Charting a New Fiscal Course for Hawaii: Fiscal Architecture Approach

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By James Mak and Robert D. Ebel

The future is bound to surprise us, but we don't have to be dumbfounded.
Kenneth E. Boulding
Keynote Speaker for the "Hawaii 2020 Conference, 1974

The Hawai'i Executive Conference (HEC)'s recent report, *Troubled Waters: Charting a New Fiscal Course For Hawaii*, makes a compelling case for the Hawaii community to focus on "the future fiscal capacity of Hawaii state and local governments."[1] HEC examines three public expenditure challenges totaling $88.4 billion that residents will likely face over the next thirty years: (i) addressing public employee pension and retiree health obligations ($25.7 billion) ; (ii) building and maintaining a 21st century physical infrastructure ($47.4 billion); and (iii) preparing for natural disasters, sea level rise and climate change ($15.3 billion).[2]

The HEC Report does not produce estimates of future government revenues nor does it provide specific solutions. Rather it argues that Hawaii's State and county governments have "limited financial resources" and thus a "major effort must be undertaken to formulate fixes." To make this work Hawaii must begin a phase of civic engagement that will require vision, collaboration, and innovation.[3]

The purpose of this essay is to contribute to the HEC report by picking up on the question of what spending and revenue changes make "fiscal sense" for Hawaii's state and county governments in the next three decades.[4] What is not recommended is to do nothing and try to muddle through until some action becomes absolutely necessary.

How to begin?

The Fiscal Architecture Approach

Sally Wallace of the Andrew Young School of Public Policy at Georgia State University has suggested an analytical framework—which she refers to as "fiscal architecture analysis"— for examining the fiscal needs and capacities of state and local governments in the context of changes in their long-run demographic, economic, institutional[5] and technological trends.[6] According to Wallace:

1 At https://www.grassrootinstitute.org/wp-content/uploads/2019/10/HEC-Government-Report-FINAL-1.pdf

2 Some of the $88 billion (e.g. parts of the Ala Wai flood project and the construction of the Honolulu rail system) will be paid by the federal government. It is unclear how much of the $47.4 billion infrastructure expense represents spending that would have occurred anyway to replace aging infrastructure and already accounted for in budget planning and how much of it is additional spending for which new sources of funding must be secured.

3 Remarks of HEC Chair Colbert Matsumoto, *Troubled Waters: Charting a New Fiscal Course for Hawaii* (October 2, 2019)

4 Several individuals interviewed by *Hawaii Business Magazine* offered their own views on possible solutions. See Noelle Fujii-Oride, "Hawaii's Future Liabilities are Expected to Cost $88 Billion," *Hawaii Business Magazine*, January 7, 2020 at https://www.hawaiibusiness.com/how-to-pay-hawaiis-liabilities/

5 Here, "institution" refers to the rules of the game, whether formal, informal, or even norms of behavior, that govern human interactions. Thus, passage of Obamacare, legalizing same sex marriage, and banning plastic bags are all examples of institutional change.

6 Sally Wallace, *Fiscal Architecture: a Framework for Analysis of Public Expenditure Needs and Revenue Capacity*. Washington, DC: April, 2003, World Bank Institute. Andrew Young School of Public Policy, Georgia State University .pp. 3-4 http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=D01A9B2CB7579BD58FC4D08022546591?doi=10.1.1.202.1599&rep=rep1&type=pdf Also, Sally Wallace, "The Evolving Financial Architecture of State and Local Governments," in Robert D. Ebel and John E. Petersen (editors), *The*

> The challenge of the fiscal architecture analysis is to systematically identify (on a spending category-by-category basis and then, in parallel, on a revenue type-by-revenue type basis) the needs for public expenditures and revenue generating capacity of a country and/or region. This analysis largely focuses on the development of a methodology to determine the effect of these changes on 'fiscal health'—the necessary expenditures based on needs of the population and the necessary revenue needed to comply with these needs....The analysis follows the lines of a 'policy matrix' which lists the underlying variables that influence revenues and expenditures and affect future policy choices aimed at meeting expenditure needs. The goal...is to help policy makers understand the potential impact of the important economic, demographic and institutional changes on the ability of a government to finance public expenditures.

Table 1 displays an example of an abbreviated policy matrix for Hawaii.

Table 1: Matrix of Economic and Demographic Impacts on State and Local Budgets and Option

Demographic Variables	Recent & Future Trends	Anticipated Impacts on Government Budgets	Policy Options to Consider
Population	Increased proportion of eldery in the population	Revenue: Contraction of income tax base as more people retire. Rise in county property tax exemptions.	Maintain broad based excise tax. Review policy to exempt defined pensions and social security benefits from income tax. Review property tax exemptions.
		Expenditure: Increased spending on pensions and health and other elderly related social services.	Review rules on retiree pension and medical benefits.

Source: Adapted from Wallace, 2012.

There are two steps to a fiscal architecture exercise:

- identify what we know about major trends— demographic, economic, institutional, and technological— over the next few decades, including trends that are externally imposed on Hawaii and, thus, are largely beyond state/local policy control;
- understand how these trends affect revenue bases and expenditure programs in a manner that will enable state and local policy makers to design (and as circumstances change, re-design) policies that will contribute to a sustainable fiscal system overtime.

The methodology begins by adopting "if-then" thinking:

- ...*if* based on the best data available, one can make reasonable statements about trends in Hawaii's demographics, economic structure and institutions in the future and how they will impact government spending and revenues?
- ...*then* how should we reform expenditure and tax policies that make "fiscal sense" for the state?

Major Trends with Long Term Fiscal Impacts for Hawaii

Three trends frame Hawaii's fiscal system in the future: slower population growth and faster population aging, anemic long-term economic growth, and climate change.

Oxford Handbook of State and Local Government Finance, Oxford, U.K.: Oxford University Press, 2012, pp. 156-175.

Population

Hawaii's population growth has slowed markedly. During the past decade, Hawaii's resident population grew by .5% –or less than half the growth rate in the previous decade. UHERO forecasts the state's population growth rate will continue to slow to .2% per year between 2040 and 2050. Every county can expect slower population growth, with Oahu's population numbers barely growing at all. Tourist population growth will also slow, but it will grow faster than resident population. As a result, tourists will comprise a larger share of the state's *de facto* (residents + tourist) population in the future. Tourists demand more government services/spending per person per day than residents.[7] Slower population growth may yield environmental benefits.

That Hawaii's population is aging rapidly is one of the most striking features of Hawaii's population trend. As a result, the number of people age 65 and older as a percentage of the number of working age residents will rise.[8] It follows that government spending on pensions, health care and other social services will also rise. However, some expenditures, such as spending on prisons and education, could fall. How this nets out will be a function of several factors, including how people's longevity and the technology for the delivery of local public goods and services changes. So, there is some uncertainty on the expenditure side of the public budget.

What happens on the revenue side of the budget is more predictable. Non-earned income such as pensions and social security benefits will grow much faster than earned (labor) income. The shift in sources of income will have significant negative impacts on the state's fiscal health if the Legislature continues to exempt defined pensions and social security benefits from (income) taxation. Hawaii's counties, which administer the property tax, will also take a financial hit due to population aging if the practice of homeowner exemptions based on age (rather than say, on income) remains part of Hawaii tax law. Tax breaks for seniors cost states about $27 billion a year and is expected to double in the next decade.[9]

Until we perform our own calculations, we are left to deduce long term financial future of Hawaii's state and local governments by looking at the long term fiscal outlook for all state and local governments in the country as a unit.[10] Simulations performed by the U.S. General Accountability Office (GAO) suggests that for state and local governments in the next 50 years "expenditures are projected to grow faster than revenues."[11]

HEC highlights the related problem of the state's unfunded pension liability for state and county government workers. Unfunded pension liabilities are obligations for past services and must be paid regardless of the governments' financial situation. A study published in the *National Tax Journal* in 2010 predicted Hawaii's state pension fund would run dry in 2020.[12] The good news is that in 2017 Hawaii lawmakers agreed to increase state and county government pension contributions over a four-year period in order to close the pension funding gap.[13] Earlier, new employees for the largest group of employee class

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7 James Mak, *How Hawaii's State Government Shares Transient Accommodation Tax Revenues With Its Local Governments*, University of Hawaii Economic Research Organization (UHERO) Working Paper No. 2016-4, May 12, 2016 at https://www.uhero.hawaii.edu/assets/WP_2016-4.pdf

8 A similar result reported for the period 2000-2075 by Andrew Mason, *Aging, Pension Income, and Taxes in Hawaii, Report to the State of Hawaii Tax Review Commission*, October 9, 2002 at http://files.hawaii.gov/tax/stats/trc/docs2003/trc_app_b2003.pdf

9 https://www.routefifty.com/finance/2020/01/seniors-sweet-tax-breaks-have-become-target/162508/

10 United States Government Accountability Office (GAO), *State and Local Governments' Fiscal Outlook, 2019 Update*, A Report to Congress, December 2019 at https://www.gao.gov/assets/710/703475.pdf Also Norton Francis and Frank Sammartino, "Governing with Tight Budgets, Long-Term Trends in State Finances," *Urban Institute*, September 10, 2015 at https://www.urban.org/research/publication/governing-tight-budgets/view/full_report

11 GAO, December 2019.

12 Joshua D. Raub, "Are State Public Pensions Sustainable? Why The Federal Government Should Worry About State Pension Liabilities," National Tax Journal, September 2010, 63 (3), pp. 585-602.

13 Greg Mennis and Kate Kemmerer, "Hawaii's Pension Fund Positioned to Withstand the Next Recession," PEW, March 29, 2019 at https://www.pewtrusts.org/en/research-and-analysis/articles/2019/03/29/hawaiis-pension-fund-positioned-to-withstand-next-

hired after June 30, 2012 were required to make larger individual contributions and will receive reduced future benefits.[14] The latest actuary report estimates that the pension system should be fully funded by June 30, 2045.[15] An independent evaluation by Pew Charitable Trusts (PEW) essentially came to the same conclusion.[16] In the meantime, making higher pension contributions for a limited duration to pay for past employee services has its own negative consequence: there is less revenue available to pay for current services.

To maintain state and local government fiscal health, fiscal options to mitigate the effects of population change include shifting taxes to consumption (sales and gross receipts taxes, tourist taxes and user chargers) and real property ownership (including a thorough of review of all real property exemptions besides those for the elderly), higher income tax rates on earners and eliminating preferential tax treatment of pensions and social security benefits.

Economy

Hawaii's economy is growing at a slower pace than the national economy. It has been that way for some time and is not about to change soon. UHERO forecasts a steady decline in Hawaii's real GDP growth from 1.8% per year during the last decade to just 1% per year between 2040 and 2050.[17] By comparison, GAO forecasts real U.S. GDP growth at 1.9% per year (on average) between 2018 through 2029 and thereafter at 2 percent per year until 2068.[18] Future trends in GDP growth can affect the fiscal outlook for a state. GAO's simulations show that a state's fiscal health deteriorates under a slower GDP growth scenario.[19]

One reason for Hawaii's anemic economic performance is that tourism is expected to grow more slowly because Hawaii is a mature destination and faces growing competition from other destinations. Another reason is supply/capacity constraints (e.g. a slower growing workforce as population ages). But a slower growing tourism sector is not necessarily bad. A recent UHERO research brief observes that Hawaii's tourist arrival numbers have grown sharply since 1989 but not inflation-adjusted tourism receipts.[20] The authors call for a shift in marketing programs and more, not less, public spending to upgrade tourism infrastructure and tourism services in order to attract higher-spending visitors.

What policy options are available to fix Hawaii's anemic economic growth?[21] A popular tool of state and local policymakers is to give incentives (tax and non-tax) to stimulate business investment and firm relocation.[22] In 2014, state and local governments in the U.S. gave away an estimated $30 billion in business incentives.[23] However, research reveals that at the "macro level" the biggest deals generate little in the way

recession

14 KPMG, *Employees' Retirement System of the State of Hawaii, Financial Statements*, June 30, 2018 submitted by the Auditor, State of Hawaii at http://files.hawaii.gov/auditor/Reports/2019_Audit/ERS2018.pdf

15 Dave Segal, "State pension fund begins fiscal year with gain," *Honolulu Star Advertiser*, November 13, 2019, p. B4. See also his article, "State pension fund's shortfall widens to $14B," in the January 18, 2020 issue of the newspaper.

16 Mennis and Kemmerer, 2019.

17 Provided by Carl Bonham, executive director of UHERO.

18 GAO, December 2019.

19 GAO, December 2019, p. 14.

20 Paul Brewbaker, Frank Haas, and James Mak. *Charting a New Course of Hawai'i Tourism*. Honolulu: University of Hawaii Economic Research Organization, February 14, 2019 at https://www.uhero.hawaii.edu/assets/ChartingANewCourseForHawaiiTourism.pdf

21 The term "economic growth" is usually interpreted to mean growth in real GDP per person; here we use it to refer to growth in total real GDP.

22 Another is to improve the regulatory environment for entrepreneurs and businesses to reduce unnecessary compliance costs.

23 Hawaii does not require some form of "fiscal notes" research on the net benefits of such "economic development incentives".

of overall economic benefits in return.[24]

Hawaii has also experimented with business incentives to stimulate investment. Here the anecdotal evidence is mixed. For example, beginning in 1997 state lawmakers passed several hotel renovation tax credits to spur hotel renovations in order to rejuvenate Hawaii's aging visitor destinations. The tax credits may have helped to accelerate the pace of resort redevelopment, especially in aging Waikiki, which was what lawmakers wanted.[25] In their evaluation of Hawaii's 100% high technology tax credit, University of Hawaii economists Andrew Kato, Sumner LaCroix and James Mak argue that, at very least, policymakers should be aware that many factors determine firm investment decisions and that a targeted, small investment tax credit could well be one ingredient in a policy mix, but not the sole ingredient.[26]

Economic growth affects people differently; some people are made much better off while others are not as fortunate. Despite Hawaii's below-national average unemployment rate, nearly half of Hawaii's residents struggle to make ends meet.[27] Hawaii is witnessing population out-migration and its high cost-of-living is at least part of the problem. The U.S. Bureau of Economic Analysis (BEA) estimates that the price of goods and services in Hawaii is more than 18 percent higher than the national average (with expensive housing being the principal reason) while incomes are low relative to the state's cost-of-living.[28] University of Hawaii economist Sumner La Croix notes that wages in Hawaii are below the national means in most industrial clusters.[29] Given Hawaii's great distance from mainland suppliers, limited competition in small markets, and its relative scarcity of land combined with restrictions and regulations facing developers, the state's higher cost of living is simply the price of living in paradise with little foreseeable relief. But if one believes that economic growth should make everyone in Hawaii better off, then there is a case for targeted public spending that can help with the affordability problem, including affordable housing (which typically does require public subsidy of private development), transit–oriented development, and infrastructure investments including water and wastewater systems.

One way to pare down future government spending in the face slowing economic growth is to require benefit-cost analysis on major new spending proposals. In 38 states (not including Hawaii) and the District of Columbia (2015), a proposal to start a major spending program requires that every piece of spending legislation be accompanied by a "fiscal note" that identifies where the additional money (or cuts in spending elsewhere in the budget and/or revenue increases) will come from.[30] Hard choices have to be made. Hawaii should consider adopting the same requirement.

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24 Cailin Slattery and Owen Zidar, "Evaluating State and Local Tax Incentives," in preparation for *Journal of Economic Perspectives*, January 3, 2020 at https://scholar.princeton.edu/sites/default/files/zidar/files/slattery-zidar-taxincentives-2020.pdf

25 James Mak, *Developing a Dream Destination, Tourism and Tourism Policy Planning in Hawaii*, University of Hawaii Press, 2008, Chapter 4.

26 Andrew Kato, Sumner LaCroix and James Mak, "Small State (Hawaii), Giant Tax Credits," State Tax Notes, Vol. 54, Number 9, November 30, 2009, pp.641-652.

27 Anita Hofschneider, "Nearly Half of Hawaii Residents Struggle to Make Ends Meet," *Civil Beat*, January 10, 2018 at https://www.civilbeat.org/2018/01/nearly-half-of-hawaii-residents-struggle-to-make-ends-meet/

28 Rachel Inafuku and Peter Fuleky, "Little relief from Hawaii's high cost of living," *UHERO, Economic Currents*, January 21, 2020 at https://uhero.hawaii.edu/news/view/358

29 Sumner La Croix, *Affordable Housing in Hawaii: The Bumpy Road Forward*, Presentation to Hawaii Economic Association, 7 November 2019.

30 Elizabeth McNichol, Iris J. Lav and Kathleen Masterson, "Better Cost Estimates, Better Budgets," *Center on Budget and Policy Priorities*, November 24, 2015 at https://www.cbpp.org/research/state-budget-and-tax/better-cost-estimates-better-budgets. Some states periodically establish *ad hoc* revenue and/or expenditure review commissions to undertake a comprehensive review of their fiscal systems—what works and what does not work. Hawaii state lawmakers are required by the State Constitution to appoint a tax review commission every five years to review the state's revenue system, but there is no commission to review state spending.

Climate Change

The impacts of climate change are already felt in Hawaii.[31] Yet the State has not conducted a comprehensive analysis of the impacts of climate change on resources, infrastructure, businesses, governments, and households.[32] The 2017 *Hawaii Sea Level Rise Vulnerability and Adaptation Report*, under the business-as-usual scenario and for planning purposes, projects sea level rise of 3.2 feet (a rise of more than 6 feet is "physically plausible") by the end of the century. Under that scenario, 25,800 acres of land and over 6,500 structures near the shoreline will be compromised or unusable, nearly 20,000 residents will need new homes, and 38 miles of major roads and 550 cultural sites will be flooded. Waikiki, the state's iconic visitor destination, will be under water.

The report further estimates that the value of flooded structures and 25,800 acres of land statewide at $19 billion but that does not encompass all the potential losses. Public infrastructure losses due to flooding are not included. Total economic losses due to flooded public and private critical infrastructure may be "an order of magnitude greater than the potential economic loss from land and structures."[33]

In climate change literature, the term "mitigation" refers to measures such as a carbon tax aimed at reducing greenhouse gas emissions (GHG). Climate "adaptation" refers to changes made in human or natural systems to prevent bad outcomes. Relocating highways due to sea level rise is an example of "adaptation."[34] Finding funding for climate change adaptation has become a growing concern throughout the U.S. A San Francisco Federal Reserve Bank report notes that in cities around the country "the initial need for resilience and adaptation investments cannot be met by current fiscal system supported by state and federal subsidies and conventional local taxing powers."[35] The statement regarding cities aptly applies to Hawaii's four counties which levy the property tax as their only significant tax handle and the state government guards its taxing powers jealously.[36]

In Hawaii, there is not even a "within-the-ball-park" estimate of the potential fiscal impacts of climate change on Hawaii's state and local governments. The State of Hawaii Department of Transportation estimates that about 15% of the state's highway system will be impacted and must be addressed either by hardening, raising or relocating roads.[37] The preliminary cost estimate is $15 billion. The Honolulu Board of

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31 LiAnne Yu, "The Cost of Climate Change in Hawaii," *Hawaii Business Magazine*, September 6, 2018 at https://www.hawaiibusiness.com/cost-of-climate-change/ The U.S. Global Change Research Program's fourth national climate assessment report (Volume II) assesses the impact of climate change in the U.S. and (separately in Chapter 27) Hawaii and the U.S. Pacific Islands. At https://nca2018.globalchange.gov/chapter/27/

32 Yu, 2018.

33 Hawaii Climate Change Mitigation and Adaptation Commission, 2017, *Hawaii Sea Level Rise Vulnerability and Adaptation Report,* at https://climateadaptation.hawaii.gov/wp-content/uploads/2017/12/SLR-Report_Dec2017.pdf.

34 AECOM, *Paying for Climate Adaptation in California, A Primer for Practitioners*, October 2018 at https://resourceslegacyfund.org/wp-content/uploads/2018/11/Paying-for-Climate-Adaptation-in-California.pdf

35 John Cleveland, Jon Crowe, Lois Debacker, Trine Munk, and Peter Pastrik, "Hunting for Money: U.S. Cities Need a System for Financing Climate Resilience and Adaptation," Federal Reserve Bank of San Francisco, *Community Development Innovation Review*, October 17, 2019 at https://www.frbsf.org/community-development/publications/community-development-investment-review/2019/october/hunting-for-money-u-s-cities-need-a-system-for-financing-climate-resilience-and-adaptation/

36 There exists a good case for state authorization of an expanded local taxing role. Such local revenue diversification (local option taxes) could be designed to "fit" the differential revenue generating capacities of the counties and, thus, reduce some of the tax raising pressures on the state. See, for example, James Mak, May 12, 2016 at https://www.uhero.hawaii.edu/assets/WP_2016-4.pdf

37 A very detailed analysis of the state's highways most "susceptible" to climate change because of their proximity to the ocean and requiring adaptation is contained in Oceana Francis, Horst Brandes, Guohui Zhang, and David Ma, *State of Hawaii Statewide Coastal Highway Program Report, Final*, State of Hawaii Department of Transportation Highways Division, August 21, 2019, at https://hidot.hawaii.gov/highways/files/2019/09/State-of-Hawaii-Statewide-Coastal-Highway-Program-Report_Final_2019.pdf A benefit/cost ratio analysis of various adaptation measures will be forthcoming.

Water Supply estimates that 76 miles of pipeline in the flood zone on Oahu must be updated at an estimated cost of $300 million. And this is just a start.[38] The HEC report cites the $15 billion figure for state highway adaptation and another $300 million for the Ala Wai Flooding Project under "future natural disasters and climate change expenses" but excludes the $300 million Honolulu Board of Water Supply estimate for pipeline update. Obviously, HEC's combined $15.3 billion public sector infrastructure cost figure is too conservative. Moreover, it does not include increases in operating costs of the public infrastructure due to climate change (e.g. air conditioning public schools.)

In addition, as the sea level rises, Hawaii may experience a surge in migration from U.S. affiliated Pacific islands to Hawaii as their home islands become uninhabitable. This migration has fiscal implications for Hawaii's state and local governments as a result of increased demands placed on health, education and other public services.[39]

While climate change adaptation will increase government spending, it will negatively affect government revenues. Tourism will be heavily hit; that alone would slow economic growth. (Thus, UHERO's long term economic and population forecasts may be optimistic.) With rising temperatures, some tourists may decide to visit destinations with more temperate climates.[40] A recent survey of travel technology companies, tour operators, travel agents, hoteliers and travel management companies conducted by Travel Technology Europe revealed that nearly half say that customers are asking for more "eco-friendly, sustainable travel options."[41] As tourism is a contributor to climate change, environmental activists are encouraging people to fly less. Around the world, efforts to deal with climate change will lead to higher cost of travel and dampen demand. Columbia University economist, Jeffrey Sachs, observes that "We face two huge unsolved problems in decarbonization: aviation and ocean shipping. There are no easy answers available technologically."[42] The cost of using synthetic and biofuels to replace fossil fuels would increase airfares around the world by 30% to 40%.[43] Hawaii relies on both aviation and ocean shipping.

How can Hawaii's state and the counties pay for the public sector's share of the adaptation costs associated with climate change? Two options are available. One option worth considering is a carbon tax, expressed as dollars per ton on carbon emissions. Such a study is in progress at the University of Hawaii-Manoa. The overriding purpose of a carbon tax is to encourage consumers and businesses to reduce the consumption of fossil fuels to curb GHG emissions. The alternative to a carbon tax is an emissions trading system (ETS). Under such a system, the government places a cap on total state carbon emissions which would be lowered over time and sell pollution "allowances" up to the limit of the cap.[44] California implemented such a system in 2013.[45] Energy giant, BP, is supporting legislation that would establish

38 Yu, 2018.

39 Hawaii Advisory Committee to the United States Commission on Civil Rights, *Micronesians in Hawaii: Migrant Group Faces Barriers to Equal Opportunity*, a briefing report, March 2019 at https://www.usccr.gov/pubs/2019/08-13-Hawaii-Micronesian-Report.pdf Of course, migrants also pay taxes.

40 A 2008 study notes that, temperature-wise in year 2100, being in Honolulu may feel like being in Acapulco, Mexico or Bangkok, Thailand. Frank Ackerman and Elizabeth A. Stanton, *The Cost of Climate Change, What We'll Pay if Global Warming Continues Unchecked*, Natural Resources Defense Council (NRDC), May 2008 at https://www.nrdc.org/sites/default/files/cost.pdf

41 Linda Fox, "Travel tech pros put economy as key challenge for 2020," *Travel Weekly*, January 9, 2020 at https://www.travelweekly.com/Travel-News/Travel-Technology/Travel-tech-pros-put-sustainability-behind-economy-as-key-challenges-for-2020

42 Johanna Jainchill, "Changing climate could destroy the industry, travel CEOs warned," *Travel Weekly*, September 26, 2019 at https://www.travelweekly.com/Travel-News/Government/Climate-change-could-destroy-travel-industry

43 Jainchill, 2019.

44 For more details on the two systems, see Erik Haites, Duan Maosheng, Kelly Sims Gallagher, Sharon Mascher, Easwaran Narassimhan, Kenneth R. Richards, and Masayo Wakabayashi, "Experience with Carbon Taxes and Greenhouse Gas Emissions Trading Systems," *Duke Environmental Law and Policy Forum*, Fall, 2018, 29(1), pp. 109-182.

45 https://ww3.arb.ca.gov/cc/capandtrade/capandtrade.htm

such a system in Washington State.[46] Policies such as a carbon tax and greenhouse gas emissions trading system can reduce emissions and generate revenue. The amount of revenue generated and the impacts on residents, industry and the state economy depend on the specific design of the policy adopted.

Conclusion

In this essay, we discuss how using fiscal architecture analysis can help Hawaii's state and local governments to better plan their future budgets to achieve long run fiscal health (balance) under pressures from future population and economic trends and looming climate change. The methodology works best when there are no external or other unpredictable events that shock the fiscal system. Such shocks are inevitable. Thus, the analysis cannot just be a one-time exercise and should be repeated frequently.

We have not quantified future government spending and revenue requirements. That will be necessary to obtain a better grasp of the magnitude of the fiscal problems ahead in order to craft potential policy options to address those problems. The policy options will need to be vetted to make sure that they are technically possible, based on sound economics, preserves Hawaii's competitiveness,[47] are equitable and culturally sensitive, easy to administer, and politically acceptable. The authors of the *Statewide Coastal Highway Program Report* (Chapter 4) have created an excellent check- list of questions to evaluate the benefits versus costs of climate change adaptation options for the state's highways.[48] Those questions can be adapted to evaluate other proposed expenditures. It will be up to lawmakers to formulate action responses.

Some readers might be concerned that government will be taking an ever larger share of our aggregate income. Not necessarily so. Future government spending can still grow, but Hawaii's State Constitution limits the growth of state government operating expenditures to no faster than the growth of total personal income in the state. (There is a separate debt ceiling.)[49] That provision is unlikely to be repealed soon. Thus, some expenditures may grow faster than personal income; others may grow slower; and some expenditures may even decline due to cost savings from technological change (think AI) and changing consumer and business demands (e.g. an older population demands less spending on prisons and K-12 public education). Planning ahead enables us to reprioritize our public spending and reassess the best ways to pay for them. It may mean that some valued expenditures may have to be cut. As a result, Hawaii's fiscal architecture thirty years from now may be quite different from what it looks like today.

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46 https://www.seattletimes.com/seattle-news/politics/new-bp-ad-campaign-calls-on-washington-legislature-to-put-a-price-on-carbon-pollution-from-fossil-fuels/

47 For further explanation of state/local fiscal competitiveness see Michael J. Wasylenko, "Competitiveness: Factors that Contribute to Economic Growth in States With Special Reference to State and Local Spending and Taxes". *Final Report of the Connecticut Tax Study Panel*, Vol 2: Staff Study Papers on the Economic and Policy Framework and Connecticut Taxes. Hartford: General Assembly, 2015. www.cga.ct.gov/fin

48 At https://hidot.hawaii.gov/highways/files/2019/09/State-of-Hawaii-Statewide-Coastal-Highway-Program-Report_Final_2019.pdf

49 Capital spending is largely financed by borrowing. The State's ability to finance future infrastructure spending could be stymied by the debt ceiling; the alternative is cash financing.

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About the Authors

James Mak is Professor Emeritus of Economics at the University of Hawai'i and a Research Fellow at the University of Hawaii Economic Research Organization.

Robert D. Ebel is a former member of the University of Hawai'i Department of Economics and, subsequently, Lead Economist for the World Bank Institute Program on Intergovernmental Relations and Local Public Financial Management.