

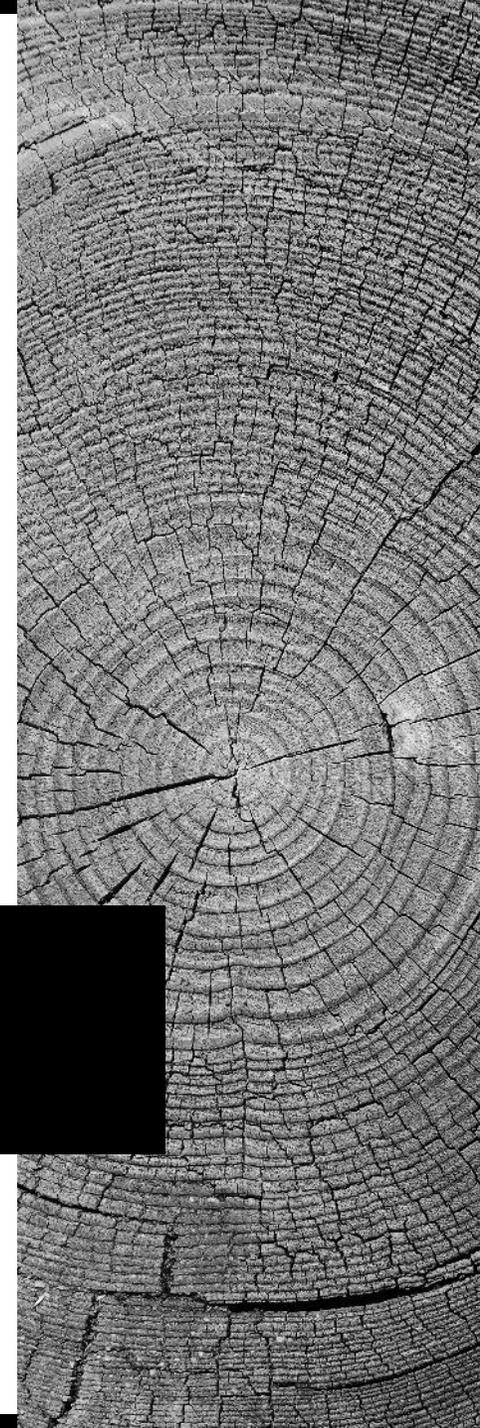


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TRADE AND ECONOMIC GROWTH

Development Policy

FSPPM



THE ASSUMPTIONS OF NEOCLASSICAL GROWTH MODELS

- One sector models: no movement of labor from low to high productivity sectors
- Constant returns to scale and decreasing returns to the factors
- Say's Law: Supply always equals demand
 - Because prices adjust, there is no such thing as a glut
 - More supply simply lowers prices until demand equals
 - This may be true for many goods and services, but it is not true for labor and capital → derived demand
 - Demand for labor depends on the demand for the goods and services produced by labor
 - Capital is not invested if there is insufficient demand for the goods and services that it produces



Jean-Baptiste Say,
1767-1832

EXPORT LED GROWTH

- Adam Smith's "vent for surplus": the division of labor and specialization require a large market (supply doesn't equal demand)
 - Exports bring underutilized factors (labor) into production
 - The resulting "surplus" can be reinvested in industry
- Verdoorn's Law: Productivity growth is a function of the rate of growth of manufactured output (again requires a large market)
- Thirlwall's Law: Balance of payments constraint on growth
- Recent Asian history: Japan, Korea, Taiwan, China, Singapore, Malaysia Thailand and Vietnam all examples of export-led growth

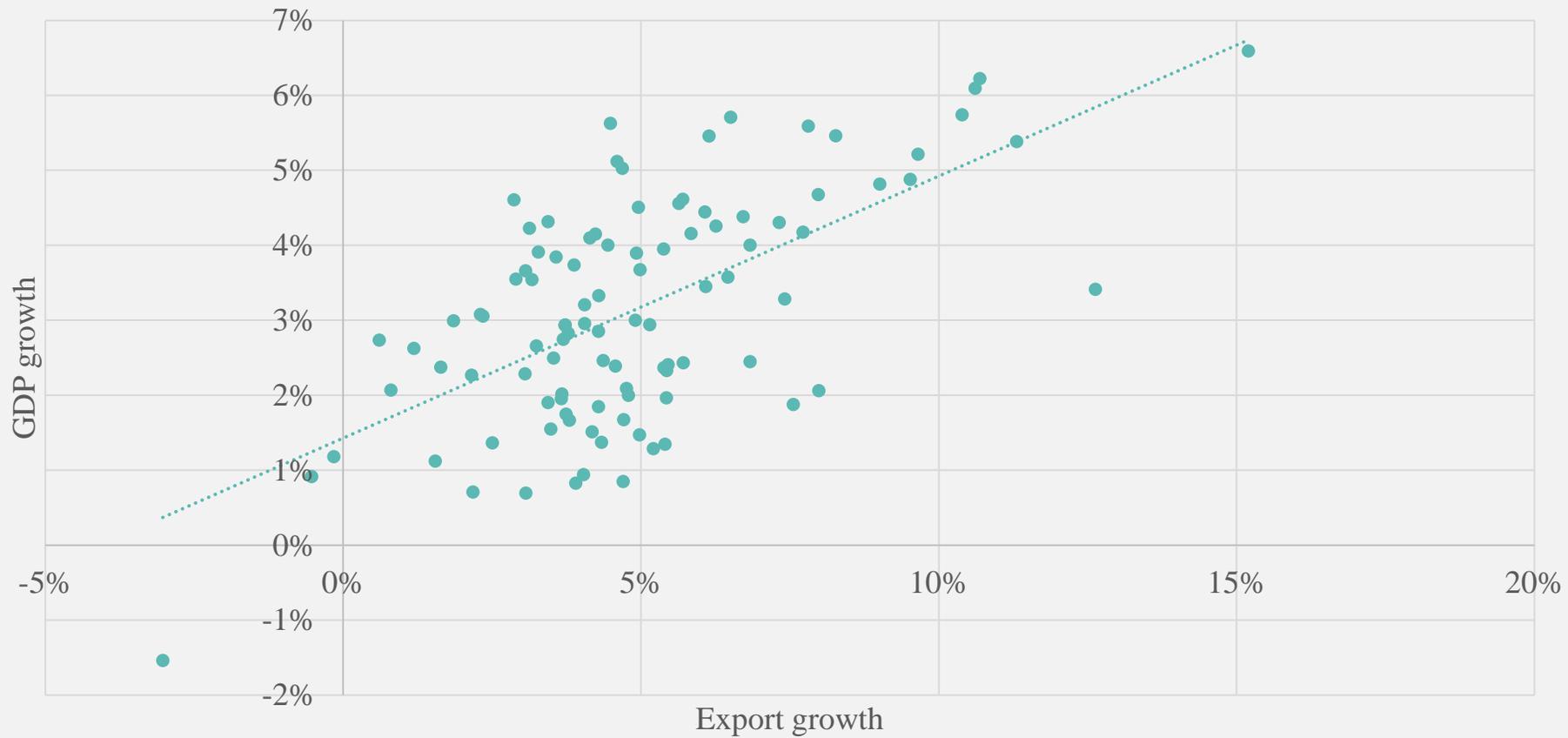


EXPORTS ARE THE ONLY AUTONOMOUS SOURCE OF DEMAND

- Remember $GDP = C + I + G + (X - M)$
- Consumption demand is *derived* from labor earnings (when you hear someone tell you that consumption is driving growth, you should ask what is driving consumption? The answer is growth).
- Investment demand is *derived* from expectations about future profits (what drives expectations? Growth)
- Government demand depends (to a large extent) on taxation of consumption and earnings.
- Exports are *autonomous* in that their level does not depend on GDP growth or expectations about future GDP growth.



GROWTH OF EXPORTS AND GDP GROWTH, 1990-2018



COMPETITIVENESS OF EXPORTS

- Export growth is a function of relative prices and foreign income

$$f(\text{exports}) = \frac{\text{home prices}}{\text{foreign prices}}, \text{ foreign income, elasticity of demand}$$

As rates of change: $x_t = \eta(p_{dt} - p_{ft}) + \varepsilon(z_t)$

p_{dt} are domestic prices and p_{ft} are foreign prices, all in the same currency

η is the elasticity of demand for exports (eta) $[\Delta Q/\Delta P]$ (always negative), so if foreign prices are rising faster than domestic prices, export growth is positive

ε is the income elasticity of demand for foreign income (epsilon) $[\Delta Q/\Delta Z]$ (always positive): so exports growth when foreigners get richer

CHANGE IN DOMESTIC PRICES

- Foreign income and foreign prices are exogenous to the model
- But domestic prices are a function of changes in domestic wages and productivity
- So as domestic wages rise, domestic prices also rise
- But as domestic productivity rises, domestic prices fall.
- Remember that domestic productivity in manufacturing rises more quickly as the pace of output growth increases: Kaldor's Second Law
- So good exporters (where output is growing rapidly) become more competitive over time



THE BALANCE OF PAYMENTS

- $BOP = \text{Current account} + \text{Financial Account} + \text{Capital Account}$
 - Current account = net exports + net primary income (wages and investment income) + net secondary income (net transfers) + change in central bank reserves
 - Financial account = net FDI + net portfolio flows
 - Capital account = net purchase of fixed assets (land)
- BOP is an accounting identity, not an equilibrium model
 - When the current account is negative, the financial and/or capital account must be positive (or the central bank draws down on its reserves)
 - Price changes do not automatically bring the balance of payments into balance



BALANCE OF PAYMENTS AS A GROWTH CONSTRAINT

- When the current account is in deficit, the country must:
 - reduce imports and/or
 - attract foreign direct investment or loans and/or
 - Draw down on foreign exchange reserves
- This can mean slowing down domestic demand growth by increasing domestic interest rates
- Why are high oil prices bad for developing countries (that do not produce oil)?
 - If the price of imports is rising faster than the price of exports, the country needs to either export more or finance the deficit with capital inflows
 - If neither is possible, interest rates will have to rise to attract foreign capital and slow down domestic demand



LONG RUN BALANCE DEPENDS ON ACHIEVING GROWTH OF EXPORTS EQUAL TO THE GROWTH OF IMPORTS

- Recall the export function : $x = \eta(p_d - p_f) + \varepsilon(z)$
- Now add an import function: $m_t = \psi(p_f - p_d) + \pi(y)$,
 - where ψ (*psi*) is price elasticity of demand for imports (always negative) and
 - π (*pi*) is income elasticity of demand for imports
 - y is domestic income growth
- Imports grow more rapidly when domestic prices are rising faster than import prices, and domestic incomes are increasing



WHAT ARE THE LEVELS OF Y THAT ARE CONSISTENT WITH IMPORTS EQUALING EXPORTS?

- If the prices of the goods a country imports are rising faster than the goods its exports, the BOP consistent growth rate will be slower (terms of trade effect)
- If the country's inflation rate is higher than its trading partners, the BOP consistent growth rate will be slower.
- If prices do not change, then the crucial factor is ratio of income elasticity of demand for exports and the income elasticity of demand for imports:
 - $y = \frac{\varepsilon(z)}{\pi}$ or x/π (*Thirlwall's law*)
 - In words: the more import intensive growth is, the lower the rate of BOP consistent growth

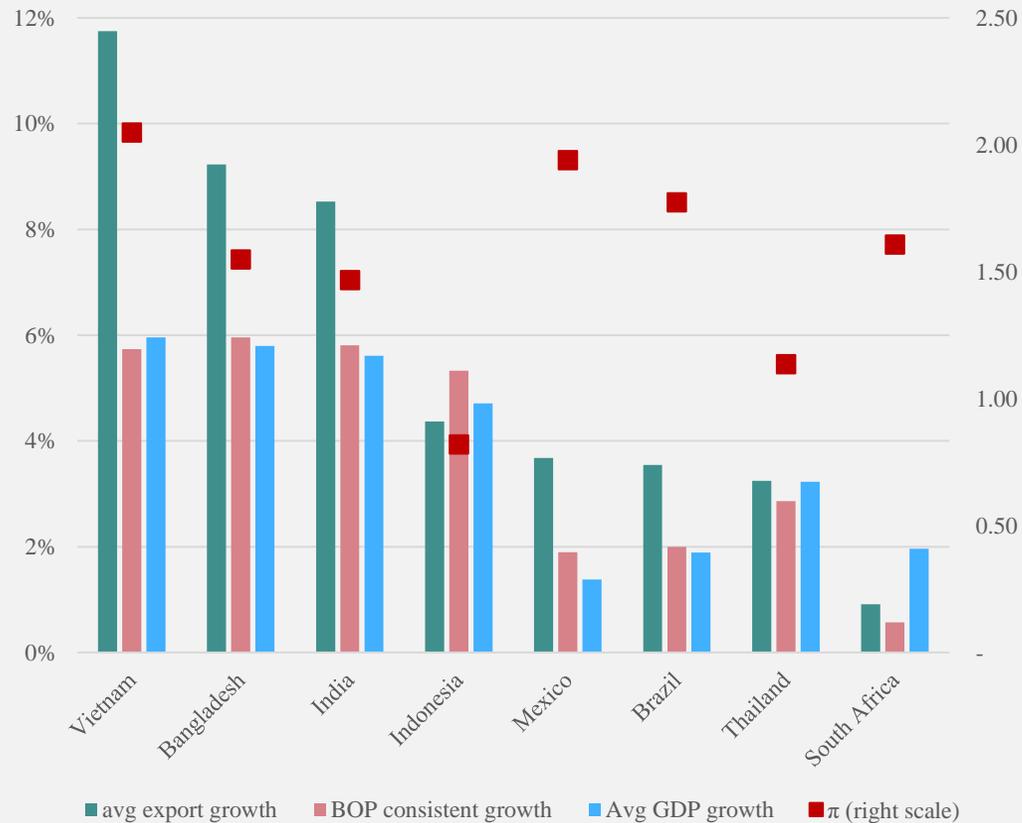


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BALANCE OF PAYMENTS CONSISTENT GROWTH 2001-2020 IN SELECTED COUNTRIES



- Vietnam had the highest export growth rate but also higher income elasticity of demand for imports
- Indonesia's export growth was slow but relatively low import elasticity
- Mexico and Brazil had slower export growth and higher import elasticity



POLICY IMPLICATIONS

- Countries grow faster if they can sustain a higher rate of export growth
- Countries with a high income elasticity of demand for imports will achieve a lower balance of payments consistent rate of growth (Thirlwall's Law)
- Countries that produce goods that have a high income elasticity of demand will grow faster (manufactured goods vs. bulk commodities)
- Verdoorn's Law: labor productivity is a function of the rate of growth of manufactured output
- Remember we are talking about export growth (a policy outcome) not "trade liberalization" (a policy mechanism)



DISCUSSION QUESTIONS

1. Discuss the balance of payments constraint on growth and the implications for trade policy
2. How can countries achieve a high rate of export growth and lower income elasticity of demand for imports?

