



Pacific Islands Workshop

Building Resilience to Natural Disasters and Climate Change



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Introduction to exercise on *Fiscal Policy and Building Resilience*



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Motivation

- Exploration why building resiliency is potentially very beneficial
- What does it take?
- We want to hear from you ...

Outline

We are going to use a tool with a very simple setup to simulate various fiscal policy options to assess the merit of building resiliency against the explicit economic and political costs it implies:

- A simple setup
- Taking a tour through the simulation tool
- Hands-on exercises
- Sharing your experience

A Simple Setup

A very simple budget

Revenues

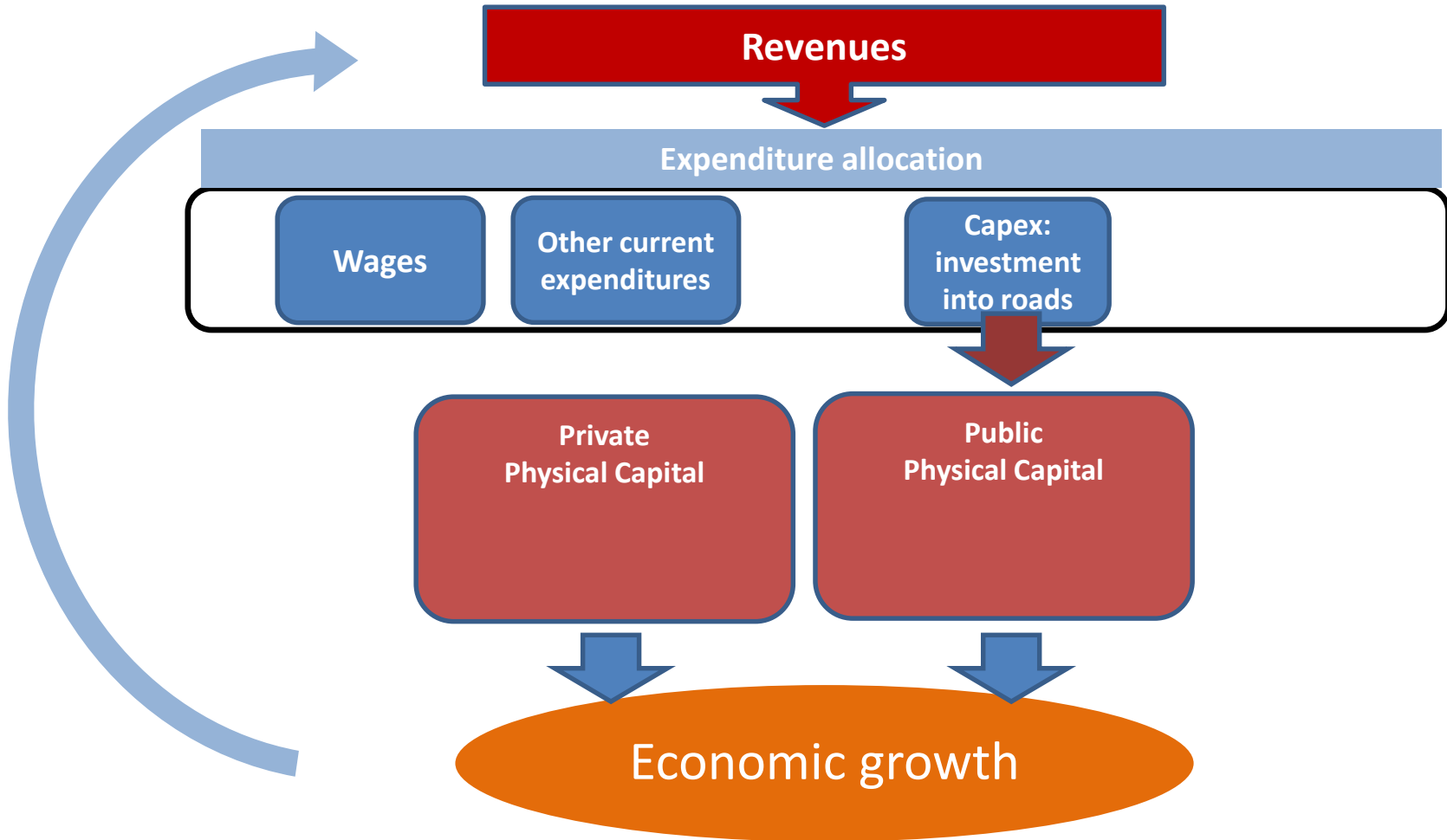
Expenditures

Current expenditures
Capital expenditures

Overall balance

Buffer Fund

Stylized links between fiscal policy and the economy



Impact of natural disaster on fiscal policy and the economy



Expenditure allocation

Other current expenditures:
emergency relief

Economic contraction

Revenue contraction

What does resiliency mean (in the context of this simple setup)?

- Having enough money on hand for emergency relief
 - Need to run surpluses to build up buffer fund
- Build infrastructure to a standard that it can withstand disasters
 - Build resilient roads (even though they are more expensive)



Taking a Tour through the Simulation Tool

Dashboard

- Here you enter your policy decisions
 - Fields with yellow background and red fonts are for you to enter your policy decisions
 - Please do not change other fields
- Provides graphical overview of key developments in your economy (and consequences of your policy decisions)
 - Real economy
 - Fiscal indicators

Budget Overview

- Budget overview is presented in different formats
 - Nominal terms (millions of Pacifica)
 - Percentage changes
 - GDP terms
- Sheet is for information only
 - Please do not change cells

Disaster Panel

- Here we enter whether a disaster has occurred ...
 - Possibility of disaster every five years
 - If disaster occurs, it can be small or large
 - You also see what disaster cost is, and what savings are due to resiliency investment

Hands-on exercises

Exercise I

- We start out from a baseline in which the ‘world is in order’ but in which there is no resiliency
 - Decent wage growth
 - Decent economic growth
 - Balanced budget
- Now let’s assume a disaster occurs:
- What happens, and why?
 - Discuss vulnerabilities that emerged in wake of disaster

Exercise II

- What are the implications of shifting investment from traditional roads to resilient road building?
 - Let's upgrade our road building program from standard to resilient quality—what is the impact of disasters now on the economy?
 - But can we afford this shift to resilient building? After all, resilient road building is 50% more expensive!
 - Let's create fiscal space by reducing wage increases—is even an extreme scenario where we freeze nominal wages enough? No, it isn't!
 - We have to downscale our resilient road-building program: the constraint is to keep the overall balance sufficiently in surplus so that the reserve fund never runs out of money.

Exercise II (continued)

- A suggested approach for downscaling our resilient road-building program:
 - The overall constraint is that the reserve fund should never run out of money—this means we need to run an overall surplus in non-disaster years to build up reserves in the reserve fund for emergency relief in disaster years.
 - Let's begin in 2017 by reducing our road building program such that the overall balance is in surplus.
 - Do the same for the following years—if you run into a situation where the reserve fund runs out of money, go back to the start and reset the path so as to build up more reserves.
 - If you have enough fiscal space in outer years, you can increase the road building volume above the baseline.

Exercise II (continued)

- What are the strengths of weaknesses of this rapid shift towards resilient road building?
 - Consider feasibility regarding
 - the stark compression of the public wage bill (and real wages of public employees)
 - the rapid change in construction techniques
 - What is the economic impact in the early years?
 - When do economic benefits materialize?
- Would you recommend such a rapid shift?

Exercise III

- Create a scenario of shifting towards resilient road building that you consider as feasible and desirable:
 - You may want to start with determining how much fiscal space you think you can create through public wage restraint without overly compressing the public wage bill
 - You gain additional fiscal space by reducing standard road building, but don't reduce it too much since it will take time to switch to resilient standards and investment into the road network will need to continue in the meantime, if at a reduced level (you could scale the baseline standard road building program down by a fixed factor for sake of simplicity)
 - Next, determine a level of resilient road building that you think is feasible in the short term
 - Scale up resilient road building at a pace that you think is feasible and that doesn't tax fiscal space too much
 - Reiterate the steps above until you are satisfied with the overall result!

Exercise III (continued)

- Let's test the robustness of your recommended approach towards resilient road building by considering alternative sequences of natural disasters
 - Represent your recommended approach, with a focus on the tradeoffs and constraints you considered to arrive at this recommendation

Sharing your experience

Sharing your experience

- Is resilient investment a topic in your country?
 - Is it happening?
 - If so, are you satisfied with the level of resilient investment?
- What are the constraints for resilient investment?
 - Possible factors you could consider:
 - Payoff is too far in the future?
 - Similarly, budget process focuses on shorter term objectives?
 - Technical capacity in private sector (e.g., road building contractors) and public sector (e.g., public investment management)
 - Fiscal space
 - Revenues: political will/technical capacity?
 - Spending: other priorities are more pressing?
 - Reliance on donor funding for investment?