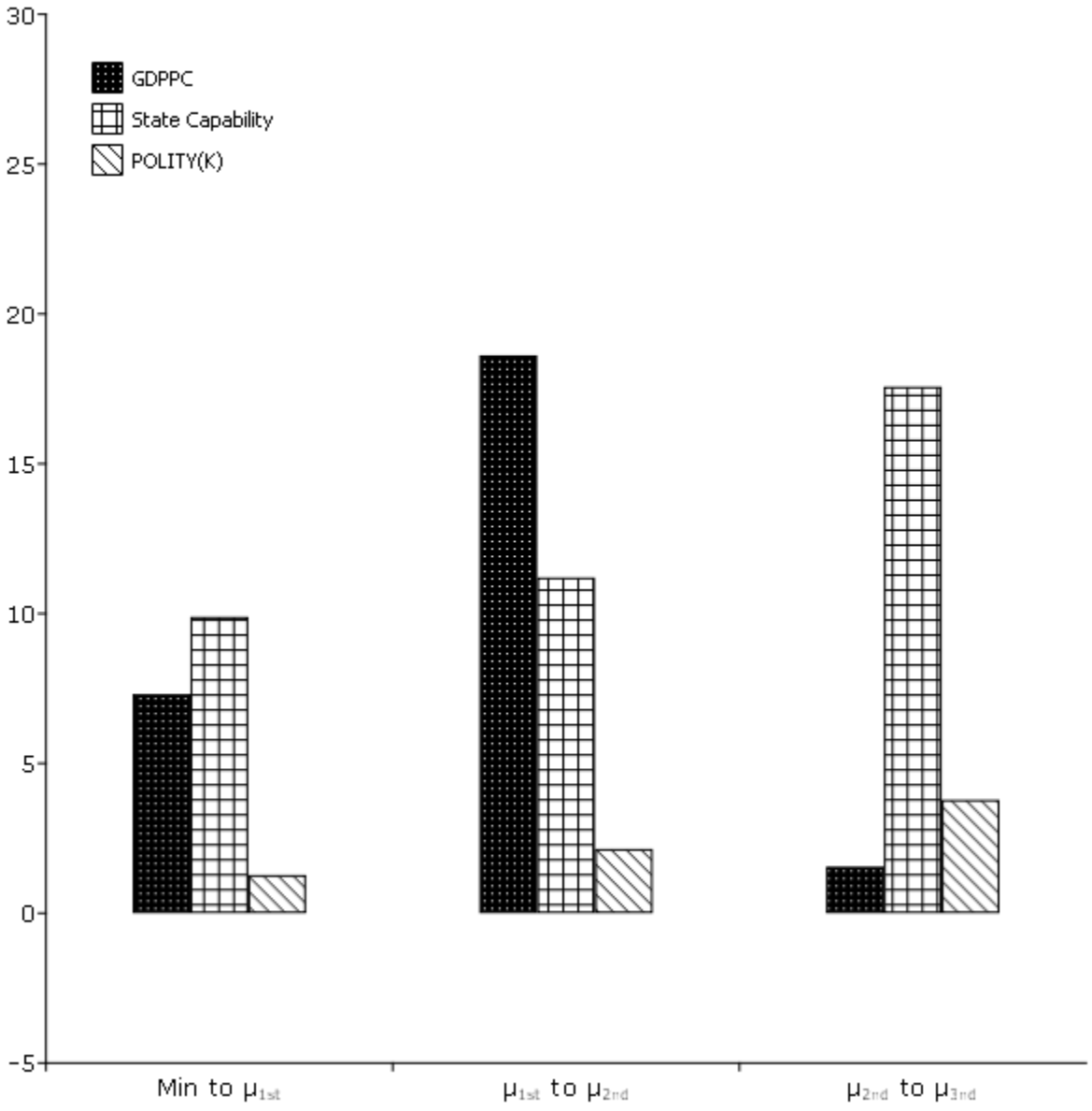


Source: Pritchett (2022), Figure 3.

A multivariate regression of the Social Progress Index on GDPPC (with quartic terms in GDPPC to flexibly allow for nonlinearity), State Capability, and Democracy can be used to predict the gain in social progress associated with an improvement in each of those variables as they improve across the range of development outcomes. Figure 2 shows the gain in Social Progress associated with an increase in each of the indicators (all scaled 1 to 100) from (a) the lowest to the average of the first tercile (first three bars on the left), (b) the average of the first tercile to the average of the second tercile (middle three bars), and (c) the average of the second tercile to the average of the highest tercile (final three bars). The graph shows that, across the key

range of "national development" from very low (mean of the first tercile) to "middle range" (mean of the second tercile), improvements in *both* GDPPC and State Capability are associated with large gains in Social Progress.

Figure 2: Social Progress Index and Improvement with Three Elements of National Development



Source: Adapted from Pritchett (2022), Figure 7a.

A country improving from the bottom third to the second third in both GDPPC and State Capability would be expected to have a gain in the Social Progress Index equal to the sum of the bars, whereas if a country had the same growth but zero improvement in State Capability the expected improvement would only be that expected from growth. This emphasizes that concern

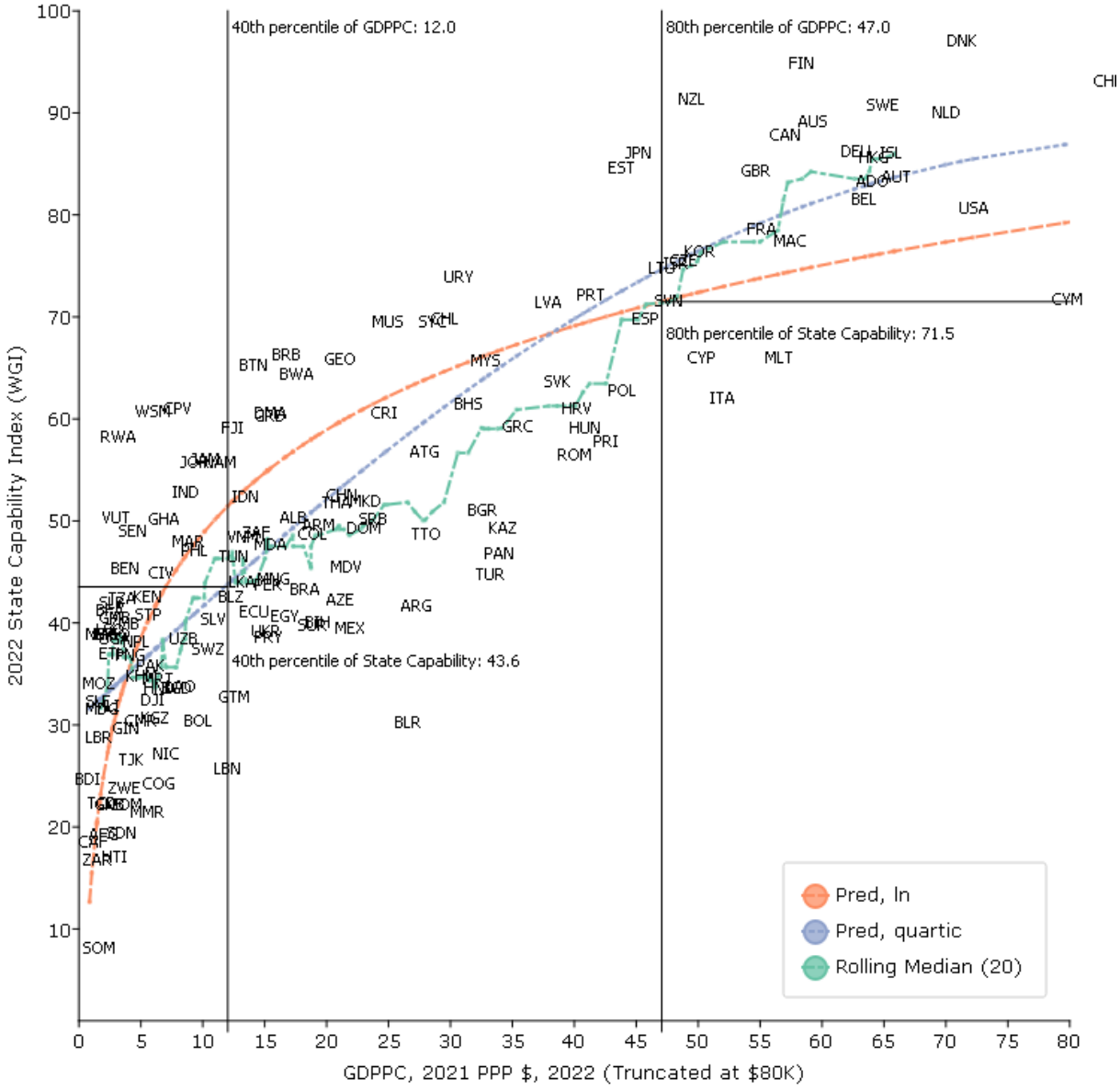
about the joint dynamics of GDPPC and State Capability is *both* because: (i) State Capability may be a factor in facilitating and sustaining high levels of GDPPC *and* (ii) State Capability contributes *directly* to well-being for any given level of GDPPC.

1.3) The Cross-National Association of Levels of GDPPC and WGI State Capability

Figure 3 shows the cross-national association of State Capability and PPP GDPPC in 2022. The figure excludes the high oil-dependent economies (who tend to have very low SC for their level of GDPPC). The graph is truncated at P$75,000 (which excludes very high GDPPC countries like Singapore)—this is done only to increase resolution in the relevant range for developing countries. The association is illustrated with three "predicted" values of SC for GDPPC: (i) a simple regression of SC on the natural log of GDPPC to allow for a (particular) curvilinear relationship; (ii) a regression with quartic terms in GDPPC to allow for nonlinearity (as the SC index is a normed 1 to 100 scale there is no theoretical reason to expect linearity); and (iii) a nonparametric measure, the rolling median of SC in a window of 20 countries (10 on each side) across levels of GDPPC.

There is a reasonably strong association between GDPPC and State Capability. The R-Squared of the quartic regression (also including a binary indicator for FSU countries and Eastern European countries) is .765 (or similarly, for the natural log .707). The association is modestly nonlinear, tapering off at the high levels of GDPPC. The figure illustrates that most countries in the bottom 40% by GDPPC (below P$12,000) are also in the bottom 40% by State Capability (bottom left box). Also, nearly all countries with GDPPC in the top 20% (above P$47,000) are also in the top 20% in State Capability (top right box), with just Cyprus, Malta, and Italy having a GDPPC over P$47,000 and a State Capability below 71.

Figure 3: The Cross-National Association between GDPPC and State Capability Is Strong and Nonlinear



Notes: High-income oil countries not included in the graph. Truncation at 80K excludes Norway, Bermuda, Ireland, Luxembourg, and Singapore.

Source: Author's calculations.

This cross-sectional association says nothing about cause and effect between these two national development components. The cross-national association of levels in 2022 is just the result of the long-run joint dynamics. History has led to nearly all European countries and their offshoots (US, Canada, Australia, New Zealand) having high GDPPC and high State Capability.

This is also the case for some Asian countries/economies/regions: Japan (JPN); the Republic of Korea (KOR); Hong Kong, China (HKG); and Singapore (SGP) (not shown due to truncation). All countries with GDPPC in the top 20% (over $47K) have a State Capability above 71.5 (the 80th percentile of SC), with the exception of Italy, Cyprus, and Malta. It would be an anomaly relative to current outcomes for any nonmineral wealth country to reach high income levels without achieving quite a high level of State Capability.

2) In the Medium Run (Decades) Growth and State Capability Are Not Closely Connected

2.1) Countries Initiate Extended Rapid Growth Episodes Starting With Low State Capability

While there is a strong relationship between the *levels* of GDPPC and State Capability, having low State Capability does not imply slow economic growth. Figure 4 shows the cross-national association of GDPPC ppa (percentage per annum) growth from 1996 to 2022 and State Capability in 1996. The unconditional bivariate association is slightly negative: Countries with higher State Capability were likely to grow modestly *slower*. However, if initial GDPPC is included (which allows for conditional convergence), this reverses and countries with higher initial State Capability conditional on their initial GDPPC grew modestly faster.

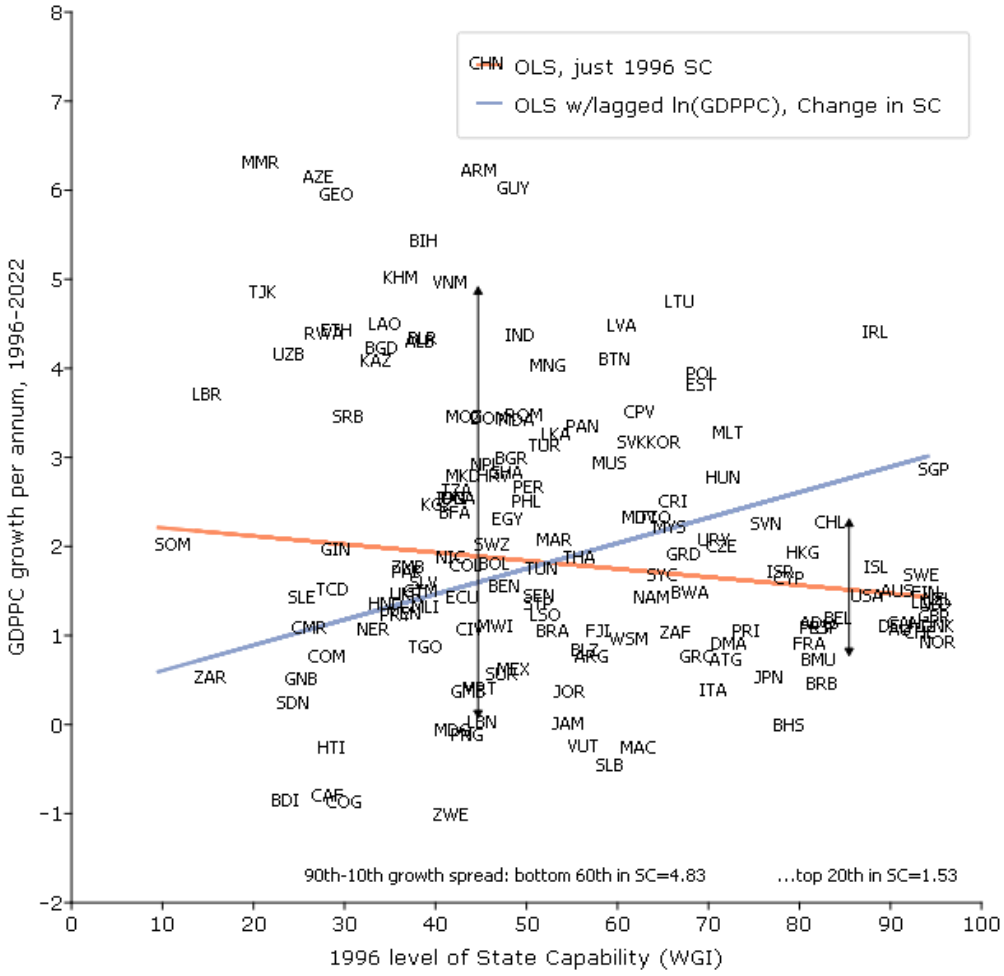
But the main feature of the relationship between medium-run growth (over the span of decades) and state capability is that the *variability* across countries is much, much larger among countries with weak State Capability. The 90th–10th percentile spread of growth rates for the countries in the bottom 60% of State Capability was 4.83 ppa—ranging from the 10th percentile near zero (e.g., Jamaica (JAM), Papua New Guinea (PNG)) to almost 5 ppa (e.g., Viet Nam (VNM), Cambodia (KHM), Tajikistan (TJK)). Hence the *fastest* and the *slowest* growth happened in countries with low State Capability. If two countries started with the same GDPPC in 1996 and one grew at the 90th percentile pace and one at the 10th percentile pace, the faster-growing country would have GDPPC *3.5 times higher* by 2022.

This high variability in growth rates across countries with low SC is also reflected in the stability of growth rates within countries. North, Wallis, and Weingast (2009) frame the question of the role of institutions by showing that in the periods in which developing countries grow fast, they grow faster than developed countries, but in the periods in which they grow slowly, they also grow much more slowly than developed economies. The reason for the lack of absolute convergence in incomes (until recently) was not that developing countries did not experience rapid growth, as they often had periods of rapid growth, but, compared to developed countries, they also experienced more periods of slow and negative growth and remained in those periods for longer than developed countries did (Kar et al. 2013). Pritchett and Werker (2012) document that growth volatility, the difference between the highest growth and the lowest growth for the same country over time, is much larger for countries with weaker democracy and with the lowest state capability (e.g., law and order).

Not surprisingly, as high State Capability countries already have relatively high GDPPC, the growth rates of high State Capability countries are modest, and the variation is very low, the

90th–10th percentile spread of growth in the top 20% of SC countries is only 1.53 ppa. What "strong institutions" ensure is *steady* growth, with low variability in growth rates, as the potential for very rapid growth among high-capability countries is usually limited by these countries already being near the productivity frontier.

Figure 4: Many Countries with Rapid Growth from 1996 to 2022 Began with Low State Capability



Source: Author's calculations.

2.2) The Medium-Run Growth of GDPPC and Improvement in State Capability Are Only Weakly Related

Countries with weak SC can generate and sustain episodes of rapid growth; moreover, the association between the pace of economic growth and the improvement in SC is positive (and statistically significant) but has relatively low explanatory power.

One framing of the Bangladesh "paradox" is that it had rapid economic growth (4.3 ppa) while its level of state capability remained roughly the same (unlike some of the measures cited

above, the WGI SC measure increased, from a low level, but by less than 1 point (on a 1 to 100 scale) over 26 years). But this "paradox" of a disconnect between the pace of growth and the evolution of SC is hardly unique to Bangladesh.

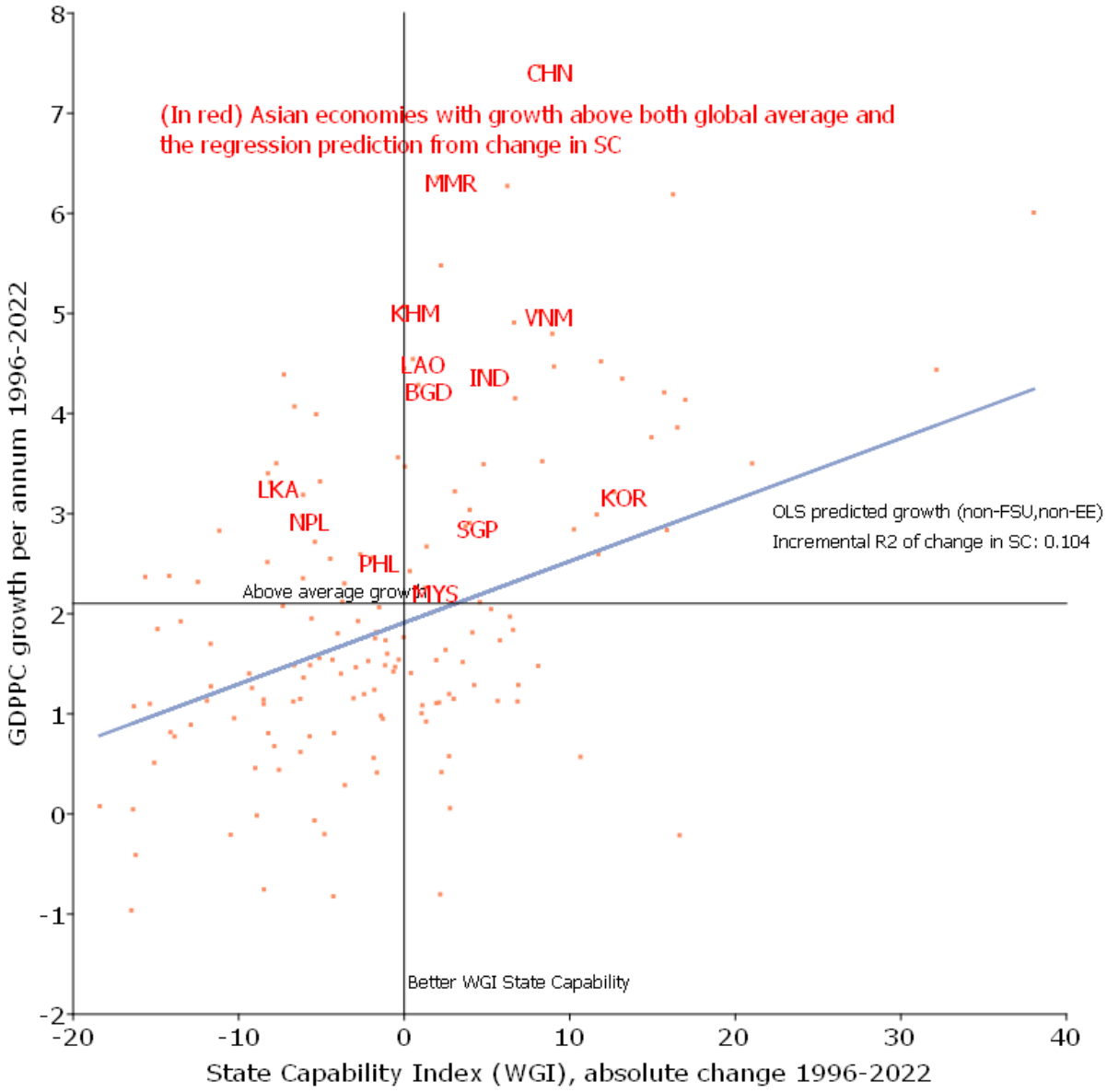
Sri Lanka (LKA), Nepal (NPL), Cambodia (KHM), and Mongolia (MNG) all had relatively rapid growth (above 3 ppa) but *falling* levels of state capability.

Other countries had rapid growth but only marginal improvements in SC. Myanmar (MMR) grew at 6.36 ppa but SC increased by only 2 points; the Lao People's Democratic Republic (LAO) grew at 4.54 ppa but SC improved by only a half of one point.

Even those countries that improved in SC had growth that was faster than expected for the improvement in SC. India's SC grew by 4.6 points, but that is the improvement in SC "expected" for a country with average growth, whereas India grew at a pace of 4.42 ppa over this period. Viet Nam (VNM) improved SC by 8 points over this period—but grew at 5.0 ppa. The PRC (CHN) did see improved SC, by a substantial 8.1 points, but the "expected" growth was 3 ppa, not the 7.5 ppa it actually achieved.

Of course, some Asian countries were near the cross-national association, often with about average growth and near zero improvement in SC (e.g., Malaysia (MYS), Pakistan (PAK), and Thailand (THA)). Indonesia (IDN) stands out (by not standing out) with relatively strong growth of 2.6 ppa (this growth rate averages over the East Asia crisis years and so understates its post-crisis performance) and also a very large improvement in SC of nearly 12 points.

Figure 5: There is a Positive, but Weak, Association between Economic Growth and the Improvement in State Capability Over the Period 1996–2022: Many Asian Countries (Highlighted) Experienced High Growth Relative to their Improvement in State Capability



Source: Author's calculations.

Another way of looking at the growth-state capability relationship is to start from "growth accelerations"—periods in which growth accelerated to a high level and then remained high—and examine what happened to SC during those periods. I use the growth accelerations and their starting and ending years as identified by the method of Gootjes et al. (2024) and use all of the growth acceleration episodes that happened in Asia after 1990, as that is the period for which the WGI SC measure exists, which implies that earlier episodes, like the Republic of

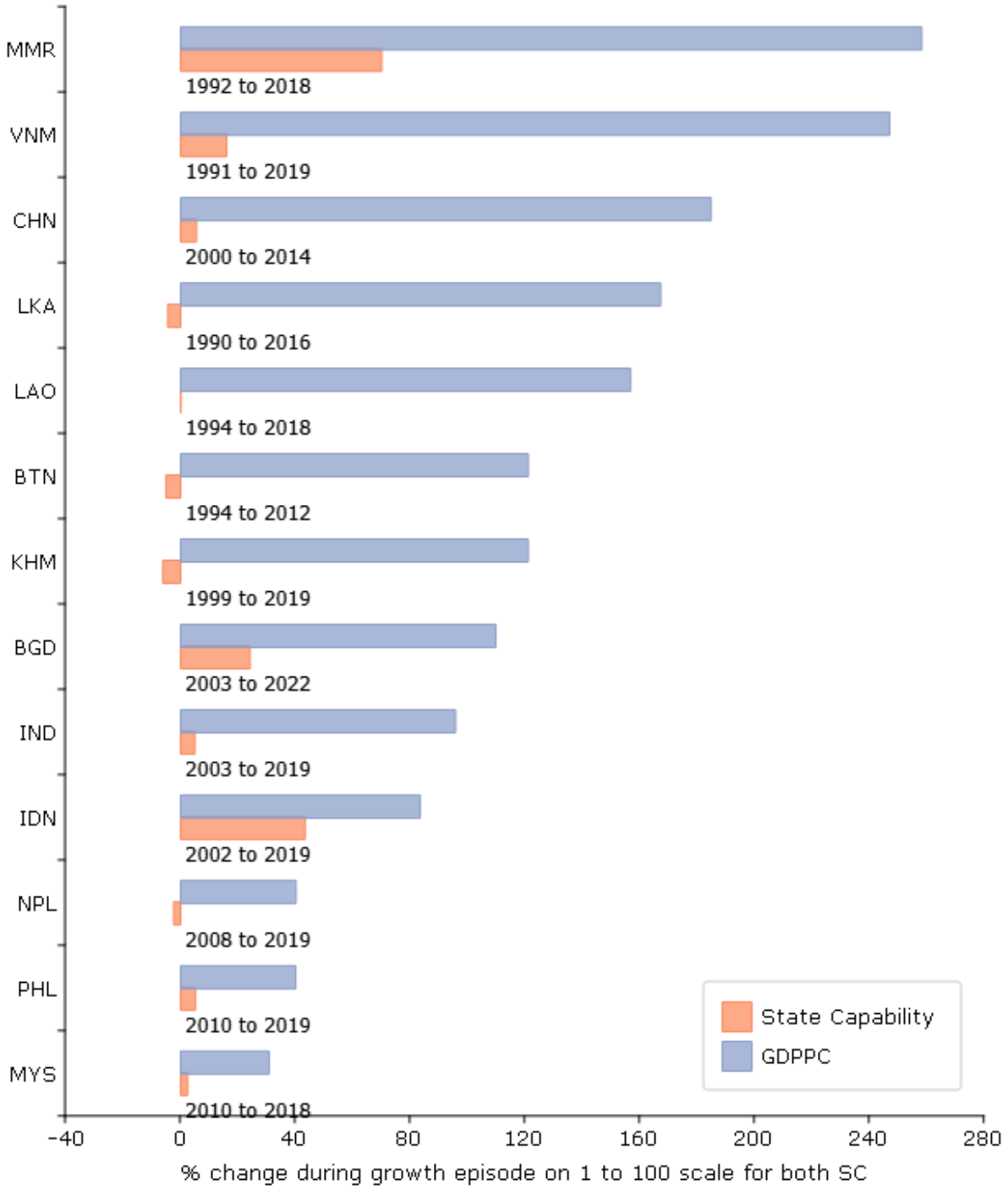
Korea 1966–1997 or Indonesia 1970–1984, are not included. This produces 13 countries with a recent growth acceleration. Also, so that I can compare changes in State Capability and in GDPPC, I scale GDPPC to a 1 to 100 basis so that both measures have the same interpretation, which is that a one-unit change is moving one unit along the scale from the lowest ever to the highest ever in either SC or GDPPC.

Figure 6 shows the percentage change in State Capability and GDPPC, with both scaled from 1 to 100, during the acceleration episodes. Given that these are acceleration episodes, most of the changes in GDPPC are very large, with nine episodes in which the GDPPC (scaled 1 to 100) more than doubled during the episode. Over the same periods the changes in State Capability are mostly quite modest. Four of the countries (Nepal, Cambodia, Bhutan, and Sri Lanka) had a lower State Capability at the end of their acceleration episode than at the beginning. Five countries had improvements in State Capability of less than 10% during the episode (Malaysia, the Philippines, India, the Lao People's Democratic Republic, and the PRC) even though GDPPC (1 to 100) more than doubled in three of those countries (India, the Lao People's Democratic Republic, and the PRC).

Only four countries had improvements in State Capability during their episode of rapid growth of more than 10%: Indonesia (44%), Viet Nam (17%), Bangladesh (25%), and Myanmar (71%). However, as we will see below, these latter two large percentage increases in SC are due to the particular timing (e.g., Myanmar's growth episode is dated from 1992 to 2018 and its SC improved enormously from 2004—when it was one of the lowest in the world—to 2018 but then fell precipitously from 2018 to 2022). Bangladesh's acceleration episode began (according to the Gootjes et al. (2024) dating method) in 2003 while its SC fell from 1999 to 2004 and then recovered (hence the large increase during the episode), but in 2022 its level was only modestly higher than in 1996.

Many countries managed to maintain consistently rapid growth over extended periods with either deteriorating SC or small improvements, which implies that the medium run (of decades or more) has a very different dynamic than the long-run cross-national association would suggest.

Figure 6: Evolution of GDPPC and State Capability During 13 Recent Acceleration Episodes in Asia



Source: Author's calculations with WGI SC and growth accelerations from Gootjes et al. (2024).

3) Can Current Trends Persist? Is Lagging State Capability a Threat to the Sustained Growth Needed to Reach High Income Status?

While many Asian countries are experiencing rapid growth, there is significant concern over whether countries are on a path that can be sustained to reach high income status. This section illustrates at least one framing of that concern. I begin with the straightforward calculation of extrapolating the recent trends in GDPPC and State Capability growth out to the year 2050. This calculation reveals that in some (but not all) countries, extrapolating into the medium-term future the current combination of very rapid GDPPC growth and negative, stagnating, or slow growth of State Capability implies that by 2050 there will be an increasingly large empirical anomaly or "paradox." In other words, these extrapolations imply that there will be countries with a level of GDPPC in 2050 that is "upper middle income" or "high income" but with State Capability extrapolated to be much lower than historically associated with countries with that GDPPC. Or, conversely, their 2050 level of State Capability is that typically associated with countries much lower than their extrapolated GDPPC—or, in some cases, even lower than their current GDPPC.

3.1) The Mechanics of the Hypothetical Scenarios

As mentioned in the introduction, Bangladesh experienced an unexpected and irregular change of government with the resignation of the Prime Minister on 2 August 2024. This obviously sheds new light on the previous question of the "Bangladesh paradox" of sustained rapid economic growth but weak and weakening "institutions." I will illustrate the simulations to be done for each Asian country with the example of Bangladesh (although, since the State Capability data only extend to 2022, these do not capture anything about recent events).

The calculations are all straightforward and there are seven elements, each illustrated in Figure 7.

- One, I extrapolate Bangladesh's growth rate from 1990 to 2022 (4.1 ppa) out to 2050 (the solid orange line). Extrapolated at 4.1 ppa, GDPPC in 2050 reaches $24K, which is above the 60th percentile in 2002, roughly the current level of "upper middle income" countries like Costa Rica, Mauritius, and Serbia.

- Two, using the levels of extrapolated GDPPC in each year, I calculate the State Capability "expected" for that GDPPC from the cross-sectional quartic relationship between SC and GDPPC shown in Figure 3 above (the dashed-dotted pink line). This would imply that the "expected" GDPPC for Bangladesh at its extrapolated future level of GDPPC of 24K would be State Capability reaching 55.8, which is about at the 60th percentile of State Capability in 2022. This is a very substantial improvement over Bangladesh's 2022 level of 33.6.

- Three, I extrapolate the level of State Capability to 2050 using the growth rate of SC (in points per year) utilizing either (i) its growth rate over all available years from 1996 to 2022 (dashed blue line) or (ii) the last 10 years (small dashed green line). This is the 2050 level of State Capability that would result from change in the pace of

State Capability improvement. As can be seen in Figure 7, the trend for Bangladesh is positive but small (either for all years or over the last 10 years), and hence the extrapolated levels of SC are close, at 37.3 (last 10 years) and 38.1 (all years), and both are only modestly (1 to 1.5 points on a 1 to 100 scale) above Bangladesh's 2022 value of 33.6.

- Four, I just subtract to calculate the "state capability gap," which is the difference between (i) the State Capability "expected" at Bangladesh's extrapolated 2050 GDPPC according to the cross-national association and (ii) what State Capability would be in 2050 based on current trends. Using the State Capability growth of the last 10 years, this State Capability gap is 15.3 (52.6–37.3). This is a pretty substantial difference, between being near the 60th percentile of countries in 2022 (53.6) (near Indonesia's or Thailand's 2022 level) and around the 30th percentile (37.5) (near Pakistan's or Nepal's level in 2022).

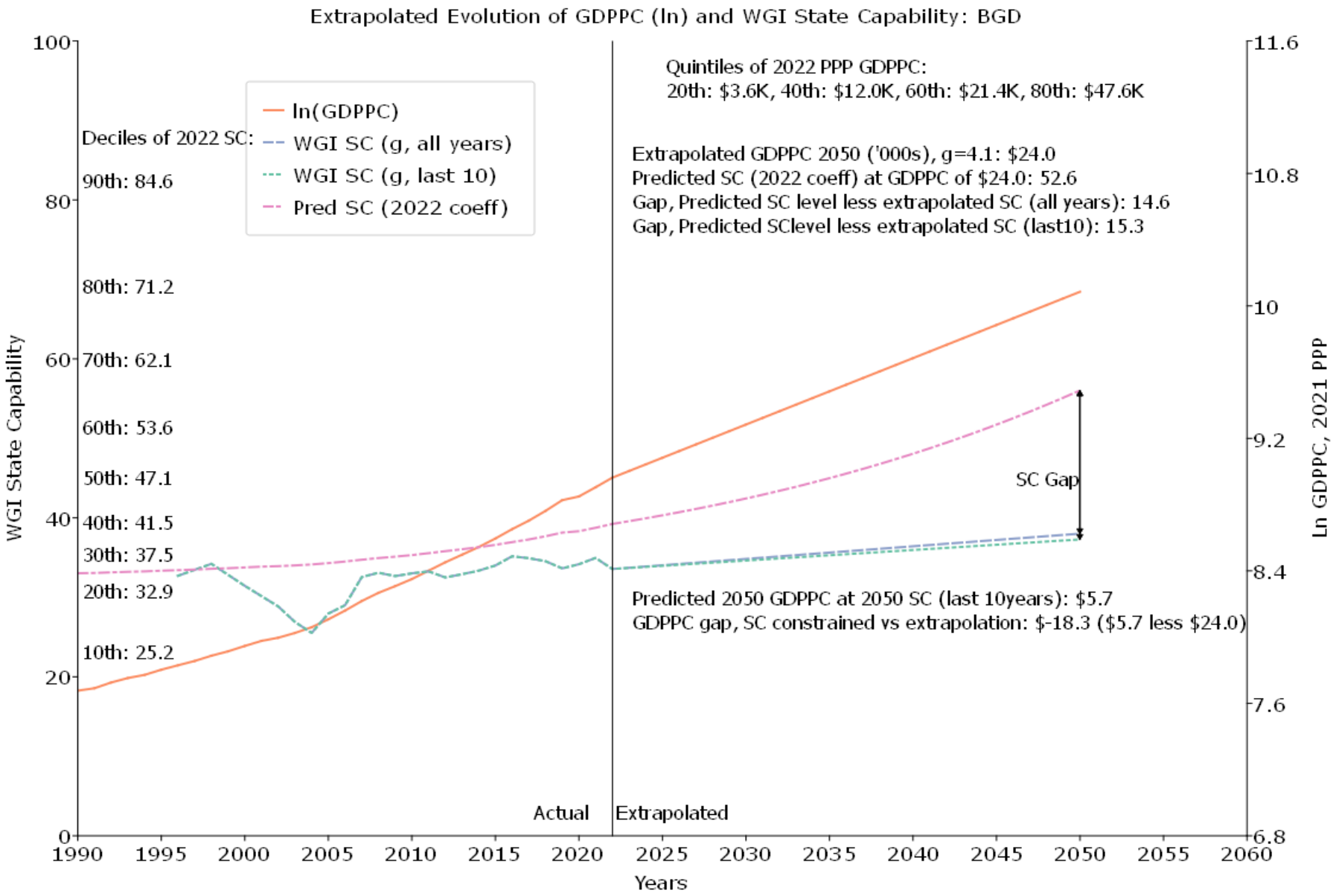
- Five, I "invert" the cross-sectional association in Figure 3 between SC and GDPPC and calculate the 2022 level of GDPPC of countries with the level of State Capability that Bangladesh would have in 2050 extrapolated at the "last 10 year" growth. I calculate the median 2022 GDPPC of the 20 countries centered on Bangladesh's extrapolated State Capability of 37.3. This "expected" GDPPC at the extrapolated 2050 level of State Capability is $5.7K, which is actually *poorer* than Bangladesh was in 2022 (in Figure 7 the actual GDPPC (orange line) is already higher than "expected" for its SC (pink line)). This calculation gives an "output gap," which is the difference between the extrapolated GDPPC and what it would be if it were the expected level for its extrapolated State Capability, which is $18.3K (24K–5.7K).

To return to the metaphor of the title, from a four-lane highway to national development, we might expect, from historical experience, that in terms of the progress in the four national development transformations—to high productivity, to a responsive polity, to a capable state, and to a national identity and equal treatment—they might maintain some relationship with each other by having compatible growth rates over the medium term.

The "state capability gap" and the "output gap" measure conceptually the same phenomena in two different dimensions (for economists, like the primal and the dual). One measures where, given the long-run relationship between GDPPC and State Capability, we would expect State Capability to be for a country that achieved any given level of GDPPC (particularly in a nonresource-intensive way)—that is, the "state capability" gap for a given actual or forecast level of GDPPC. Alternatively, one can ask: "What is the GDPPC we would expect for a country with a given level of State Capability?" This gives the "output gap" between a country's actual GDPPC and the level expected for its SC.

The same simulation with extrapolations is carried out for Asian economies (except for four, which already have high GDPPC and State Capability: Hong Kong, China (ROC); the Republic of Korea; Japan; Singapore), with results in the Graphical Appendix.

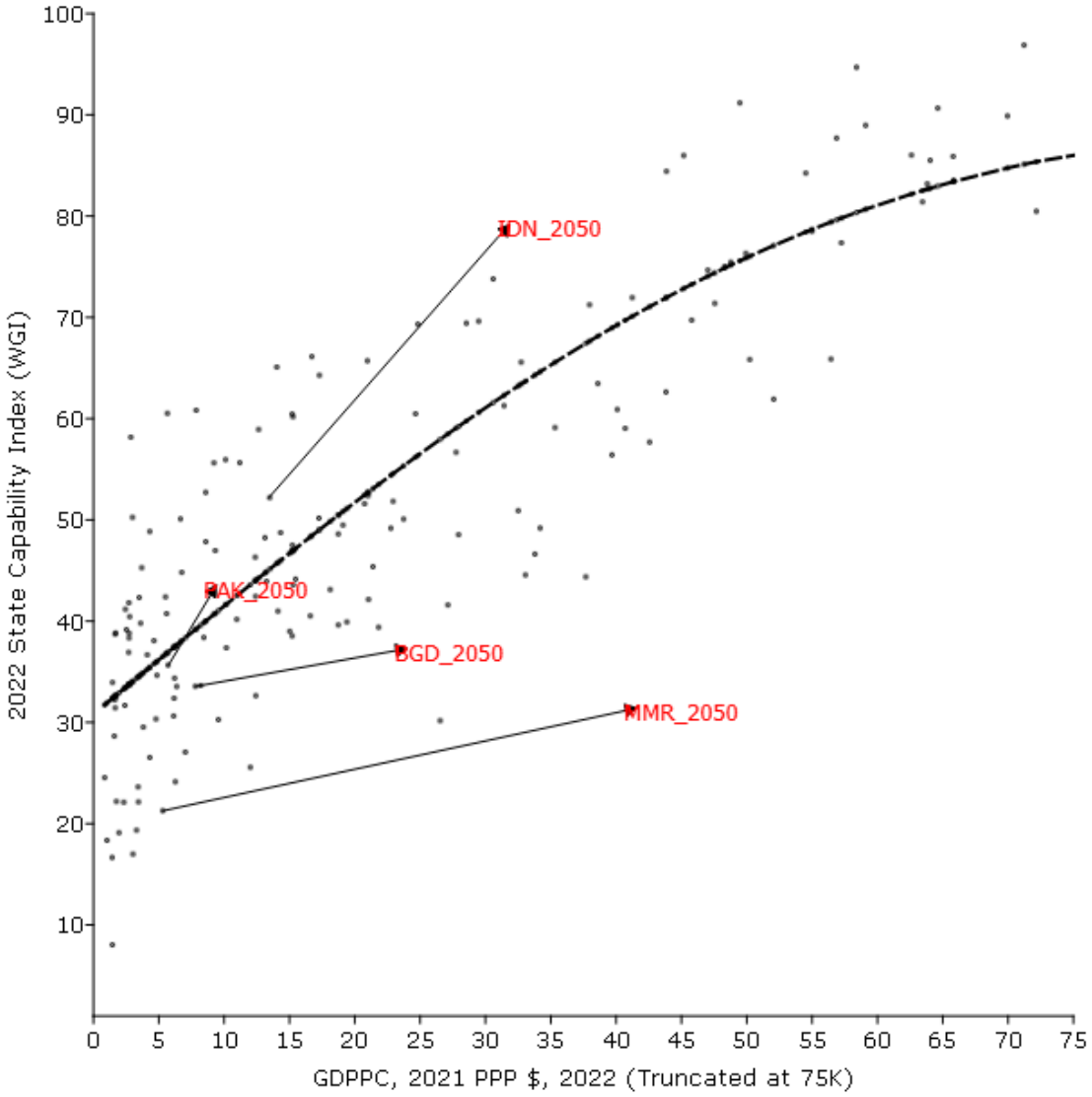
Figure 7: Illustration of the (Hypothetical) Extrapolation of Recent Past Trends in Growth of GDPPC and State Capability



Source: Author's calculations.

Figure 8 illustrates the consequences of the differential speed of progress of GDPPC and State Capability and hence the increasingly large gap between the country's development experience and the cross-national association in levels. The arrows and the text illustrate where an extrapolation of past GDPPC and SC growth would lead the country to be in 2050. This is, of course, an entirely hypothetical scenario, not a "prediction" or a "forecast," as the question of interest is actually whether the extrapolated combinations of GDPPC and SC are possible, or, for those countries whose extrapolations move them into being massive "outliers" from the cross-national association, even remotely plausible.

Figure 8: Illustrations of the Evolution of GDPPC and State Capability from Extrapolating Past Growth Rates to 2050 versus the Cross-National Association



Source: Author's calculations.

The location in the GDPPC-State Capability space of "Bangladesh 2050" illustrates the implication of Figure 7: The rapid growth of GDPPC and the modest pace of SC growth imply a

very large State Capability gap in 2050. If it were the case that Bangladesh in 2050 reached GDPPC of P$24,000 but at its slow pace of SC reached only an SC of 37, it would have the *lowest* SC for a country of that GDPPC (with the sole exception of Belarus, the dot to its southeast).

Myanmar (MMR) would be an even larger outlier. If Myanmar were to sustain its very rapid growth rate to 2050 it would nearly reach "high income" (top 20%) GDPPC by 2050. However, if its modest improvement in SC also remained the same until 2050, it would have far and away the lowest SC of any country with its level of income. A country with the 2050 extrapolated GDPPC of Myanmar would be expected to have an SC well above 60 and Myanmar's 2050 extrapolated SC is below 30, which is in the bottom 20% of countries.

That rapid GDPPC growth outstrips slow/stangant/negative SC growth and causes "negative" gaps in 2050, as in Bangladesh and Myanmar, is just one of many possible outcomes.

Pakistan (PAK) is one alternative. GDPPC growth is slow (so small moves in the horiztonal direction) and SC is slow (small moves in the vertical direction), and hence the gap between Pakistan and the cross-national "expectation" remains small.

Indonesia (IDN) illustrates an optimistic scenario, which is that both GDPPC and State Capability grow at a relatively rapid pace until 2050. And extrapolating the recent progress in State Capability in Indonesia into the medium-run future produces "positive" gaps as the actual 2050 SC would be *higher* than predicted for its GDPPC, or, alternatively, its GDPPC would be below that expected for its SC.

3.2) Results of Extrapolation to 2050 for Asian Countries

Figures 9 (for South Asia) and 10 (for East and Southeast Asia) summarize the results of these simulations. These bar charts illustrate the "GDPPC gap" showing: (i) the current (2022) level of GDPPC; (ii) the hypothetical level of GDPPC achieved in 2050 if growth were to persist at its 1990–2022 pace; and (iii) the GDPPC "conditionally expected" for a country with the 2050 level of State Capability implied by extrapolating the linear SC growth rate of the last 10 years.

Figure 9 is sorted from top to bottom by the magnitude (in PPP$) of the 2050 GDPPC gap (between the extrapolated GDPPC and the extrapolated SC "expected" GDPPC).

Sri Lanka has the largest GDPPC gap as the extrapolation of its 4.2 ppa growth rate would produce a GDPPC in 2050 of P$41,500 (very near "high income" status); however, its State Capability in the recent past was actually falling at a pace of .26 points per year, so by 2050 SC would be only 36.5, and the 2022 GDPPC for countries with that level of SC is only P$6,200.

Bangladesh, as discussed above, has a similarly large 2050 GDPPC gap.

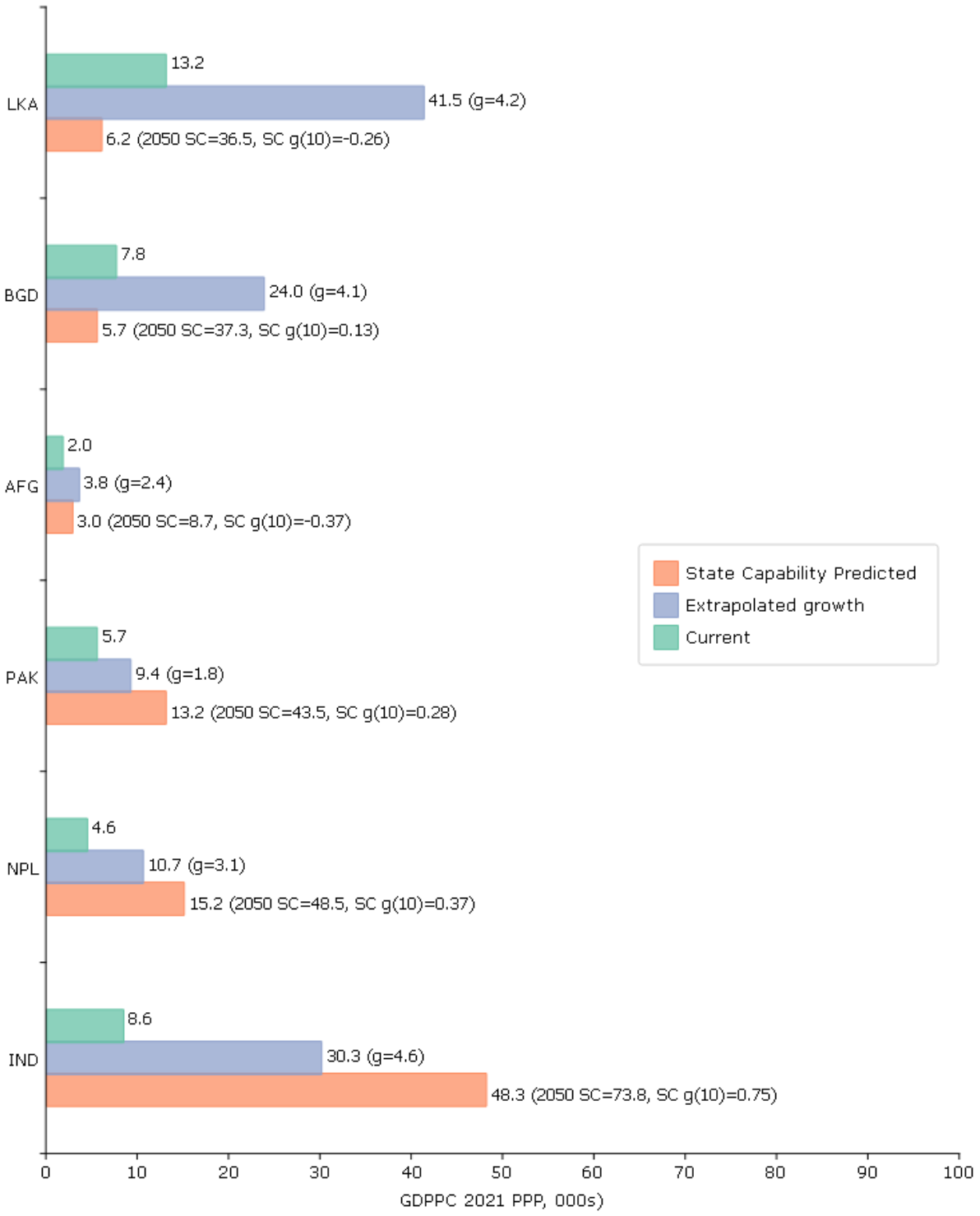
Afghanistan has a low GDPPC gap because it has very slow growth and its SC is falling, neither of which is good news.

Pakistan has had growth of only 1.8 ppa and hence its extrapolated GDPPC to 2050 is only P$9,400; therefore, even though its improvement in SC is slow (.28 points per year, reaching an

SC of only 43.5 by 2050), that means its “SC expected GDPPC” is higher than its extrapolated GDPPC.

The most surprising finding from this exercise, particularly for me given my previous research on State Capability in India (Pritchett 2009), was that the WGI state capability measure for India was already quite high in 2022 and the pace of growth from 2012 to 2022 was also pretty high, with a gain of .75 points per year. Thus, by 2050 its extrapolated SC is 73.8, which is the level of high-income countries. Its actual extrapolated growth rate of 4.6 ppa would produce quite a high level of income, P$30,300, although still significantly lower than its SC “expected” value.

Figure 9: The Estimated "GDPPC Gap" from the Extrapolation of Growth Rates of GDPPC and State Capability for South Asian Countries



Source: Author's calculations.

Figure 10 shows the results for East and Southeast Asia, and this region also has a large range of results across countries.

Myanmar (MMR) would have a GDPPC of 41.6K in 2050 if it continued its very rapid 7.6 ppa growth. But its 2050 SC is very low (31.4, from growth of only .36 points a year from a low base) and its "SC implied" GDPPC is only 6.4K. The Lao People's Democratic Republic (LAO) and Cambodia (KHM) are similar to Myanmar in that they have zero (Cambodia) or negative (the Lao People's Democratic Republic) recent progress in State Capability but rapid growth, hence a large 2050 GDPPC gap.

The GDPPC gap is large for Mongolia (MNG), Malaysia (MYS), and Thailand (THA) as in all three countries the 2050 SC "expected" GDPPC is quite near to their *current* GDPPC but their growth rate has been relatively fast, so the 2050 extrapolated GDPPC is much larger, mostly reaching "high income" status. Mongolia, for instance, has a 2050 extrapolated GDPPC of P$49,700 but its extrapolated SC is only 50. Looking at Figure 3, it is clear that no country has a GDPPC of P$49,700 with an SC of only 50.

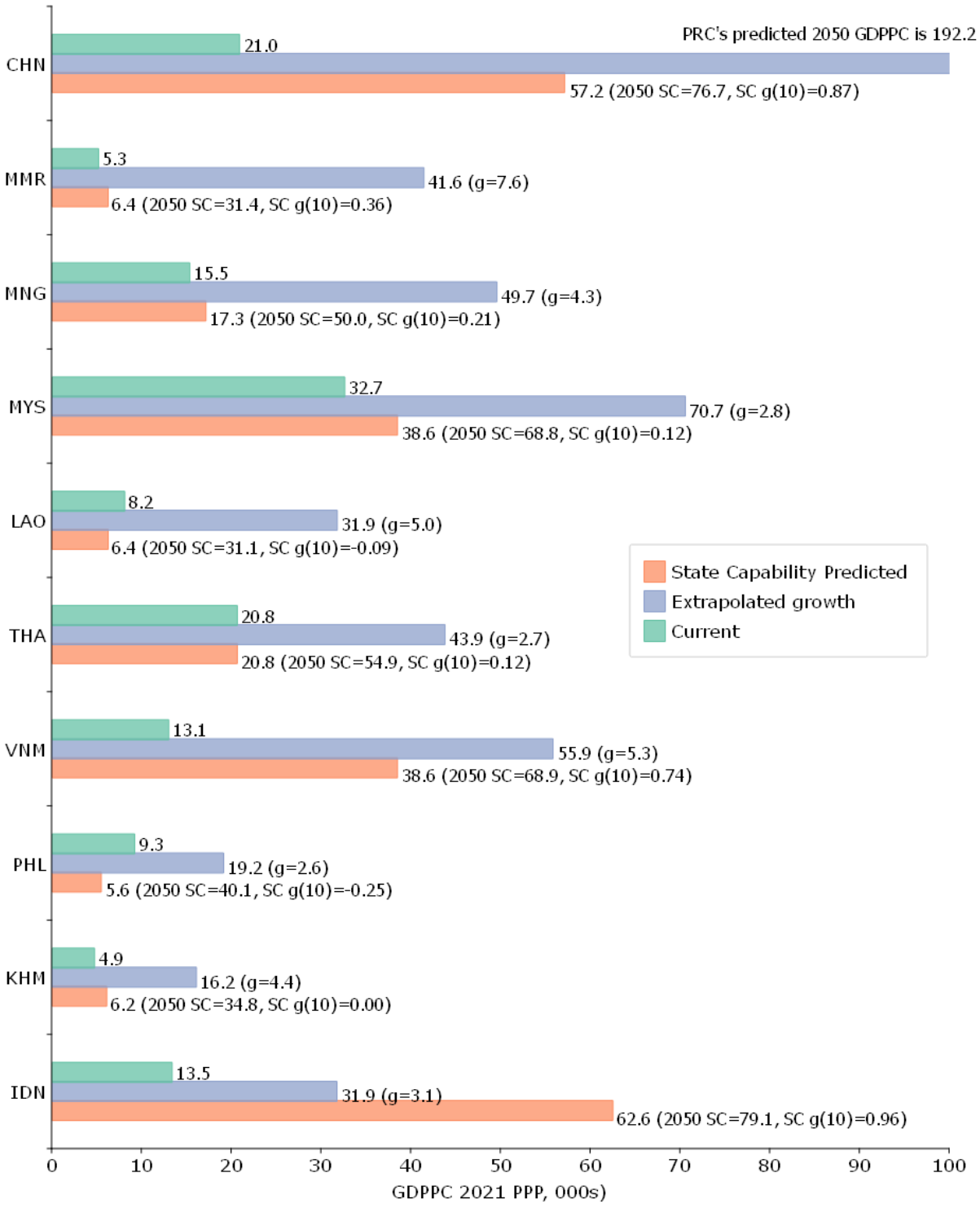
The 2050 GDPPC gap is not particularly large in the Philippines, but only because its past growth rate is modest, at 2.6 ppa, so the 2050 extrapolated GDPPC is only roughly double its current level (P$19,200). However, its State Capability fell from 2012 to 2022, so its SC "expected" GDPPC is much *lower* than its current level.

Indonesia, in these simulations, is a cautiously optimisic story. Its current growth is not super rapid, at 3.1 ppa, hence the 2050 GDPPC would be P$31,900. Moreover, the progress in SC of .96 points per year would lead to a 2050 State Capability of 79.1, which is consistent with very high levels of GDPPC.

Viet Nam is an intermediate case where it is progressing rapidly in both GDPPC (5.3 ppa) and SC (.74 points per year), so there is a moderately large GDPPC gap (P$55,900, well into "high income" status, versus P$38.600). But since there is progress in State Capability, its SC "expected" GDPPC is much higher than its current level (P$38,600 versus P$13,100).

I hesitate to even discuss the PRC, as the results are not particularly informative since it is clear that the 2050 "hypothetical" GDPPC from extrapolating the 1990–2022 growth of P$192,200 is not even striking distance from being plausible. The questions on the PRC are too large and complex for anyone to wade into, and I am not a specialist.

Figure 10: The Estimated "GDPPC Gap" from the Extrapolation of Growth Rates of GDPPC and State Capability for East and Southeast Asian Countries



Source: Author's calculations.

4. In Lieu of a Conclusion: Conjectures about the Dynamics of National Development

The extrapolations of past growth of GDPPC and State Capability into the future are *not* predictions, *not* forecasts, *not* expectations. Rather they are purely descriptive of the implications of current trends. They are only mechanical extrapolations of trends intended to illustrate the frequency of an emerging tension between the rapid growth in GDPPC and the much, much slower progress in State Capability. Countries in Asia have managed to create extended episodes of rapid economic growth, often starting from very low levels of State Capability, but to answer the question "Can Asian economies forge a high-income future and avoid burnout?" with any degree of confidence, we would need to have an understanding of the joint dynamics of various dimensions of national development, an understanding that I believe is well beyond current development economics. I conclude with a brief discussion on three points concerning what an adequate narrative and understanding of the joint dynamics might entail.

First, while in the historical experience there is powerful evidence that high, stable levels of economic productivity were reached with something that could be labeled "inclusive" economic institutions, the quality of "institutions" does not constrain or predict or explain the onset of episodes of rapid economic growth. As Yuen Ang's (2016) *How China Escaped the Poverty Trap* emphasizes, the PRC did not initiate its rapid economic growth by creating "good institutions" but rather by harnessing the institutions it had to create growth[7].

In some sense it has to be the case that "good institutions" do not reliably predict the initiation of growth episodes has to be true to reconcile basic facts about the joint dynamics of growth and institutions. In the language of macroeconomics, "institutions" (including state capability) are (with very few exceptions) a "stock" variable not a "jump" variable. North's definition of "institutions" is "humanly devised constraints that structure political, economic, and social interaction" with the clear idea that these "constraints" are not just (or even necessarily) formally enacted laws or policies but operate on a deeper level of embedded and embodied norms, customs, traditions, and practices. Institutions would therefore be expected to be dynamically quite stable and—outside of massive disruptions like (true) revolutions or, in the jargon of Acemoglu and Robinson (2012), historical "critical junctures" (both of which, revolutions and "critical junctures," often destroy the efficacy of existing institutions much more quickly than they enable new ones)—change on a gradual, evolutionary timescale. In the developing world, economic growth is not a steady "trend" with modest reverting "business cycle" fluctuations, but "trend" growth is itself unstable and episodic, with large, rapid shifts in growth rates, with massive accelerations and decelerations (e.g., Pritchett 2000; Aguiar and Gopinath 2007; Kar et al., 2013). One common finding is that growth accelerations, defined as

[7] The work of Mushtaq Khan has been pioneering and influential in: (i) critiquing the application of "new institutional economics" to developing countries (Khan 1995); (ii) demonstrating the weakness of the evidence adduced in support of the idea that "good governance" caused economic growth (Khan 2007); and (iii) promoting the idea of "political settlements" as an alternative lens for the analysis of "growth enhancing" governance (Khan 2010).

large, sustained increases in rapid growth, are quite common, even in countries with "low quality" institutions (Hausmann et al. 2005 Gootjes et al. 2024).

Second, the very fact that growth accelerations are possible in spite of "weak" or "exclusive" institutions implies that many countries are able to induce private actors to invest and innovate and generally undertake the actions that accelerate economic growth without investor/actor expectations being grounded in the reliability of anything like "rule of law" as the "rules of the game." In their edited volume *Deals and Development* (Pritchett, Sen, and Werker 2017) detail that "closed, ordered, deals" can create, for a set of "favored" investors (by sector, by region, by ethnic group, by political affiliation) sufficiently credible investor expectations for those favored investors. Moreover, the creation of these favorable expectations of profitable investment for favored investors by the move to "closed, ordered, deals" can create a significant acceleration in economic growth. The impact on expectations of a new economic strategy depends less on its content and little to not at all on "good governance" or "state capability" embodied in formal public sector organizations and more on the credibility of the "political settlement" and the regime initiating the new strategy. The growth episodes with the largest total impact on GDPPC, such as the Republic of Korea's in 1962 or Indonesia's in 1967, did not begin with anything like "good governance" or an emphasis on "state capability" (e.g., Haggard, Kim, and Moon (1990) on the Republic of Korea's transition to export-led growth).

This does not mean that there was no policy reform. Many countries initiated rapid growth episodes from conditions of serious macroeconomic crisis and/or badly misaligned key macro variables (e.g., overvalued exchange rates), inward and government-led rather than outward-oriented and private sector-led growth strategies, and "disordered" deals. But an important aspect of these reforms is that they (i) generally reduced, rather than increased, demands on state capability, (ii) relied on a combination of stable political settlements and a small(ish) core for technocratic economic management, and (iii) did not move in the short run to anything like an open, inclusive set of "rules" but rather relied on a close cooperative relationship between the (large) formal private sector actors and government (roughly what Peter Evans (1995) terms "embedded autonomy"). The impact of this "policy reform" was mediated by explicitly political structures, not "good institutions" or "good governance" in the customary characterizations.

Third, the duration of growth episodes, and in particular whether growth episodes ultimately lead to countries attaining "high income" (or even "upper middle income") status, appears to depend on creating positive feedback loops from existing economic growth to the conditions necessary for sustained structural transformation (either in the old sense of expanding "comparative advantage" or in the newer sense of Hidalgo and Hausmann (2009) and Hausmann and Klinger (2006) of creating productive capabilities for a broader and more complex set of products). In other words, "closed, ordered, deals" do not create "open" and "inclusive" rules but rather provide differential and favored treatment to specified sets of investors. This creates a situation in which the formal laws, regulations, and policies—from tax, to labor, to environment, to land use, to finance—are not neutrally applied. Measures of, say, the "investment climate" or the "ease of doing business," which rely on measures of the costs and time of *de jure* compliance, will be completely at odds with "how business is (really) done" (Hallward-

Driemeier and Pritchett 2015). There are two quite different potential paths for "closed, ordered, deals" growth strategies.

One pattern is that the "deals" space stays too closed and not sufficiently performance or productivity oriented to generate an expansion in a country's product capabilities. On this path, a country can maintain rapid growth (or high levels thereof) only for as long as the "favored" industry or investors can sustain growth. In addition, if the growth strategy is sustained by a political settlement that cannot maintain adequate opportunity and growth in jobs and wages, then the political settlement itself—and all associated institutions/organizations—will gradually become delegitimated. For instance, one interpretation of a "resource curse" is that the political settlement relies on creating conditions only for a narrow set of resources and is not under pressure to expand either economic or state capabilities to support a more productive, diverse, and complex economy (Isham et al. 2005). Eventually, growth stagnates and ebbs and flows only with resource prices, at best, and at worst, if the resource rents falter, the political settlement collapses entirely, with tragic consequences (e.g., Venezuela and Liberia). The perpetuation of "closed, ordered, deals" (in either the semi-benign or collapsed versions) is too common an outcome. Once a "closed, ordered, deal" growth strategy generates success it becomes a pattern of politics and economics that is difficult to alter as both the political and (sufficient) economic elites benefit from its perpetuation. This implies that few actors with any power want "rule of law" or strong, independent, capable, autonomous public sector organizations.

This is not inevitable. A second pattern is that there is a positive feedback loop from success from temporizing and "closed, ordered, deals" strategies for creating growth with weak institutions to strong state capability and a more "open" and at least "rules-adjacent" economic reality. This pattern has mechanisms that prevent "embedded autonomy" of feedback from private industry to government from degenerating into just blatant "in bed with the money" and crony capitalism. The Republic of Korea's modern economy has been dominated by a few large industrial groups that have produced much of the country's export success and attracted foreign investments, and these have been supported by the government. However, this has not prevented the development of powerful technocratic limitations on those from unbridled rent-seeking and from a continued diversification of the Republic of Korea's exports and a politics capable of absorbing dissent and a transition to stable electoral democracy (and hence a fourfold national development success). Similarly, the data suggest that, although the single party rule under Suharto from 1967 to 1998 was an obvious case of "closed, ordered, deals," the country's trajectory since 1998 has been one of economic success (though not as rapid as that of some neighbors), increased state capability, expanded freedoms, and regular elections.

The question of which of the currently growing Asian countries are on a path to high income status hence depends on a complicated, country-specific analysis of factors that necessarily go beyond a narrow economic approach to consider the overall progress towards national development.

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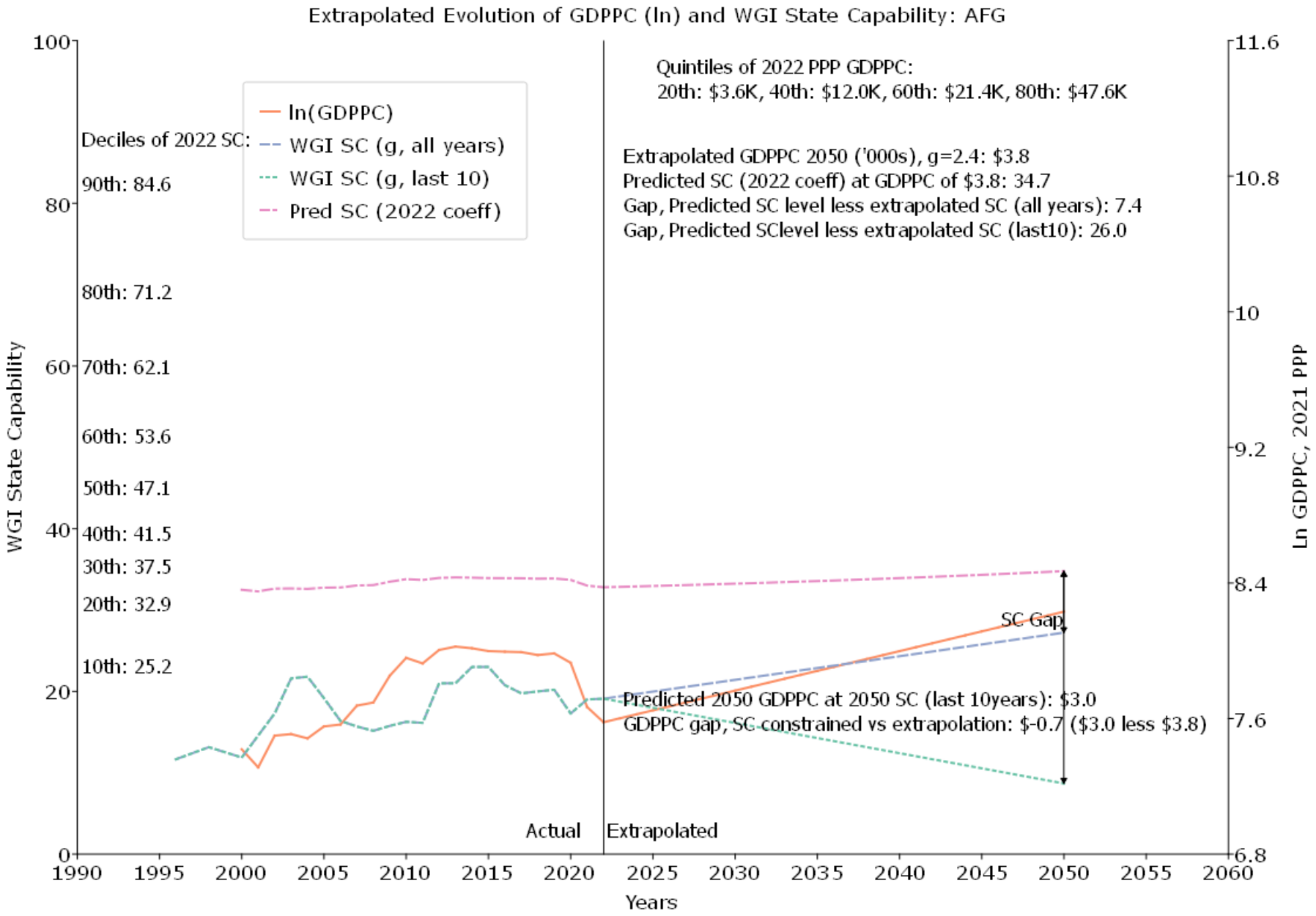
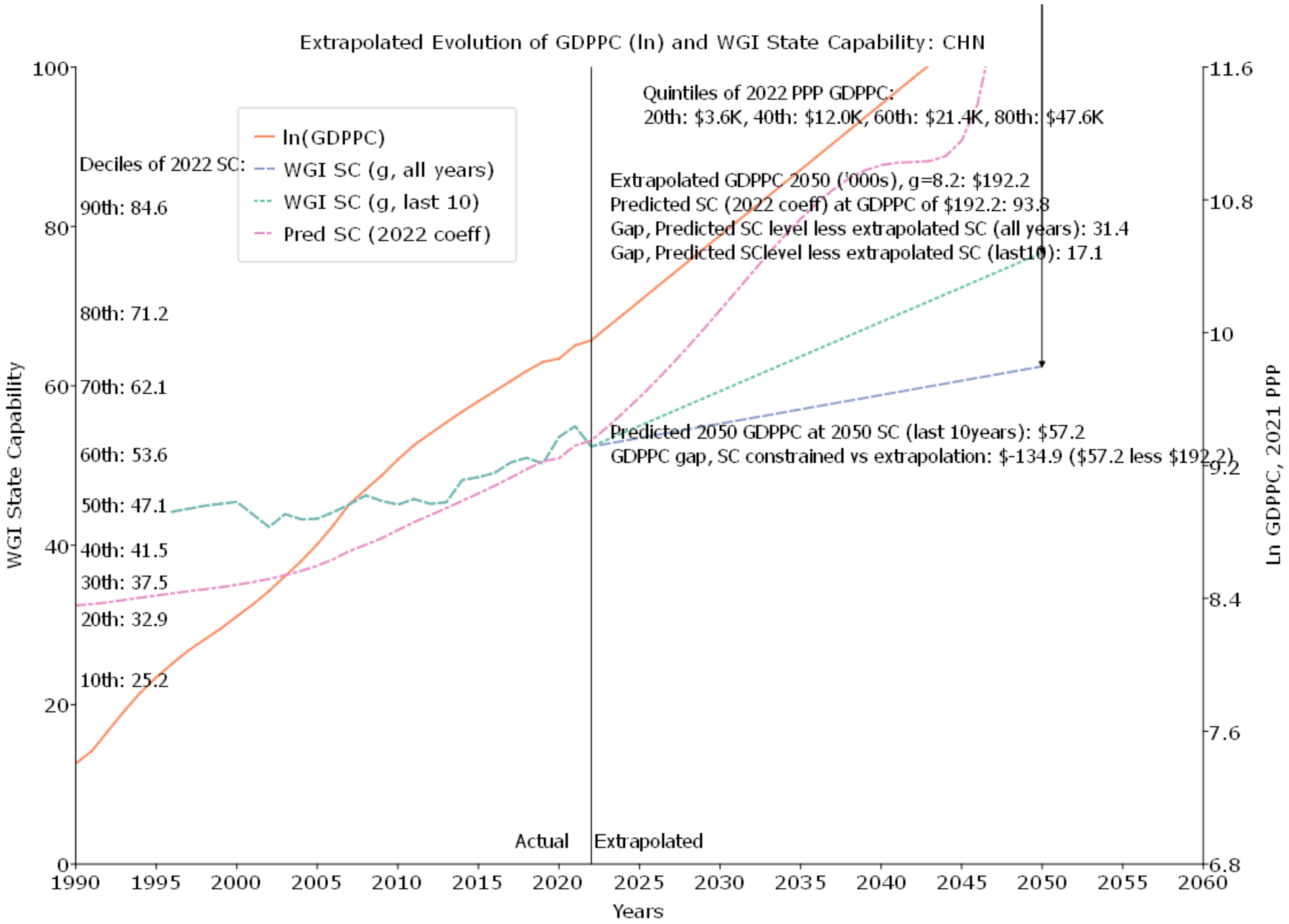
Graphic Appendix (alphabetically by three letter ISO code)




Extrapolated Evolution of GDPPC (ln) and WGI State Capability: CHN
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=8.2: $192.2
Predicted SC (2022 coeff) at GDPPC of $192.2: 93.8
Gap, Predicted SC level less extrapolated SC (all years): 31.4
Gap, Predicted SClevel less extrapolated SC (last10): 17.1
Predicted 2050 GDPPC at 2050 SC (last 10years): $57.2
GDPPC gap, SC constrained vs extrapolation: $-134.9 ($57.2 less $192.2)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
0
20
40
60
80
100
6.8
7.6
8.4
9.2
10
10.8
11.6
1990
1995
2000
2005
2010
2015
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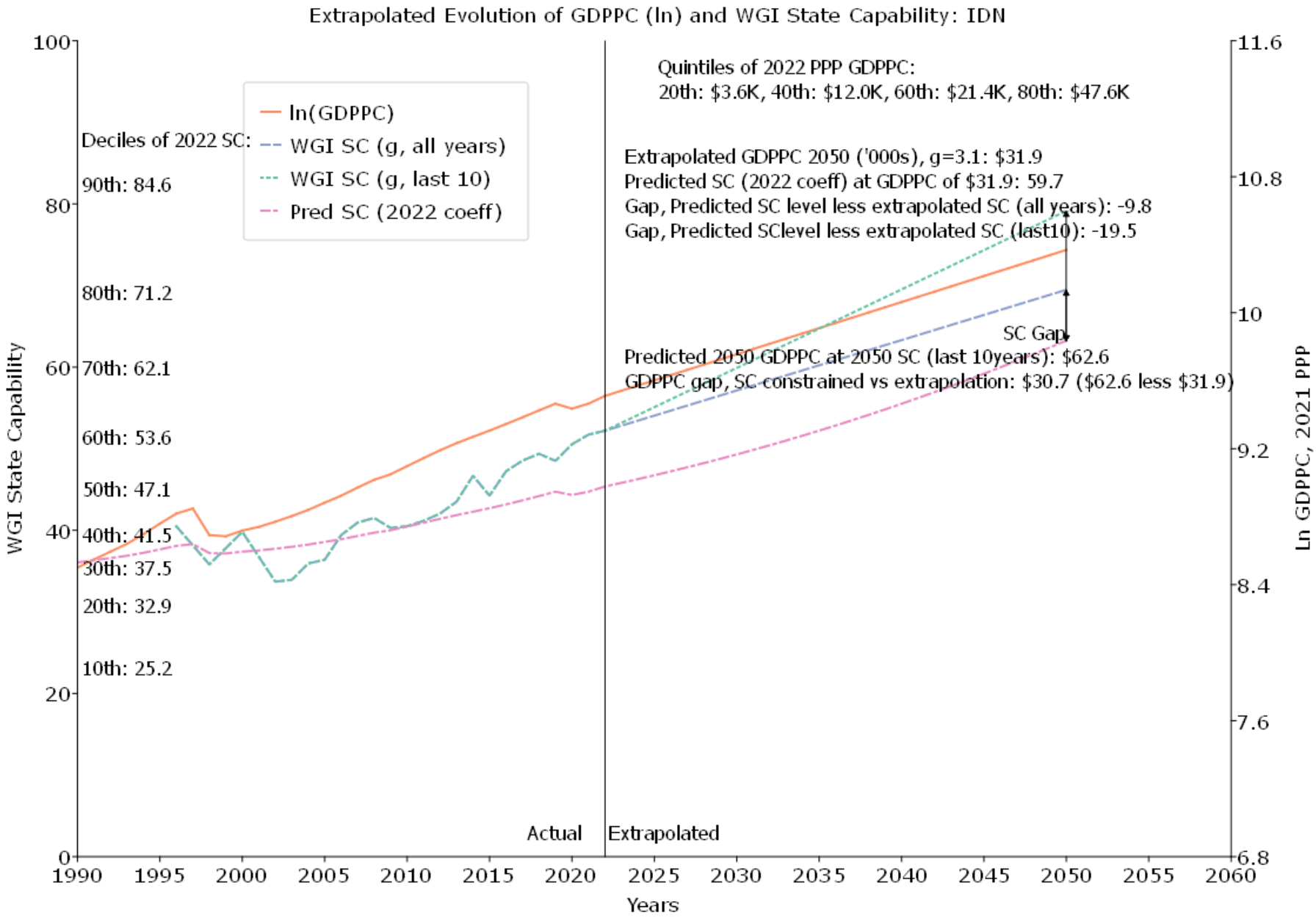
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: IDN
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=3.1: $31.9
Predicted SC (2022 coeff) at GDPPC of $31.9: 59.7
Gap, Predicted SC level less extrapolated SC (all years): -9.8
Gap, Predicted SClevel less extrapolated SC (last10): -19.5
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $62.6
GDPPC gap, SC constrained vs extrapolation: $30.7 ($62.6 less $31.9)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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80
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6.8
7.6
8.4
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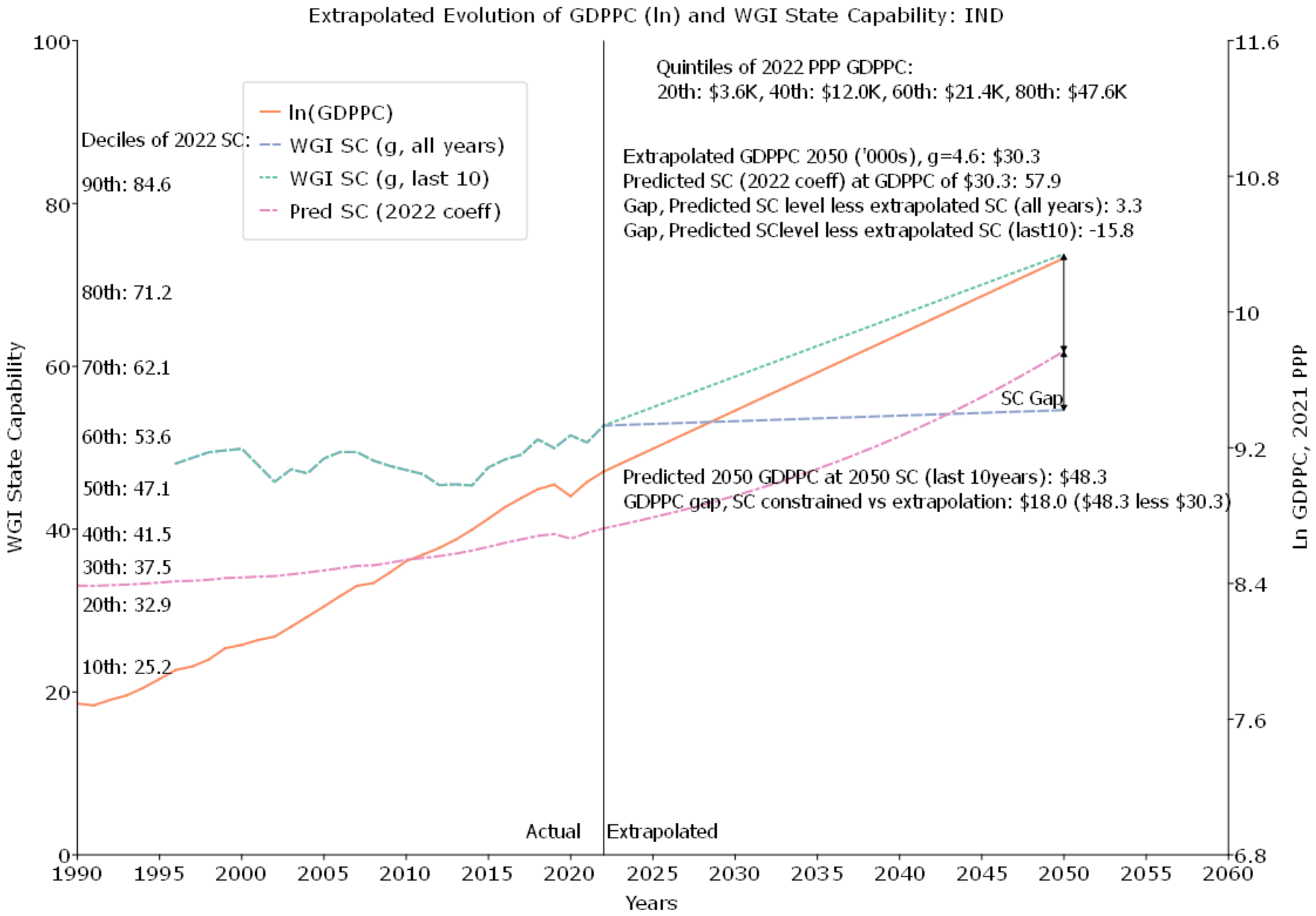
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: IND
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=4.6: $30.3
Predicted SC (2022 coeff) at GDPPC of $30.3: 57.9
Gap, Predicted SC level less extrapolated SC (all years): 3.3
Gap, Predicted SClevel less extrapolated SC (last10): -15.8
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $48.3
GDPPC gap, SC constrained vs extrapolation: $18.0 ($48.3 less $30.3)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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7.6
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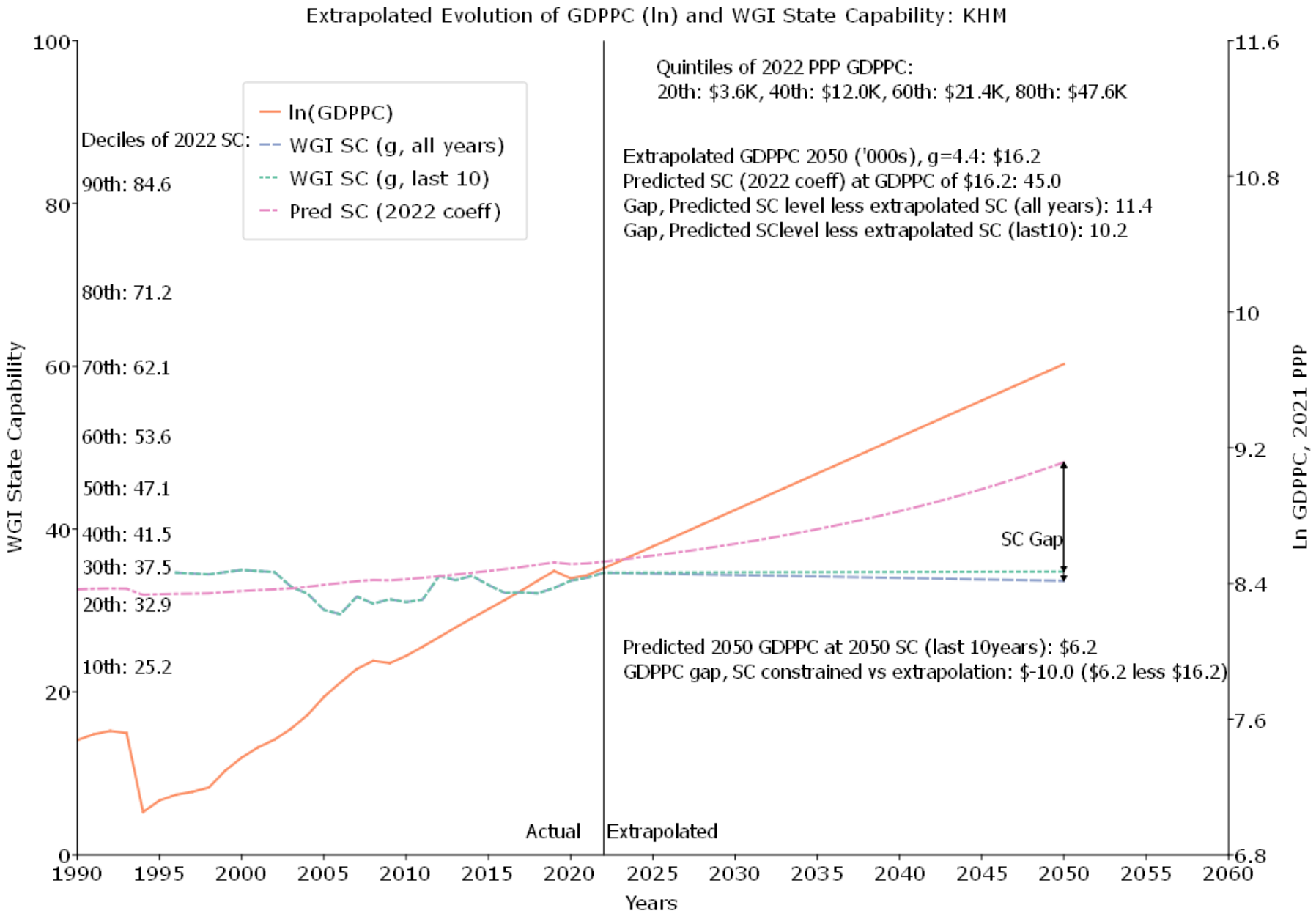
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: KHM
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=4.4: $16.2
Predicted SC (2022 coeff) at GDPPC of $16.2: 45.0
Gap, Predicted SC level less extrapolated SC (all years): 11.4
Gap, Predicted SClevel less extrapolated SC (last10): 10.2
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $6.2
GDPPC gap, SC constrained vs extrapolation: $-10.0 ($6.2 less $16.2)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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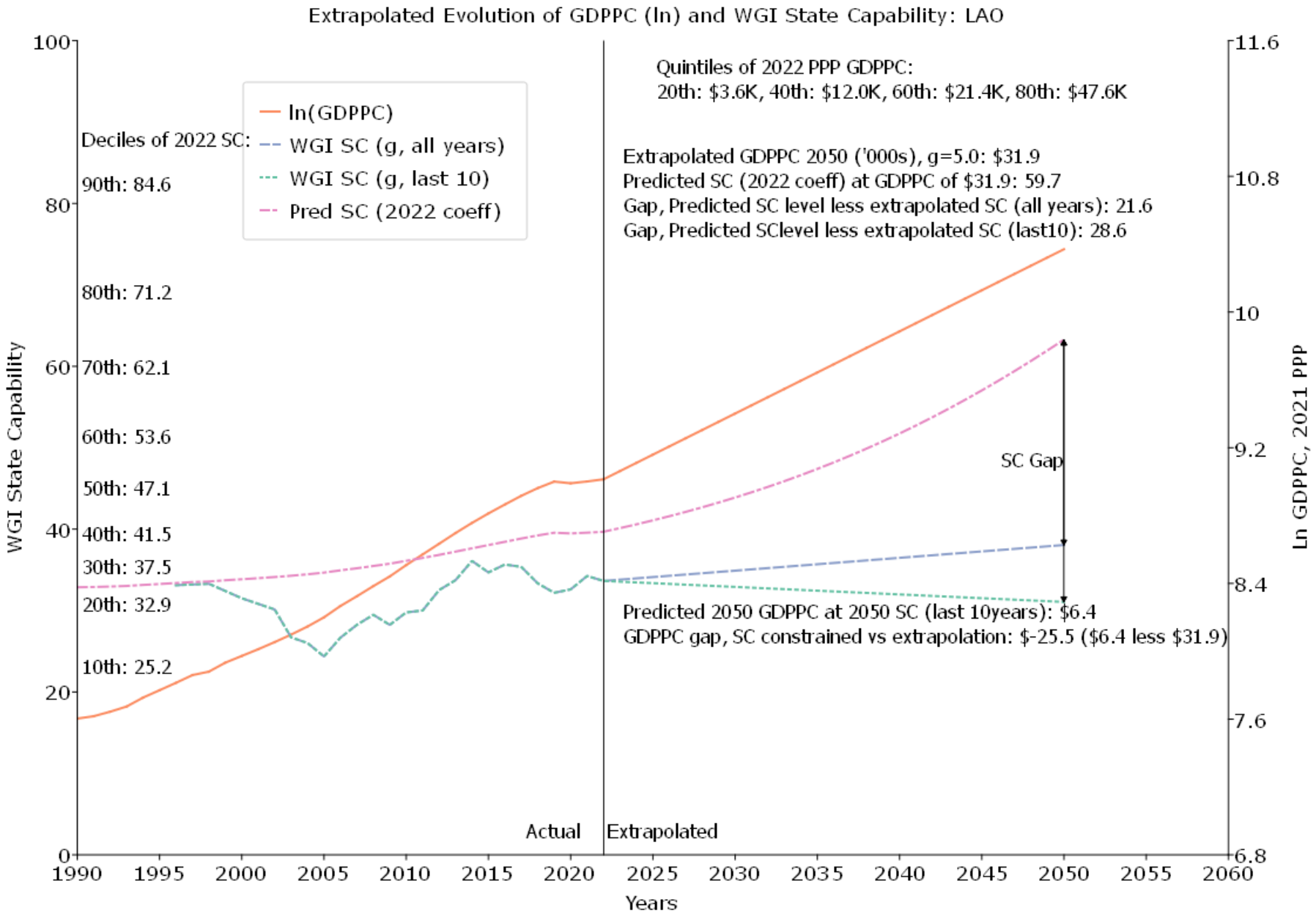
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: LAO
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=5.0: $31.9
Predicted SC (2022 coeff) at GDPPC of $31.9: 59.7
Gap, Predicted SC level less extrapolated SC (all years): 21.6
Gap, Predicted SClevel less extrapolated SC (last10): 28.6
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $6.4
GDPPC gap, SC constrained vs extrapolation: $-25.5 ($6.4 less $31.9)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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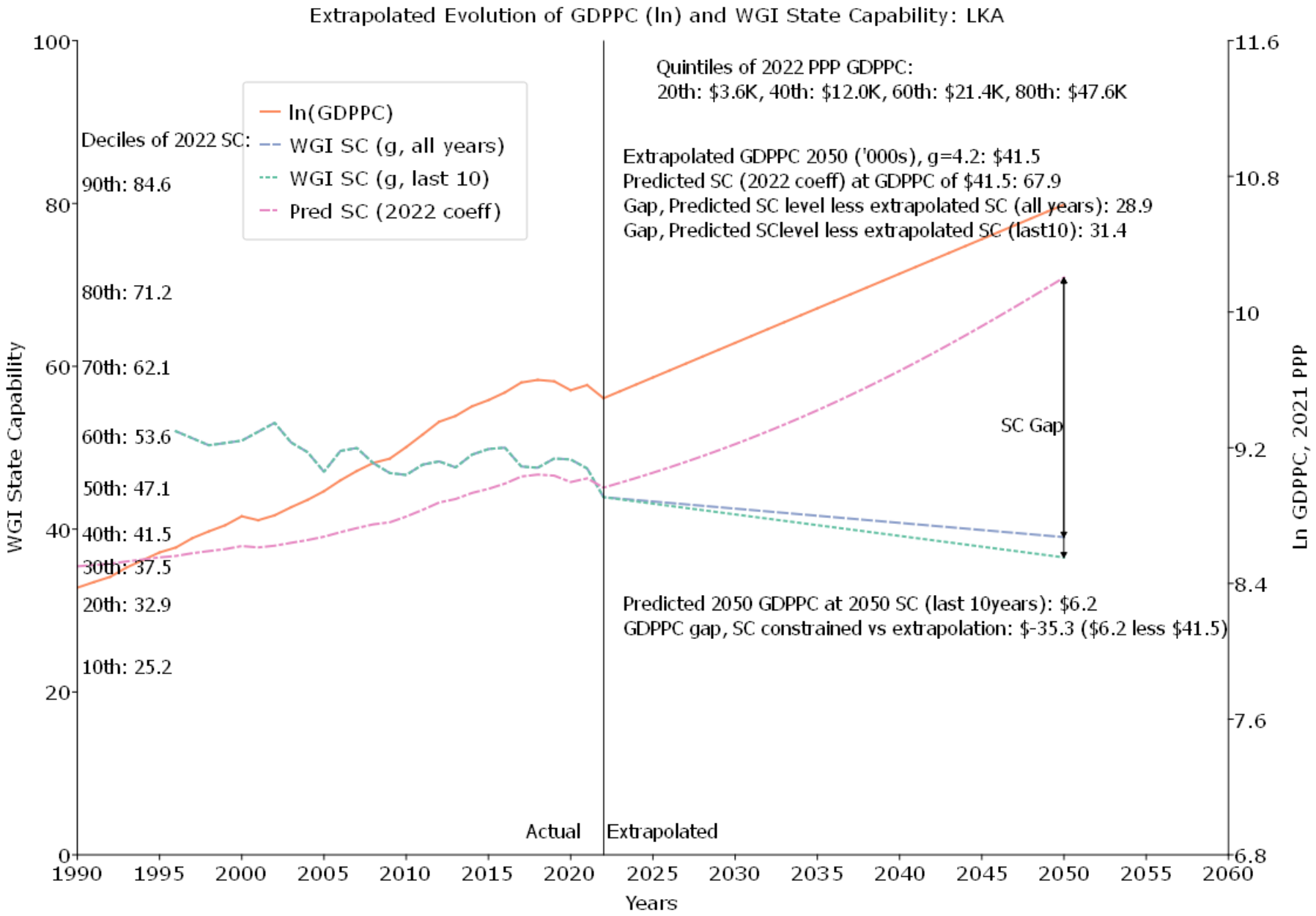
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: LKA
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=4.2: $41.5
Predicted SC (2022 coeff) at GDPPC of $41.5: 67.9
Gap, Predicted SC level less extrapolated SC (all years): 28.9
Gap, Predicted SClevel less extrapolated SC (last10): 31.4
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $6.2
GDPPC gap, SC constrained vs extrapolation: $-35.3 ($6.2 less $41.5)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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6.8
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9.2
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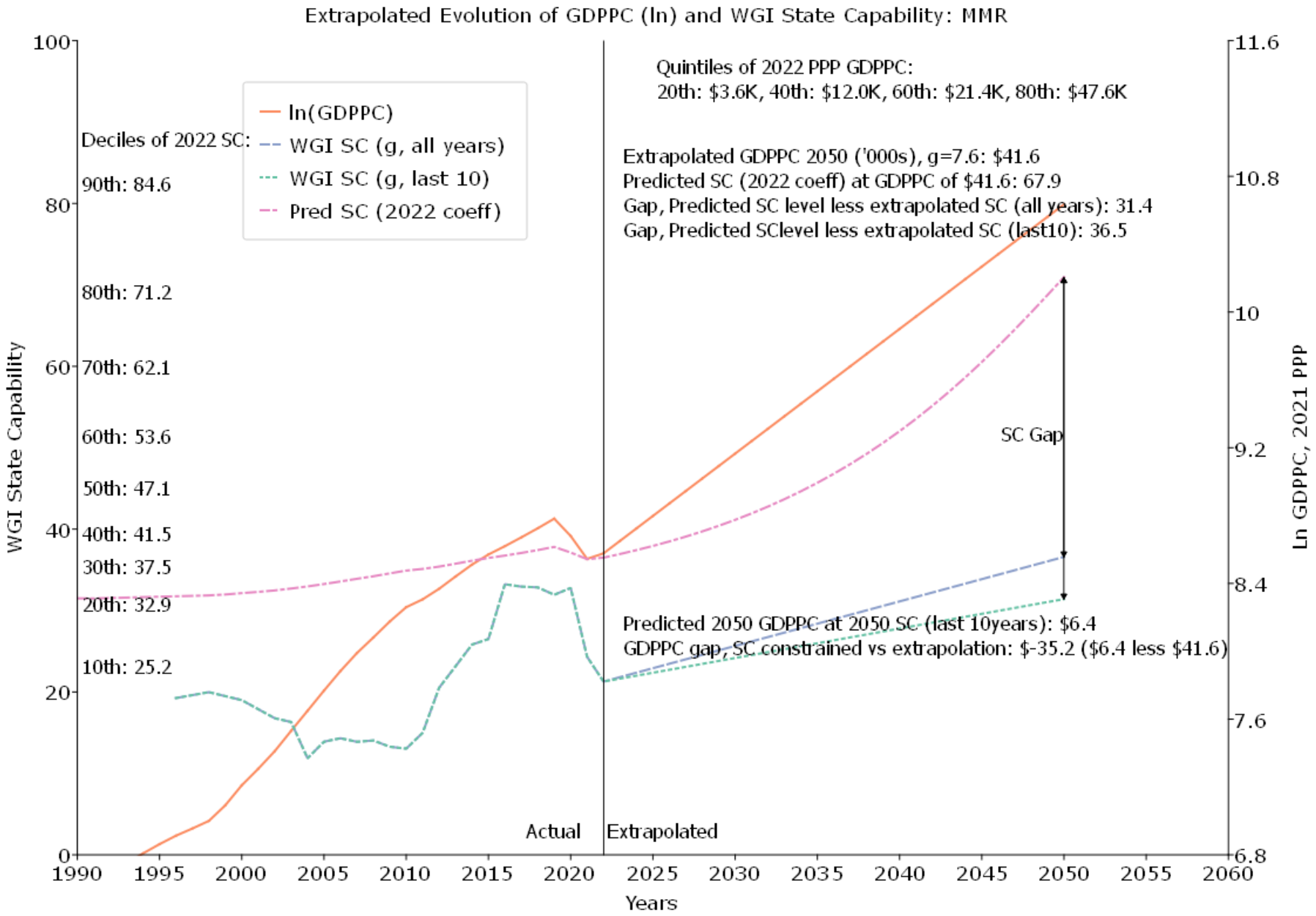
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: MMR
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=7.6: $41.6
Predicted SC (2022 coeff) at GDPPC of $41.6: 67.9
Gap, Predicted SC level less extrapolated SC (all years): 31.4
Gap, Predicted SClevel less extrapolated SC (last10): 36.5
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $6.4
GDPPC gap, SC constrained vs extrapolation: $-35.2 ($6.4 less $41.6)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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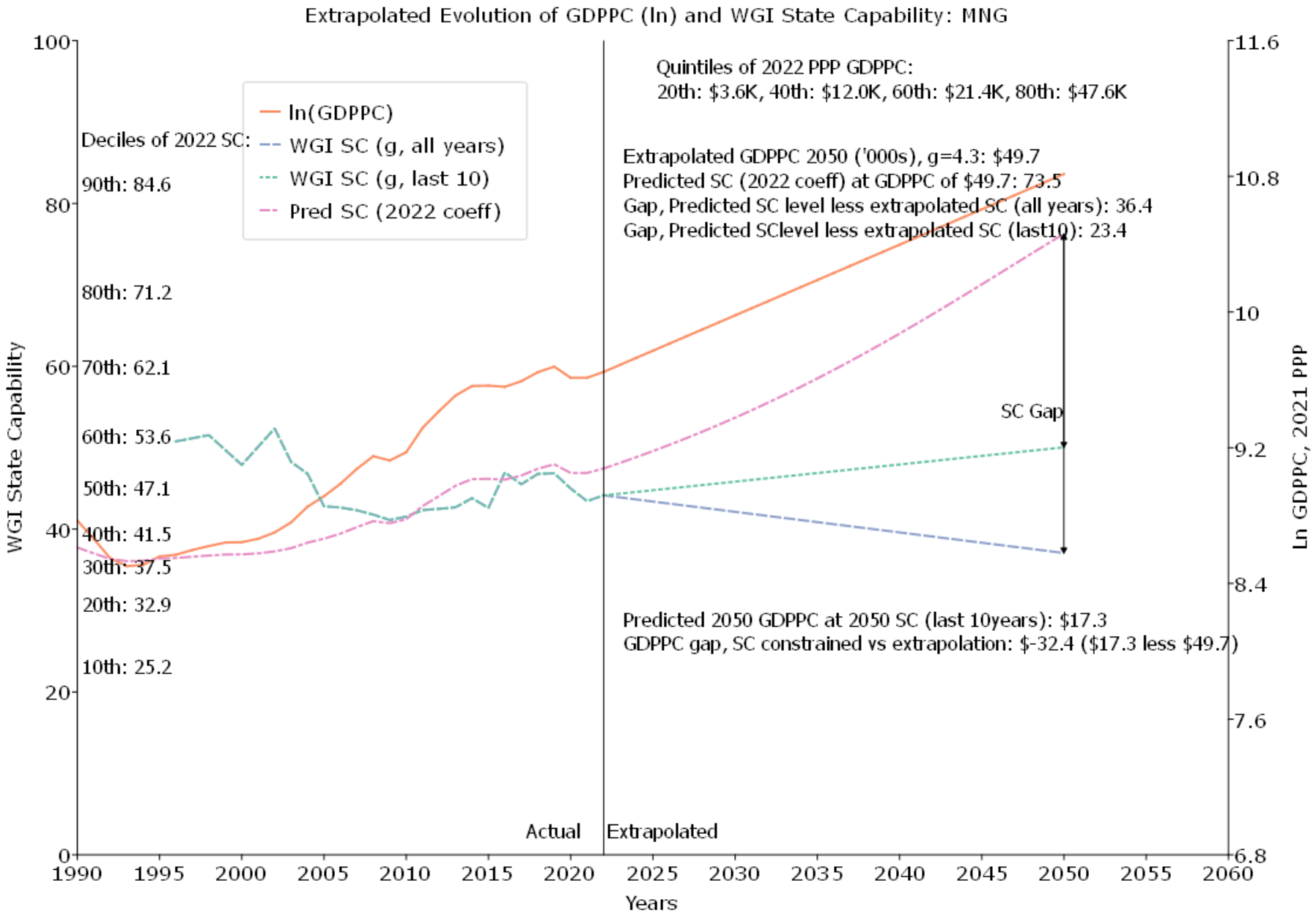
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: MNG
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=4.3: $49.7
Predicted SC (2022 coeff) at GDPPC of $49.7: 73.5
Gap, Predicted SC level less extrapolated SC (all years): 36.4
Gap, Predicted SClevel less extrapolated SC (last10): 23.4
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $17.3
GDPPC gap, SC constrained vs extrapolation: $-32.4 ($17.3 less $49.7)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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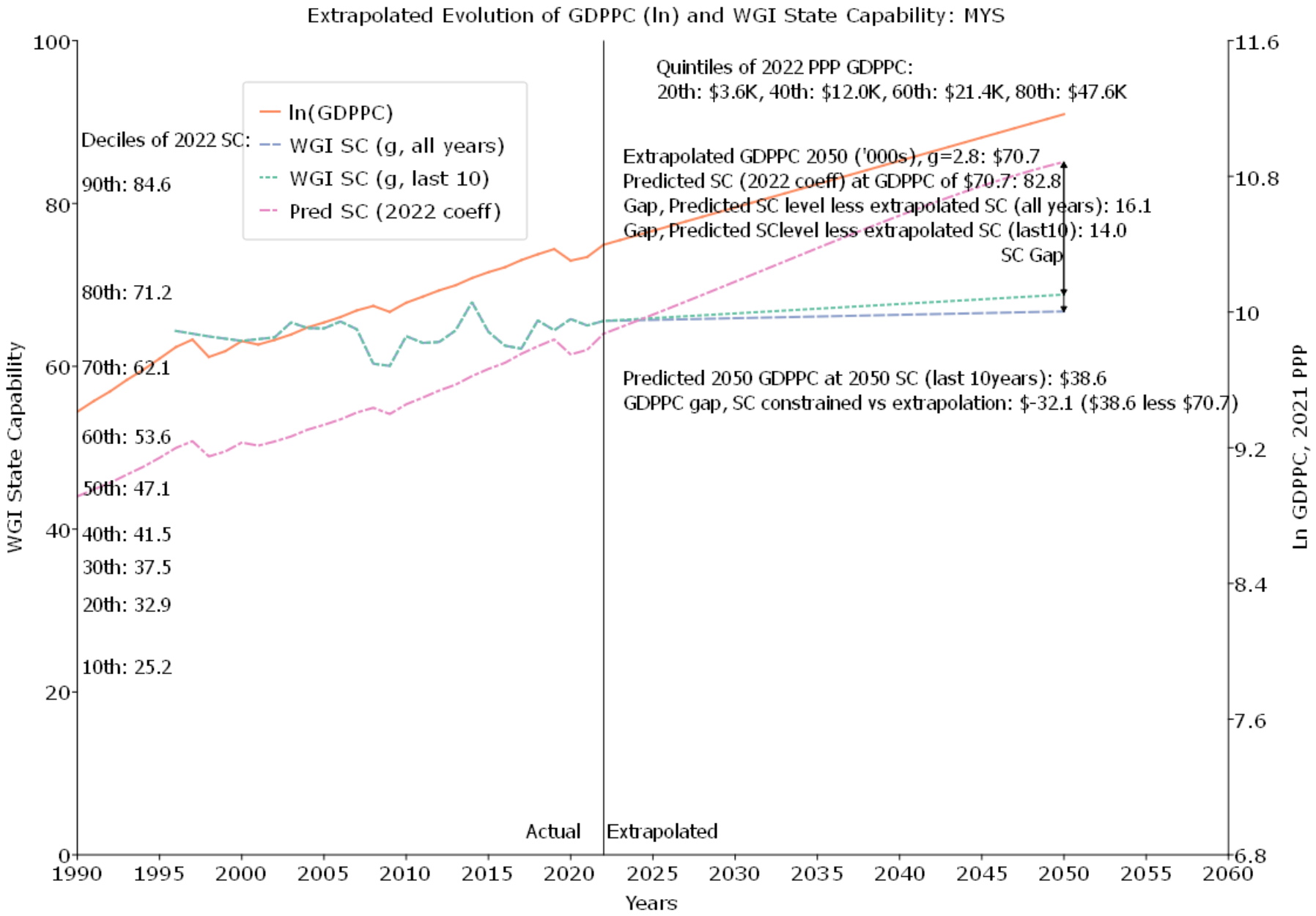
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: MYS
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=2.8: $70.7
Predicted SC (2022 coeff) at GDPPC of $70.7: 82.8
Gap, Predicted SC level less extrapolated SC (all years): 16.1
Gap, Predicted SClevel less extrapolated SC (last10): 14.0
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $38.6
GDPPC gap, SC constrained vs extrapolation: $-32.1 ($38.6 less $70.7)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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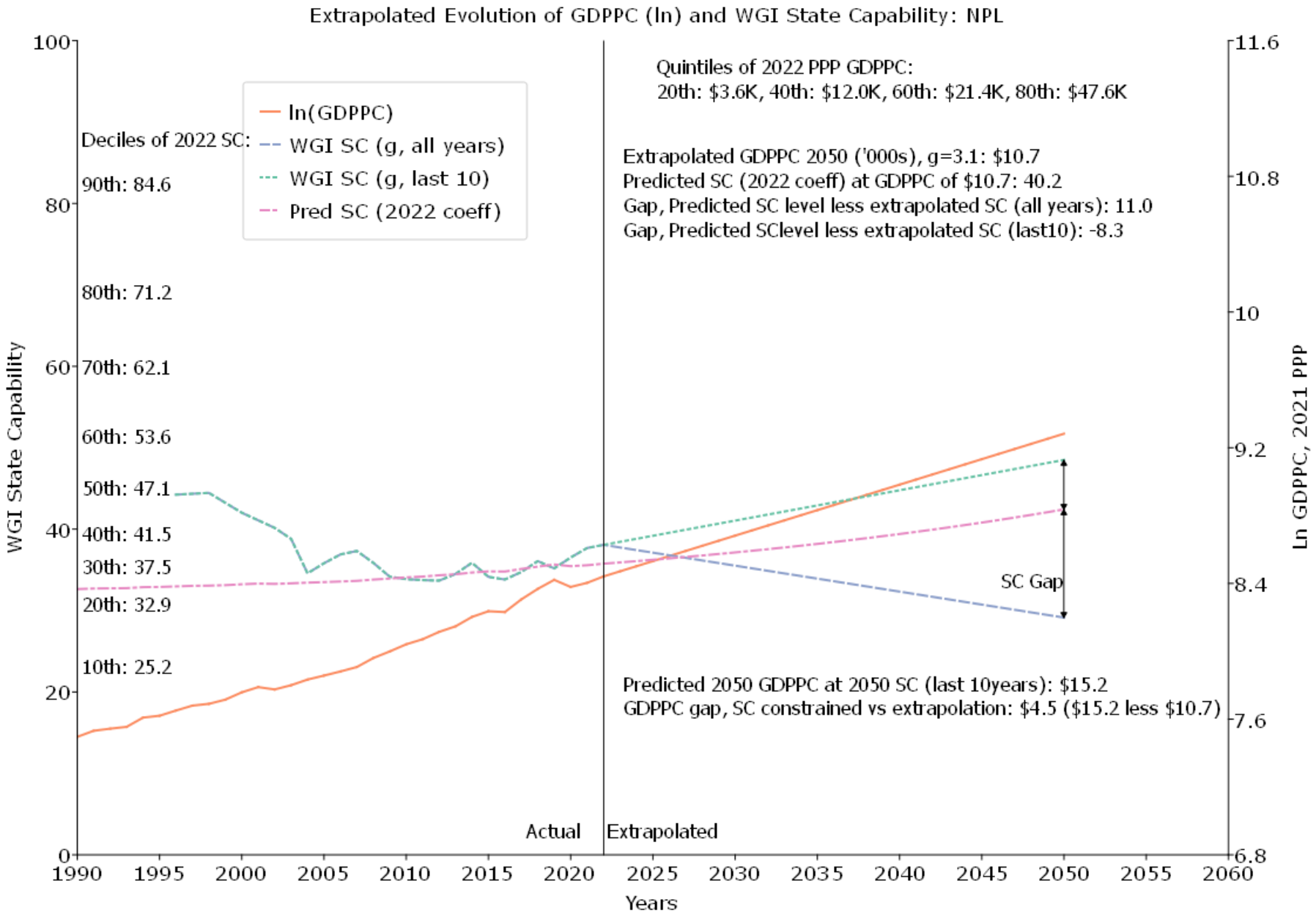
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: NPL
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=3.1: $10.7
Predicted SC (2022 coeff) at GDPPC of $10.7: 40.2
Gap, Predicted SC level less extrapolated SC (all years): 11.0
Gap, Predicted SClevel less extrapolated SC (last10): -8.3
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $15.2
GDPPC gap, SC constrained vs extrapolation: $4.5 ($15.2 less $10.7)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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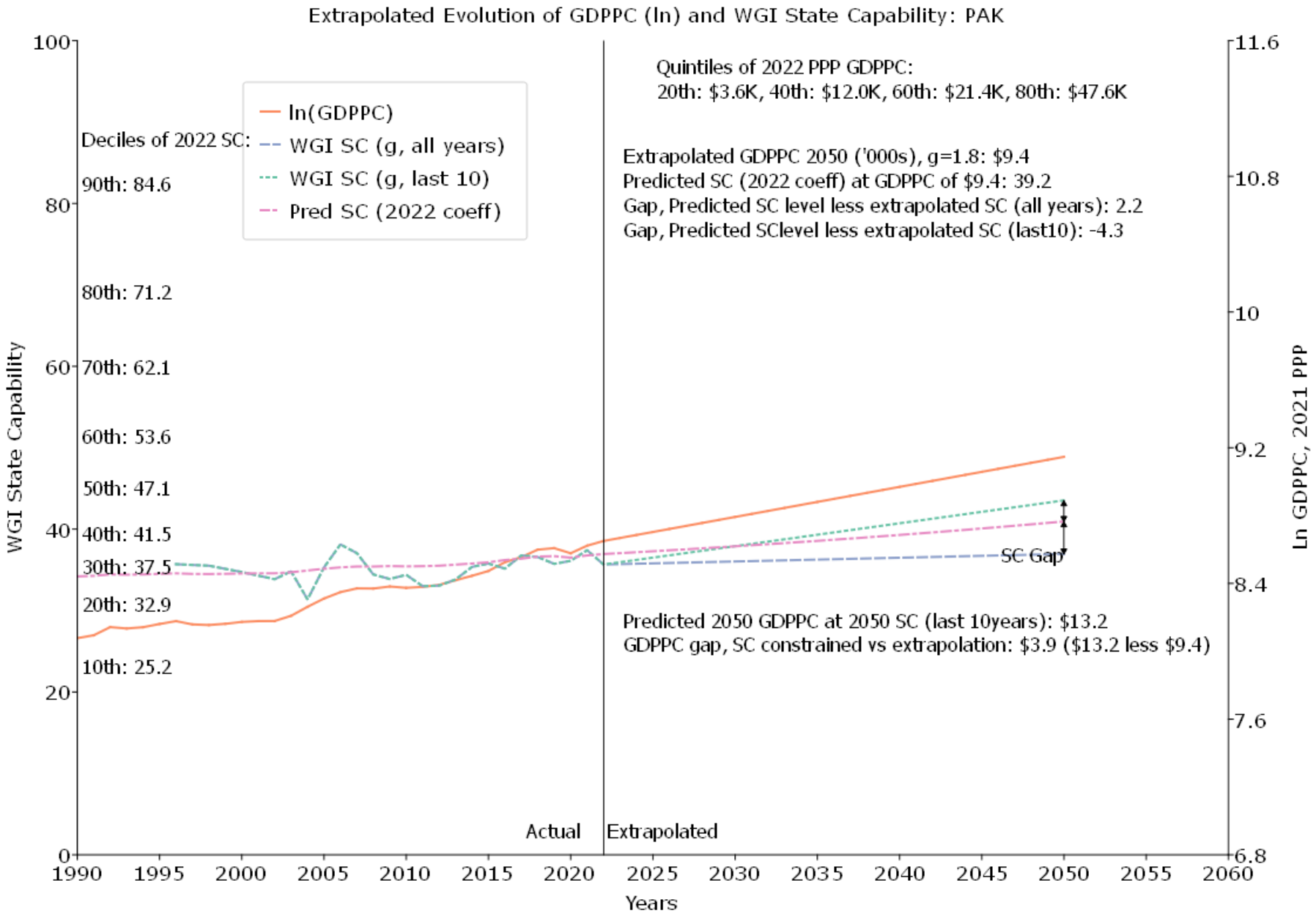
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: PAK
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=1.8: $9.4
Predicted SC (2022 coeff) at GDPPC of $9.4: 39.2
Gap, Predicted SC level less extrapolated SC (all years): 2.2
Gap, Predicted SClevel less extrapolated SC (last10): -4.3
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $13.2
GDPPC gap, SC constrained vs extrapolation: $3.9 ($13.2 less $9.4)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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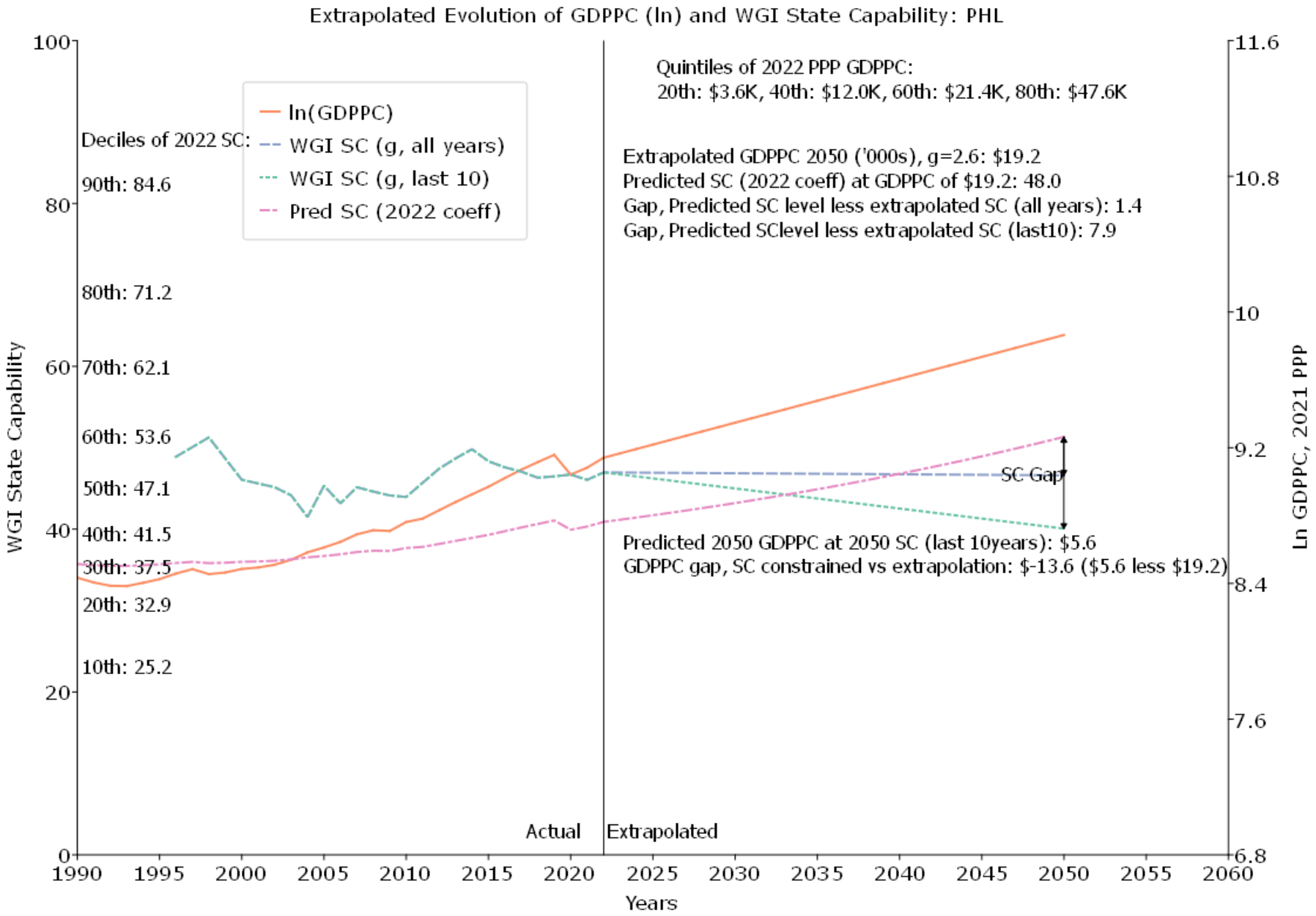
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: PHL
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=2.6: $19.2
Predicted SC (2022 coeff) at GDPPC of $19.2: 48.0
Gap, Predicted SC level less extrapolated SC (all years): 1.4
Gap, Predicted SClevel less extrapolated SC (last10): 7.9
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $5.6
GDPPC gap, SC constrained vs extrapolation: $-13.6 ($5.6 less $19.2)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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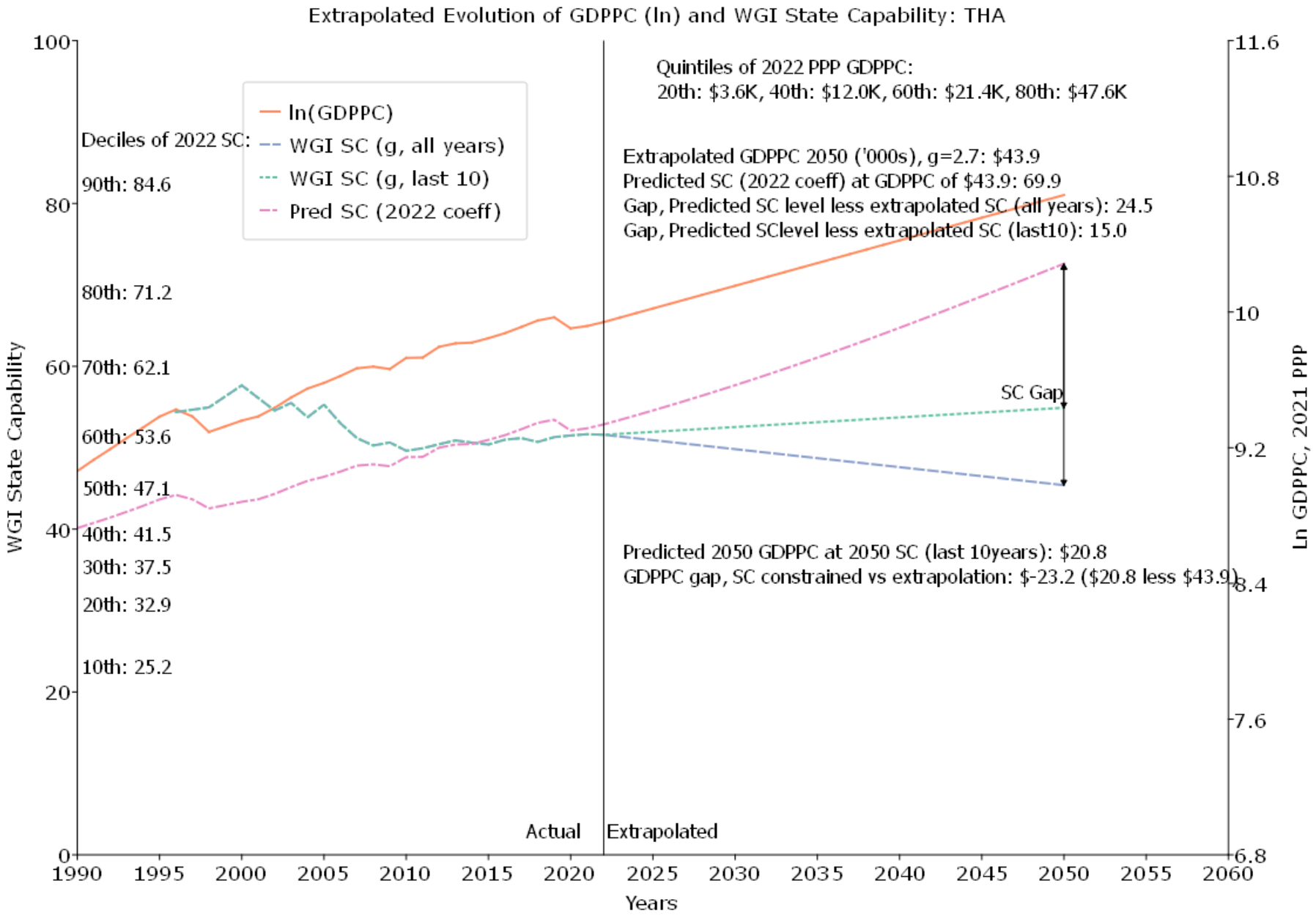
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: THA
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=2.7: $43.9
Predicted SC (2022 coeff) at GDPPC of $43.9: 69.9
Gap, Predicted SC level less extrapolated SC (all years): 24.5
Gap, Predicted SClevel less extrapolated SC (last10): 15.0
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $20.8
GDPPC gap, SC constrained vs extrapolation: $-23.2 ($20.8 less $43.9)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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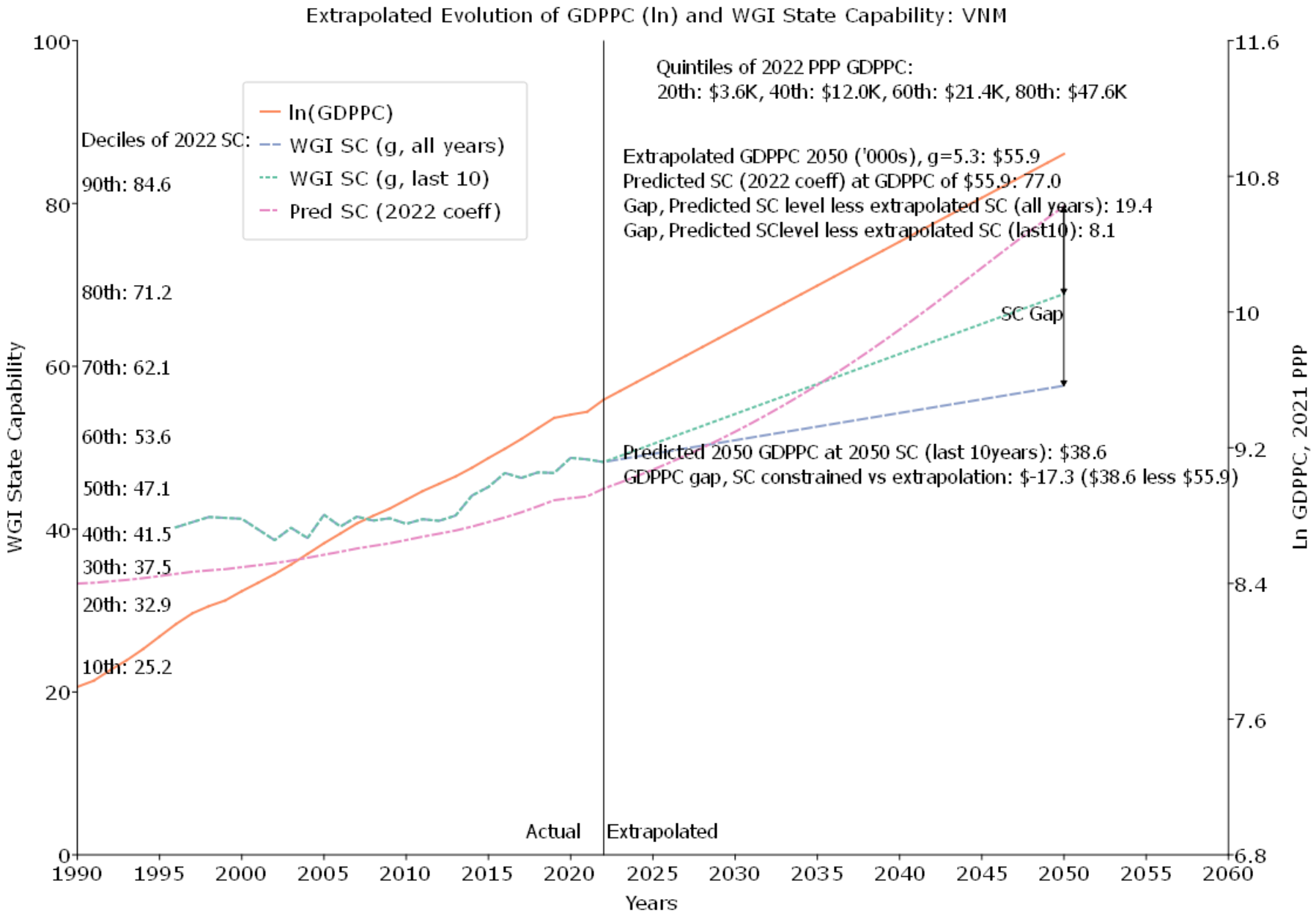
Extrapolated Evolution of GDPPC (ln) and WGI State Capability: VNM
ln(GDPPC)
WGI SC (g, all years)
WGI SC (g, last 10)
Pred SC (2022 coeff)
Deciles of 2022 SC:
90th: 84.6
80th: 71.2
70th: 62.1
60th: 53.6
50th: 47.1
40th: 41.5
30th: 37.5
20th: 32.9
10th: 25.2
Quintiles of 2022 PPP GDPPC:
20th: $3.6K, 40th: $12.0K, 60th: $21.4K, 80th: $47.6K
Extrapolated GDPPC 2050 ('000s), g=5.3: $55.9
Predicted SC (2022 coeff) at GDPPC of $55.9: 77.0
Gap, Predicted SC level less extrapolated SC (all years): 19.4
Gap, Predicted SClevel less extrapolated SC (last10): 8.1
SC Gap
Predicted 2050 GDPPC at 2050 SC (last 10years): $38.6
GDPPC gap, SC constrained vs extrapolation: $-17.3 ($38.6 less $55.9)
Actual
Extrapolated
WGI State Capability
Ln GDPPC, 2021 PPP
Years
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6.8
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