



**POLICY OPTIONS AND CHALLENGES
FOR DEVELOPING ASIA—
PERSPECTIVES FROM THE IMF AND ASIA
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**COMMENTS ON
“DETERMINANTS OF GROWTH
IN LOW-INCOME ASIA”
BY ARI AISEN**

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**Comments on “Determinants
of Growth in Low-Income Asia”
by Ari Aisen**

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The paper conducts Barro-type growth regressions

Its findings are concise:

What affects growth positively are

- Investment-to-GDP ratio
- Openness
- Primary school enrollment
- Rule of law,

What affects growth negatively is

- Government current spending-to-GDP ratio

Policy Conclusions are Concise

Low-Income Asia needs to raise marginal productivity of capital. To do so, they need

- Better education
- More technology transfer
- Improved business climate
- Deepened financial sector

They also need to open the economies to international trade and improve judiciary and police systems.

Policy Conclusions--continued

- These are important conclusions and the author should be congratulated for getting significant coefficients for these key variables with all the expected signs.
- But these conclusions are also obvious.
- Could we go further beyond the obvious in terms of policy recommendations for governments of low-income Asia? Unfortunately, probably not—with growth regressions.

What are Growth Regressions Anyway.

- These started as an effort to explain the Solow-residual—growth that could not be explained by capital and labor accumulation alone.
- Popularized by Barro (1996) and Barro and Sala-i-Martin (2003).
- It is an effort to run “millions” of regressions to identify which variables are associated with economic growth.

Growth Regressions

- But, empirical growth analysts have found it difficult to obtain “robust” correlates with this exercise. For example,

- Sal-i-Martin says in “I Just Ran Two Million Regressions” (1997) if one starts running regressions combining the various variables, variable x_1 will soon be found to be significant when the regression includes variables x_2 and x_3 , but it becomes non-significant when x_4 is included. Since the “true” variables that should be included are not known, one is left with the question: what are variables really correlated with growth?”
- Also Levine and Renelt (1992).

Growth Regressions: Problems

- As a result, these regressions offer rather static and “other-things-being-equal” pictures and offer little insight on:
 - Causality
 - Dynamic aspects of growth
 - In particular, growth seen in Asia various aspects of which seem to be mutually reinforcing

Causality-Investment

- Investment is definitely a most significant right-hand-side variable. Investment should promote growth. But, growth also raises marginal product of capital and increases investment. Causality goes both ways.

Investment

- The author says emerging Asia has higher coefficient on investment than low-income Asia and concludes investment is more efficient in emerging Asia. But could it be merely that growth is higher in emerging Asia for other reasons?
- In addition, Barro and Sala-i-Martin found that coefficient on investment is higher for low-income than high-income economies. Does the author have any comment on the difference from above?

Causality—Primary Education

- contemporaneously, primary school enrollment should be affected more by an increase in income than the variable positively influencing growth—as it takes a while before better primary education raises productivity. Also it is not clear why primary education was chosen a variable for human capital—why not secondary education, e.g.?

Fertility

- High fertility may suppress income per capita over time as the author claims, but contemporaneously, causality might well run in the reverse direction—higher growth raises income and together with it the value of women's time, among others, and tends to reduce fertility.

Government Spending

- The paper says that government consumption affects growth negatively and the negativity is larger in emerging than low-income Asia—presumably due to crowding out—Barro and Sala-i-Martin (2003) reports an opposite result.
- It is difficult to generalize growth impact of government spending without looking at its components. One could not treat all government current spending as homogenous —weights associated with different spending should vary (Croce 2002).

Government Spending

- It may be that rather than “government current spending” lowering growth, government spending is correlated with other variables that have negative relationship with growth.

Assessment of Growth Regressions

- Good for selecting key factors associated with growth, but limited as a policy analysis tool—with little insight provided into causality and dynamic aspects.
- Are there alternative/complementary studies on growth?

Alternative Growth Study

- An alternative way to study growth to complement growth regressions: essays in persuasion (Keynes) or clinical economics (Sachs)
 - Examine the economic situation and policies taken over time and in detail
 - Focus on interaction among different factors, sectors, and policies.
 - See how human and physical capital accumulation affects growth
 - Examine how policy interventions work given the institutions.

Essay in Persuasion 1

- World Bank's Asian Miracle (1993)
 - Studied macroeconomic, trade, and sector policies and various policy interventions taken by different countries over time and their results.
 - Concluded that a willingness to experiment and adapt policies to changing circumstances is a key element in economic success in Asia.

Essay in Persuasion 2

- East Asian Renaissance (2007, forthcoming)
 - A follow-up of the Miracle Study-- “Why does East (and South-East) Asia continue to be successful as a group”
 - There may be more to Asian growth than factors stressed by neoclassical growth models—macro stability, saving, openness, and education.

Essay in Persuasion 2

- New thinking on Asian growth—scale economies
 - International trade—high intra-industry trade based on scale economies
 - Economic growth—based on knowledge and innovation with increasing returns
 - New economic geography—agglomeration economies (in ideas) and gravity theory
 - (Distributional deterioration—rent to scale economies.)

Lessons for Low-Income Asia

- High investment, macro stability, openness, and education are obviously important—as the current paper attests to.
- Low income Asia should also use cost advantage to get integrated into regional production networks—with more division of labor, there are more opportunities.
- Opportunities are also plentiful as Asia is a fast growing region—neighbors bring innovation and demand—but can easily be missed if the cost advantage is not buttressed with efficient infrastructure and good business climate.

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