

Public Finance and Economic Development: The Case of Singapore



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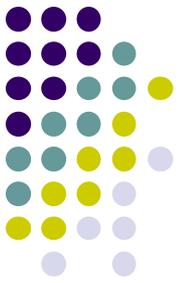


Singapore's International Reputation

<http://en.wikipedia.org/wiki/singapore>

Category	Rank	No. countries
Ease of Doing Business '06	1st	175
Globalization index '05	1st	62
Competitiveness '06	3rd	60
Quality of life '05	11th	111
Int'l. math & science tests '03	1st	46
Quality of public service '07	1 st	WEF
GDP Per capita	17 th \$30,700	175

Industries in Singapore

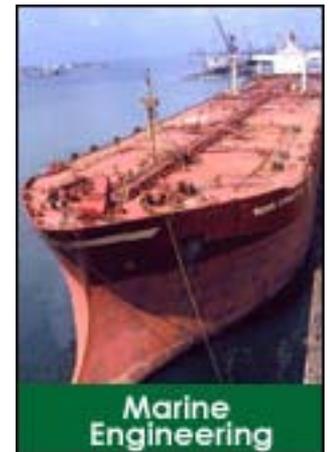


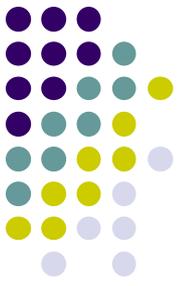
- Home to six of the world's top 10 pharmaceutical companies' manufacturing facilities
- One of the top oil refining centres in the world
- One of the top three oil trading and price discovery centres in the world
- Among the top 10 petrochemical hubs in the world
- Home to top manufacturing companies



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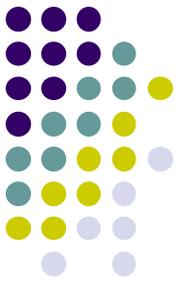




Industries in Singapore

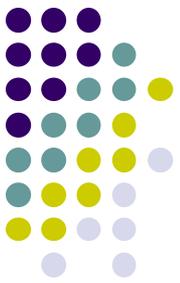
- 10% global market share for semiconductor foundry wafer output /Home to world's top 3 wafer foundry
- Home to the world's top 3 sub-contract assembly-and-test companies
- More than half of the top 40 engineering design companies have operations in Singapore
- 9 out of the top 10 process control companies have significant operations
- 15% of the world's publicly listed water companies are listed on the Singapore Exchange
- Singapore hosts one of the world's largest membrane-based seawater desalination plants

Industries in Singapore



- More than half of the top 40 engineering design companies have operations in Singapore
- 9 out of the top 10 process control companies have significant operations
- 15% of the world's publicly listed water companies are listed on the Singapore Exchange
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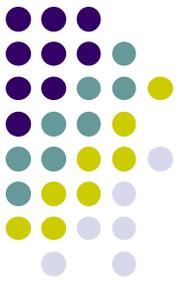
Singapore's Sources of Economic Growth: 1960-2003



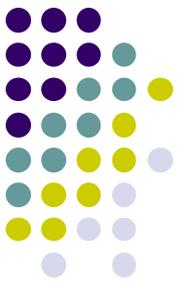
- Investment in physical capital (public infrastructure, housing, factories, etc) → created employment
- Increased labor input (total hours worked)
- Improvement in human capital (educational level, years of schooling)
- Total Factor Productivity (increasingly important)

Source: Ghesquiere, H. 2006. Singapore's Success

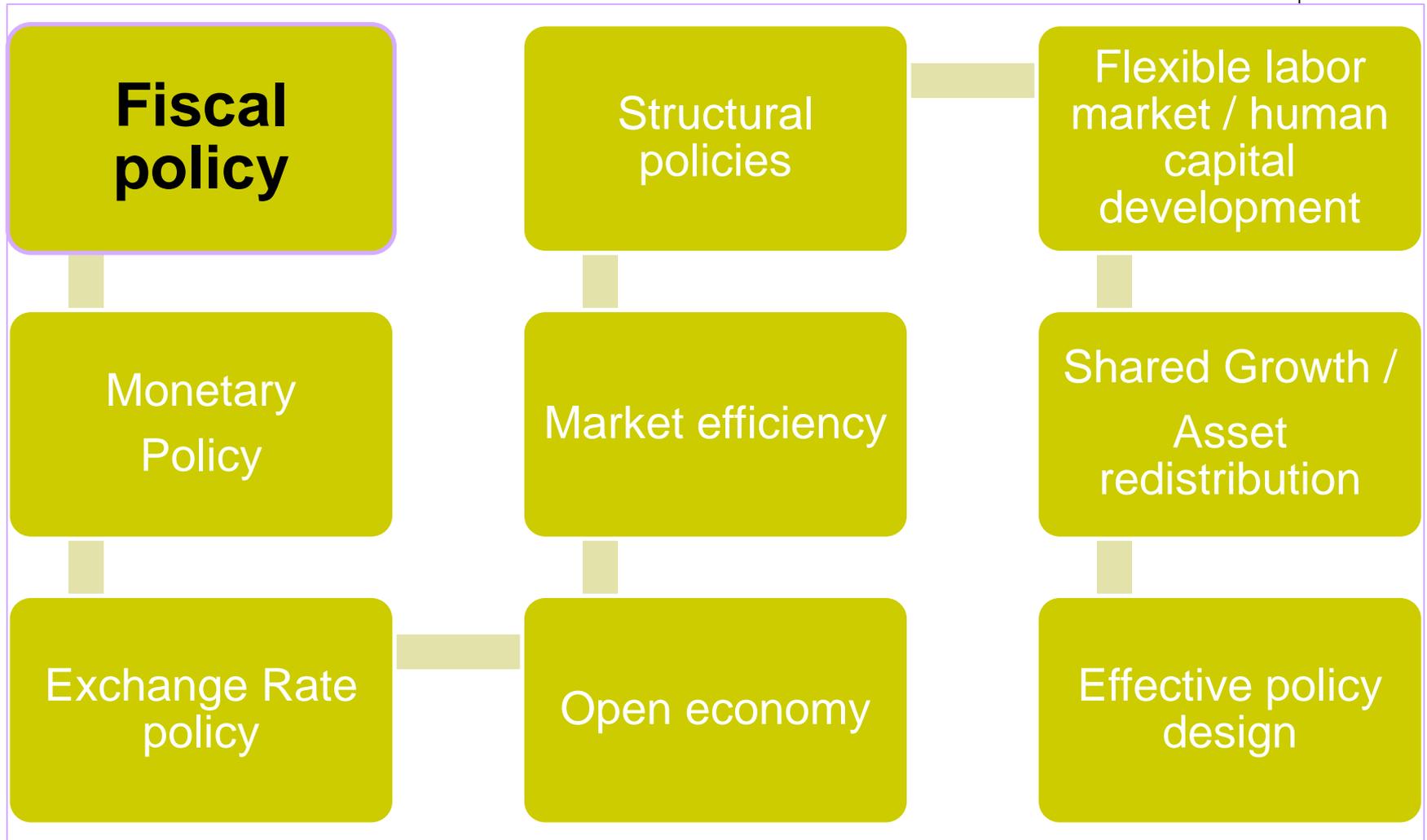
Singapore's Initial Conditions

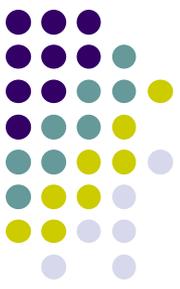


- Negative - Internal / external vulnerability
- Positive – Strategic location / deep seaport
- Positive – British legacy (institutions)
- Positive – did not go to war
- Recent immigrant status (minimized divisiveness compared w/ other countries)



Drivers of Singapore's Economic Growth





Driving forces: Pro Growth Policies

- 1) **Fiscal, monetary, exchange rate policies**
 - low inflation, stable currency
 - binding budget constraints
 - sound fiscal management (no costly welfare schemes, no subsidies to loss making SOEs, or to food, petroleum, electricity)
 - no external debt, low interest payment
 - Huge annual surpluses
 - Healthy fiscal policy

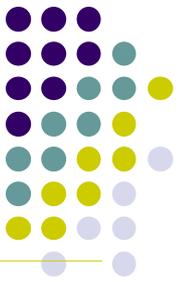
Fiscal Policy Measures



S/N	Measure	Monetary Terms (\$ billion)			As % of GDP		
		2005	2006	2007	2005	2006	2007
[A] Fiscal Balance							
1	Gross Operating Balance	15.14	15.50	25.06	7.52	7.01	9.96
2	Primary Gross Operating Balance	15.34	15.64	25.10	7.62	7.07	9.98
3	Net Lending/ Borrowing	14.17	17.52	32.06	7.04	7.92	12.74

Assessment of Singapore's Fiscal Position

A. Fiscal Balance

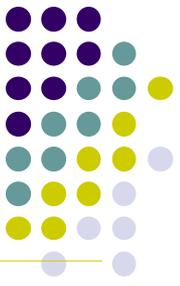


1. Gross Operating Balance [*Revenue – Expense*]

- a. Healthy fiscal position with surpluses -> prudent
- b. Hence, no need to borrow to finance current expenditure -> self reliant
- c. In 2007, 60% increase in Gross Operating Balance
 - due to increase in tax revenue (GST revenue doubled (rate 5% to 7%); stamp duties revenue doubled, etc.)

Assessment of Singapore's Fiscal Position

A. Fiscal Balance

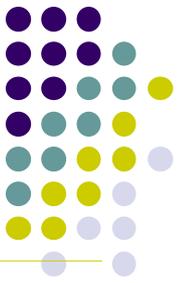


2. Primary Gross Operating Balance *[Rev – Exp + Interest Exp]*

- a. Singapore government does not borrow externally and have no external debt
- b. Interest expense constitutes 1-2% of operating balance
- c. Interest payment on declining trend: **< 0.1% of GDP** despite higher loan amount
 - because of repayment of domestic loans
 - new debt at lower interest rates

Assessment of Singapore's Fiscal Position

A. Fiscal Balance

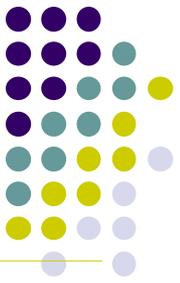


3. Net Lending/Borrowing [*Rev – Exp – Net Acq Non FA*]

- a. Singapore is positive -> net lender -> surpluses
- b. Decreasing trend of gross investment or increase in capital receipts
- c. Long term capital investments are yielding good investment returns contributing to surplus
 - larger even than Gross Operating Balance in 2006 and 2007
- d. Achieving 7-12% surplus as %GDP.
 - This goes towards building up our reserves. Revenue more than sufficient to cover expenses and development.
 - Might also mean that Govt is under-spending for social good.

Assessment of Singapore's Fiscal Position

B. Macro Economics



4. Fiscal Burden [*Tax Revenue*]

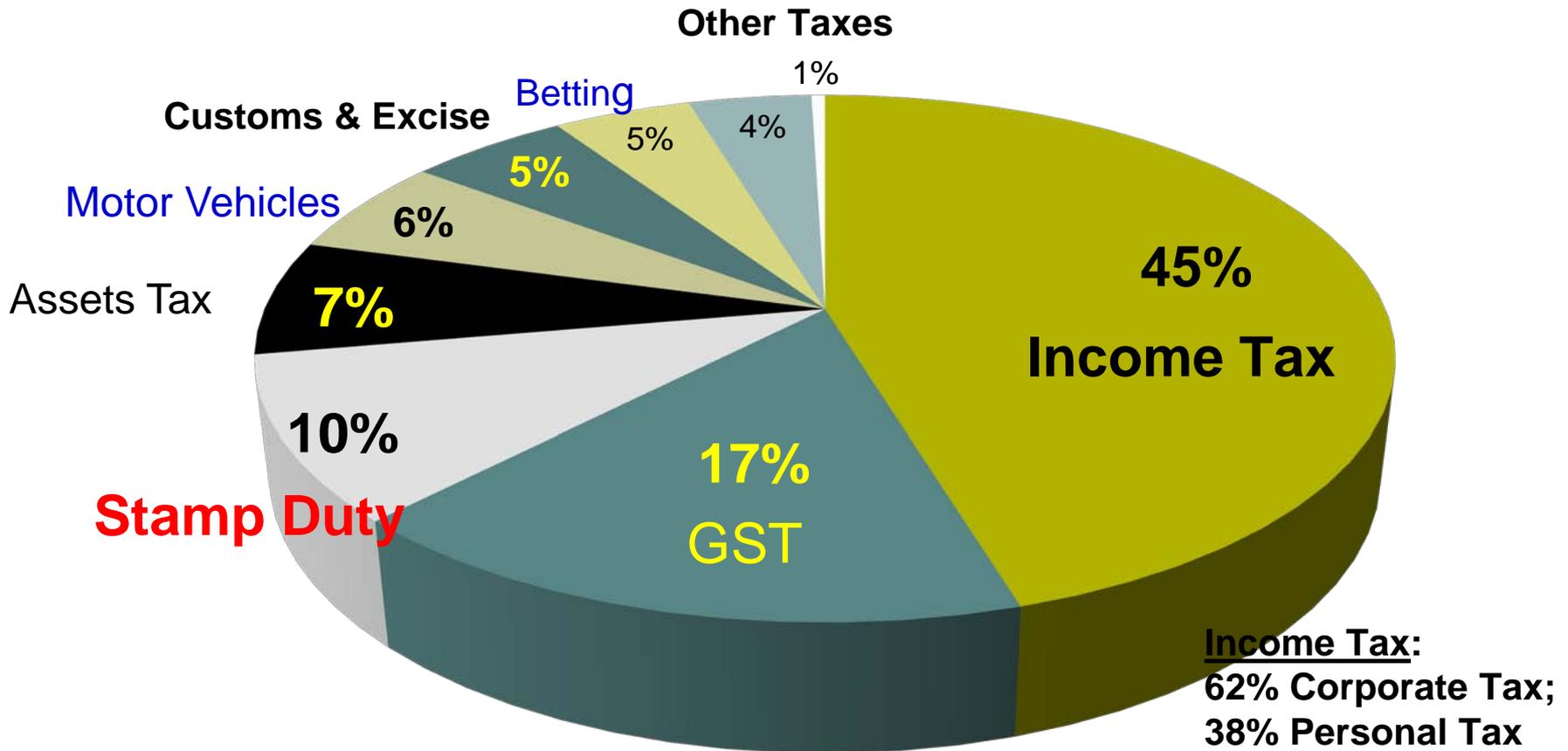
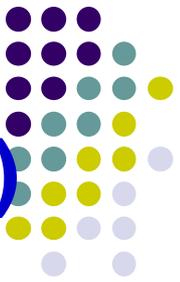
Tax revenue

- **>70% of total operating revenue -> high dependency
-> good or bad?**

Good as it is stable; bad because if companies and individuals not employed - > revenue affected

- **High collection rate**
 - despite Singapore having low tax rate compared with developed countries
- **Increasing tax revenue due to strong economic growth, etc.**

Sources of Tax Revenue (2007)



Source: Ong Bee Luan et al (2009)

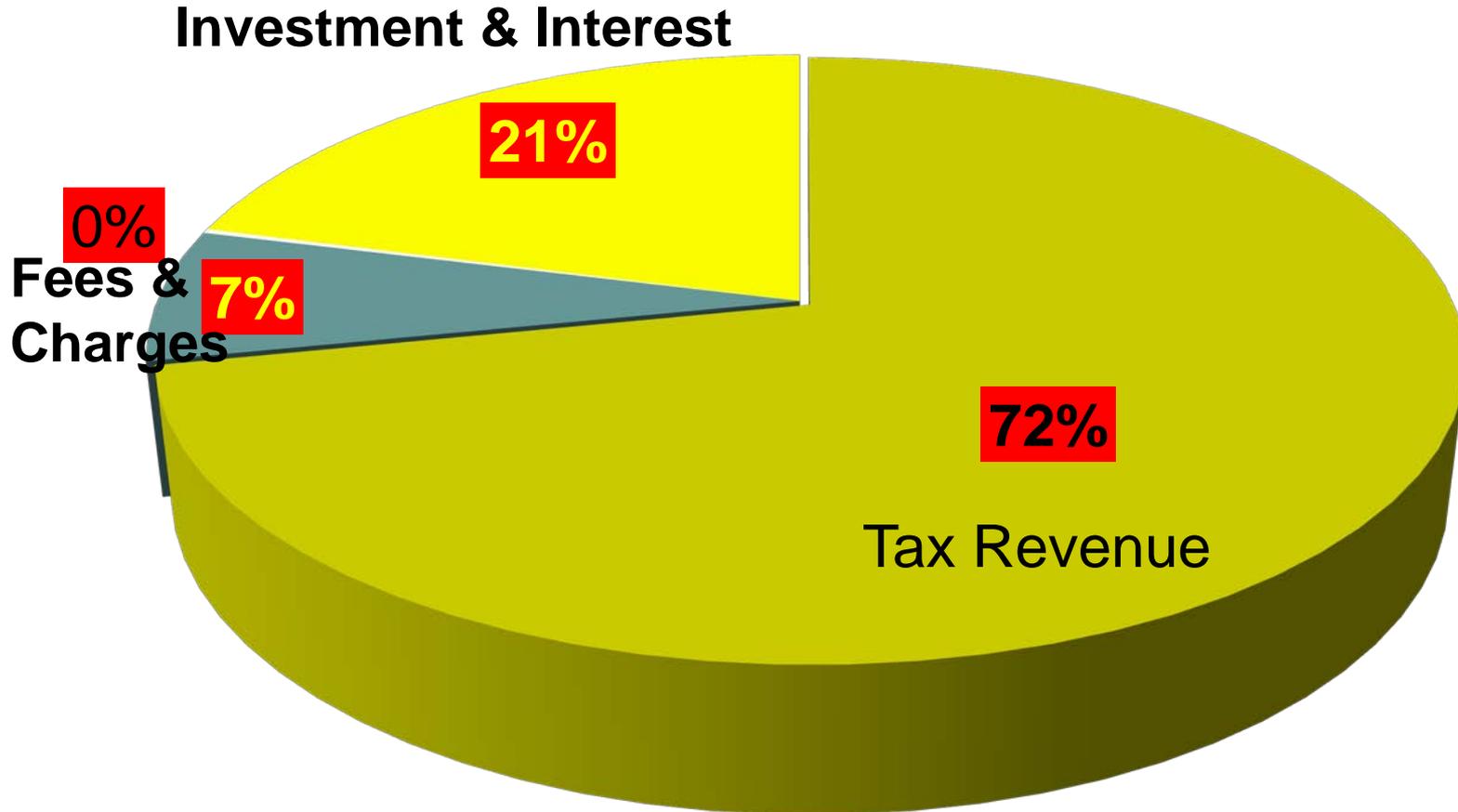
Fiscal Policy Measures



S/N	Measure	Monetary Terms (\$ billion)			As % of GDP		
		2005	2006	2007	2005	2006	2007
[B] Macro Economic							
4	Fiscal Burden	25.20	28.72	36.06	12.52	12.99	14.33
5	Total Expenditure	22.42	21.90	18.95	11.14	9.91	7.53
6	a. Health	1.77	1.94	2.20	0.88	0.96	1.10
	b. Education	6.08	6.96	7.53	3.02	3.46	3.74
	c. Defence	9.25	9.63	10.01	4.60	4.78	4.97
7	Gross Investment	0.97	(2.02)	(7.00)	0.48	-0.91	-2.78

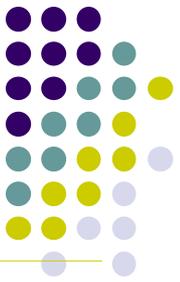
Source: Ong Bee Luan et al (2009)

Operating Revenue (2007)



Source: Ong Bee Luan et al (2009)

Assessment of Singapore's Fiscal Position



5. Total Expenditure [*Exp + Net Acg Non FA*]

Decreasing trend of total expenditure

- Operating expenditure increasing but is offset by negative net acquisition of non-financial asset
- Capital receipts increasing (to be addressed later)

Assessment of Singapore's Fiscal Position



6. Sectoral Expenditure [sector Exp + Net Acq Non-FA]

a. *Defence*

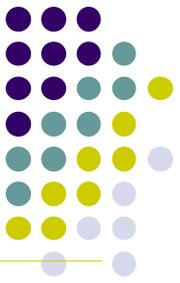
- Biggest expenditure function in budget in all 3 years
- About 1/3 of operating expense, about 4% of GDP
- Slightly larger than that of health and education combined

Military to social sector spending (almost 110%) - higher than the average of both developing (63%) and developed countries (33%).

- Little red dot
- Poison shrimp philosophy

Assessment of Singapore's Fiscal Position

B. Macro Economics



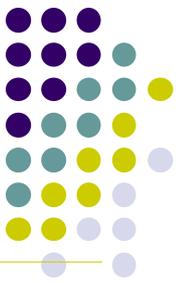
6. Sectoral Expenditure

b. Health

- **About 9% of operating expenditure, 0.8% of GDP**
- **Relative low spending compared to other developed countries**
 - **Citizens relatively healthy (good public health)**
 - **Emphasis on self-reliance (Medisave, restructured public hospital, no national healthcare system such as NHS)**
 - **Composition of health financing: 60% private expenditure, 30% government, 10% medisave**

Assessment of Singapore's Fiscal Position

B. Macro Economics



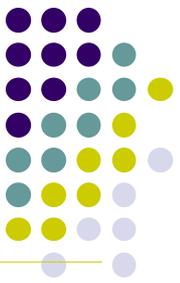
6. Sectoral Expenditure

c. Education

1. **26% of total operating expenditure, 2.7% of GDP. In most developed countries like the US, more than 5% of GDP is spent on public education.**
2. **Less than many developed countries as a percentage of GDP. Not a major concern**
 - **Spending per student increasing**
 - **Students score well in international rankings**

Assessment of Singapore's Fiscal Position

B. Macro Economics



7. Gross Investment [Net Acq Non-Fin Assets]

- a. **Gross Investment going into negative as capital receipts increasing**
- High economic growth and property boom
 - More land released to the market in late 2006 and 2007 to ease supply crunch
- b. **Decrease in development expenditure**
- Govt directive to slow down or postpone non-essential development project, so as not to compete for essential raw materials.

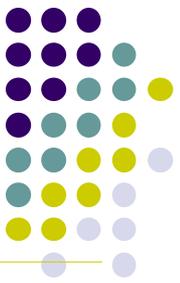
Fiscal Policy Measures



S/N	Measure	Monetary Terms (\$ billions)			As % of GDP		
		2005	2006	2007	2005	2006	2007
[C] Wealth & Debt							
8	Net Wealth Position	Not available	Not available	Not available	Not available	Not available	Not available
9	Net Financial Wealth Position	281.02	312.21	371.55	139.60	141.18	147.67
10	Gross Debt Position	200.01	206.44	234.09	99.35	93.35	93.04

Source: Ong Bee Luan et al (2009)

Assessment of Singapore's Fiscal Position

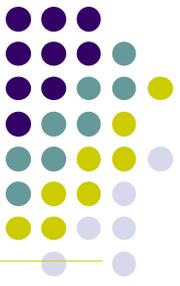


9. Net Financial Wealth Position [*Total Fin Assets – Total Liab*]

- a. **Positive and increasing net financial wealth position. 148% of GDP in 2007.**
- b. **Total liabilities: Deposit account + “real” liabilities (in this case, we use Public Debt figures obtained from MTI).**
- c. **There is no external debt.**

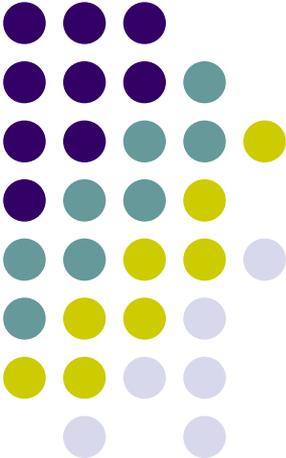
Assessment of Singapore's Fiscal Position

C. Wealth and Debt

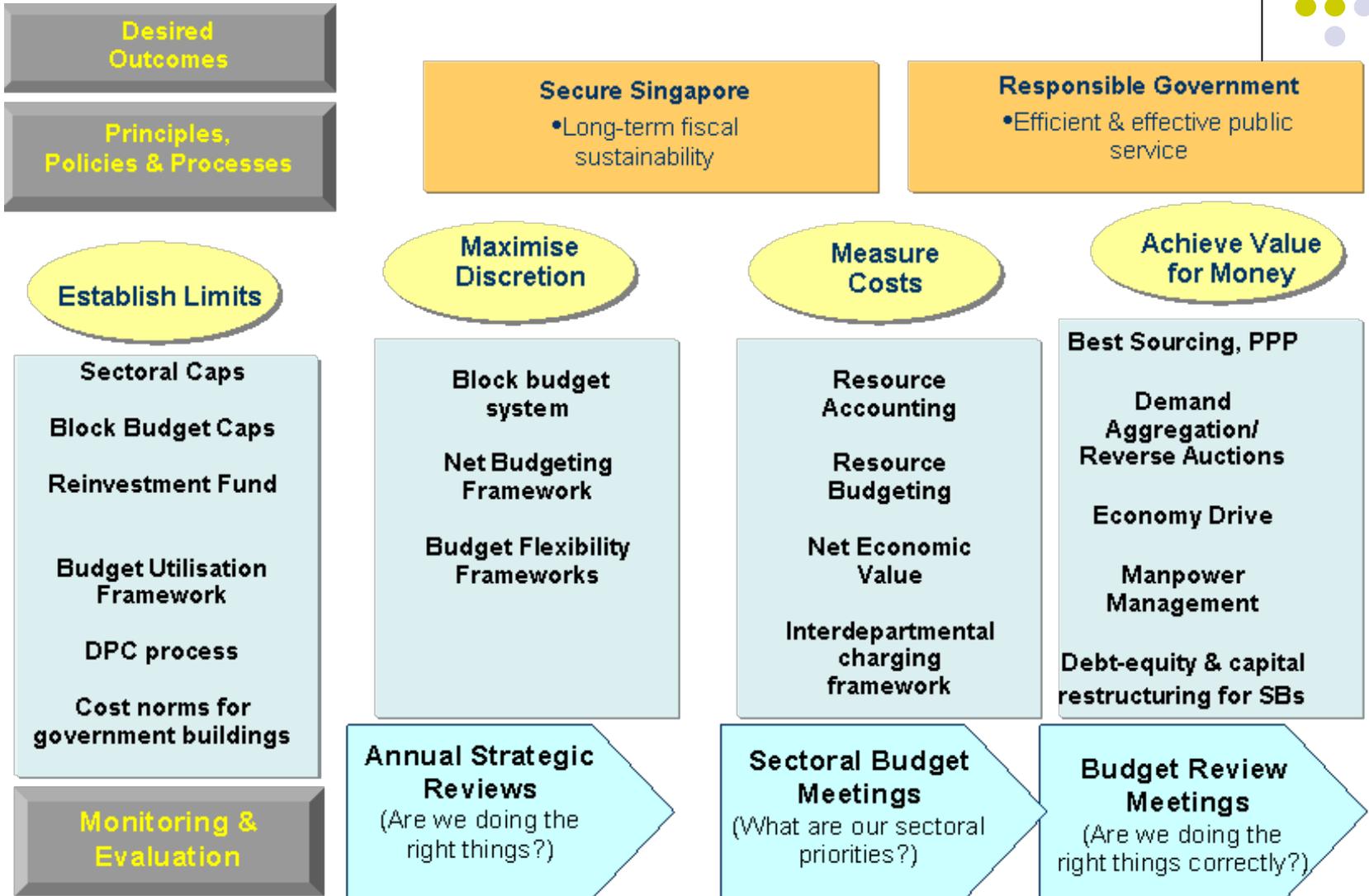
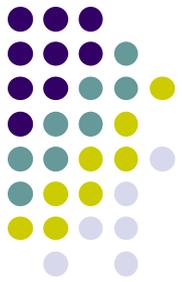


10. **Gross Debt Position** *[Total Debt Liabilities]*
 - a. **Government debt as a percentage of GDP is over 90%. domestic debt only.**
 - b. **While high as percentage of GDP, the Times over Interest Ratio is very high (553 for 2007), indicating that government is able to service the debt without difficulty.**

Singapore: Budget management framework



Singapore: Budget management framework

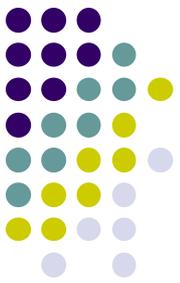


Public financial management Performance Measurement Framework: Case of Singapore



1. **Credibility of the budget** - budget is realistic / implemented as planned
2. **Comprehensiveness and transparency** - The budget and the fiscal risk oversight are comprehensive, and fiscal and budget information is accessible to the public.
3. **Policy-based budgeting** - The budget is prepared with due regard to government policy.

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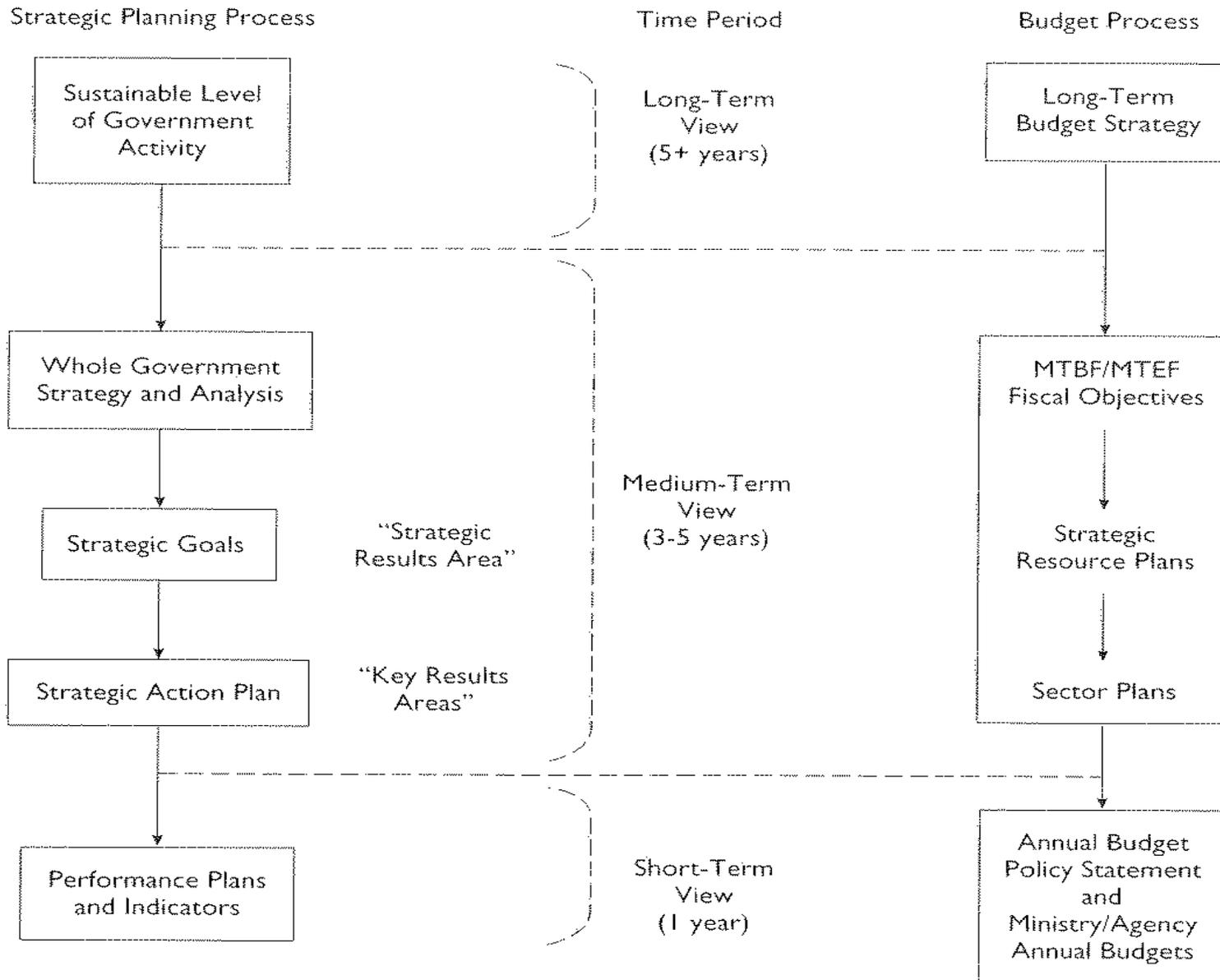
4. Predictability and control in budget execution -

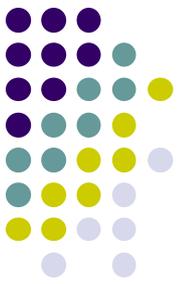
The budget is implemented in an orderly and predictable manner and there are arrangements for the exercise of control and stewardship in the use of public funds.

5. Accounting, recording and reporting – Adequate records and information are produced, maintained and disseminated to meet decision-making control, management and reporting purposes.

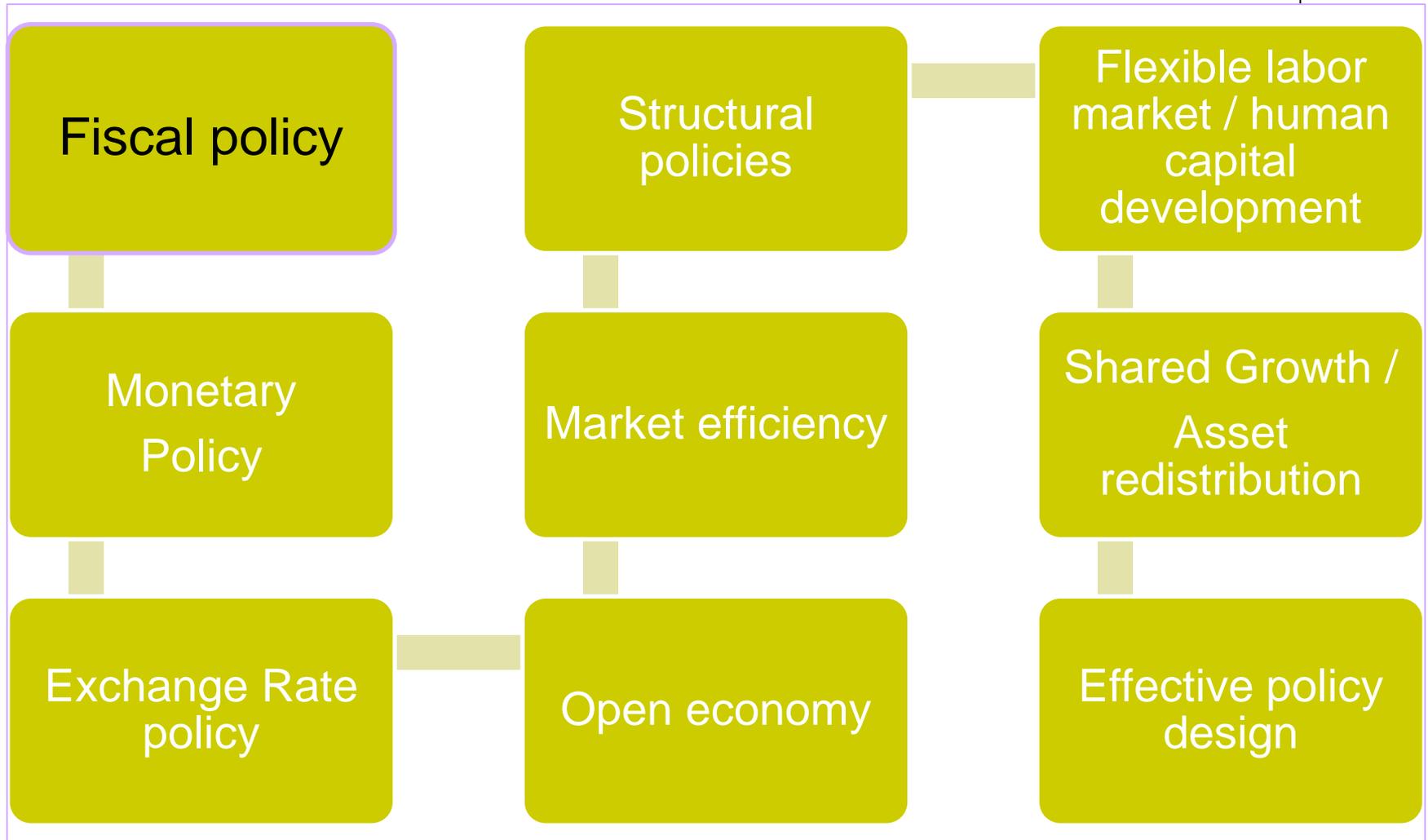
6. External scrutiny and audit - Arrangements for scrutiny of public finances and follow up by executive are operating

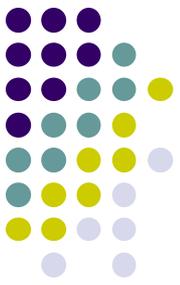
Box 12. Connecting Planning with Budgeting





Other Drivers of Singapore's Growth





Driving forces: Pro Growth Policies

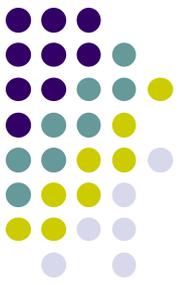
2) High corporate sector / HH savings

- SOEs run on commercial criteria
- Monopoly power pricing of statutory boards
- Mandatory savings (Central Provident Fund)



Driving forces: Pro Growth Policies

- 3) Structural policies (open markets, integration of trade and capital flows with global economy, export industrialization)

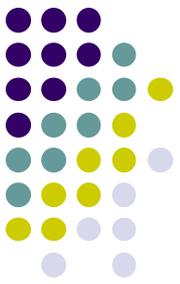


Driving forces: Pro Growth Policies

4) Market based efficiency and attention to incentives

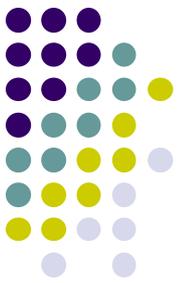
Example: Transportation

- COE, ERP, road tax, excise and import duties on petroleum → 6% of current govt. revenues
- Helps fund excellent public sector transport system



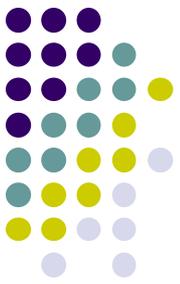
Driving forces: Pro Growth Policies

- 4) Market based efficiency and attention to incentives
- Example: Healthcare system
- 4.3% GDP spent on healthcare vs. 14% in US
- One of most cost effective health care systems in the world
- Co-payment schemes to discourage waste
- User fees / Medisave account
- Public health care competes with private care



Driving forces: Pro Growth Policies

- 5) Openness of the economy (no choice)
- Open to international trade (minimal non-tariff barrier, import protection very low, unrestricted access to foreign exchange, few import duties (cars, demerit goods))
 - Open to trade of services (tourism (9M), logistics, finance)
 - Open to international capital flows (42% of GDP from MNCs and 75% of value add in manufacturing)
 - Control of foreign labor through price mechanisms (workers levy), quota regulations

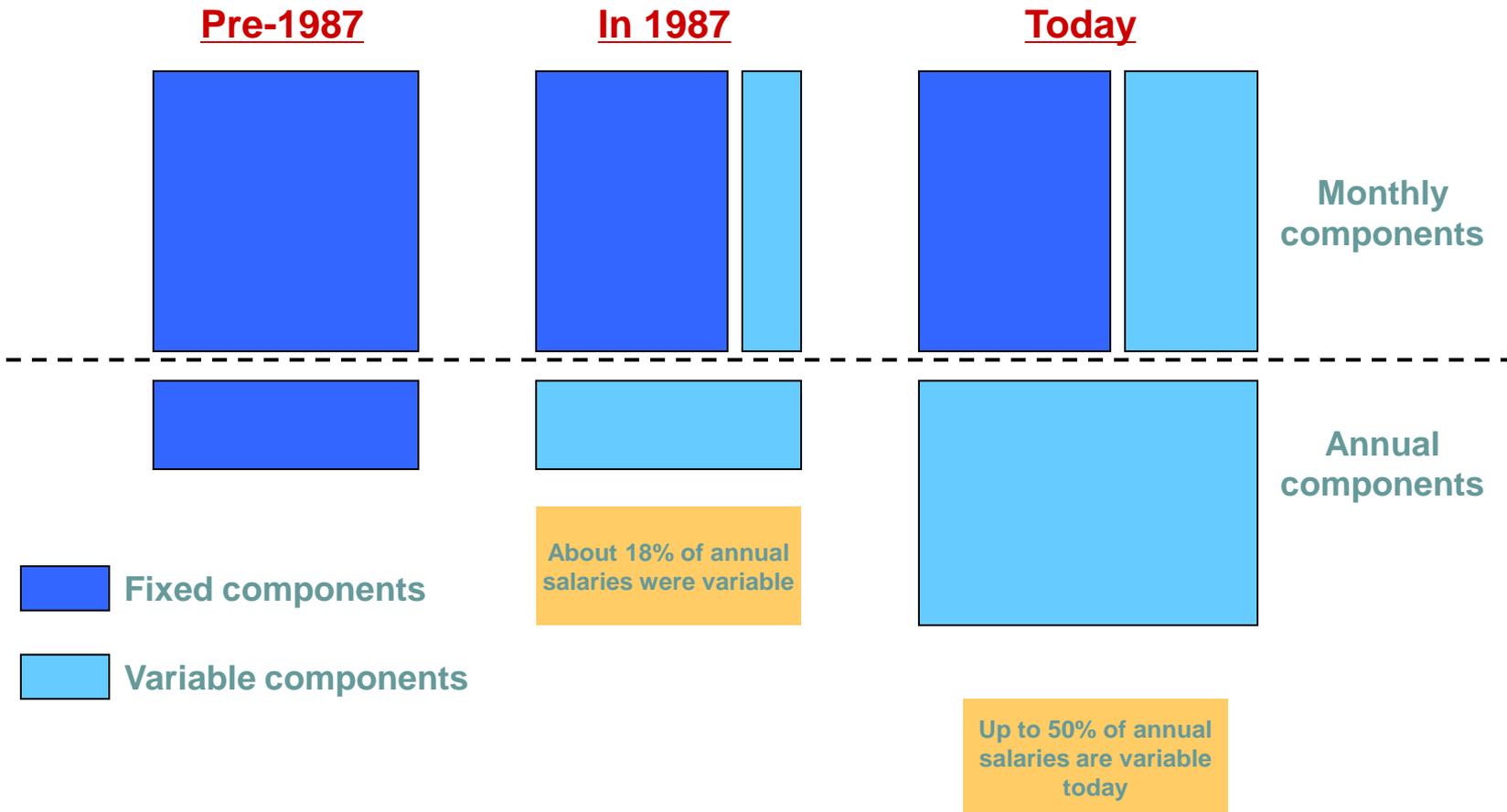


Driving forces: Pro Growth Policies

6) Flexible Labor Market

- Driven by supply and demand conditions
- Tripartism (Govt, labor, business)
- National Wage Council (wage settlement)
(composed of govt, employers, unions)
- Strikes are rare

Wage Flexibility Principle



Driving Forces:

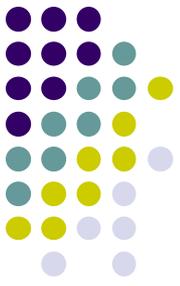
7) Human Capital Formation



- People as the key resource
- Large government subsidies for education and training
- Education policy: produce workers for industrial growth and avoid producing unemployable white collar
- Competitive and merit based access (examinations), high standards of education
- Streaming of talents (25% to university), the rest goes to polytechnic / vocational schools (will increase soon)
- Education policy tied with industrial policy (focus on engineering / sciences / finance and minimize liberal arts (slowly opening up)
- English language education

Driving Forces:

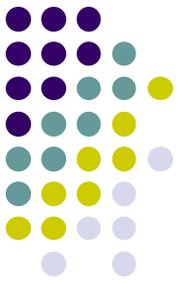
8) Shared Growth through Asset Redistribution



- Land Acquisition Act (1966) – govt. acquired private lands for public purposes (for schools, housing, transport)
- Government then leases land for residential, commercial, industrial purposes for 99 years → lowers tax rates
- Public housing (88% of pop'n; 93% ownership rates; income based subsidies)
- Part of objective of nation building

Driving Forces:

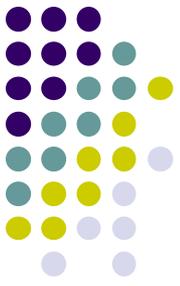
9) Effective Policy Design



- Addressing binding constraints
- Pragmatic policy adaptation and correction
- Policies tailored to local conditions (but learn from others)

Driving Forces:

9) Effective Policy Design



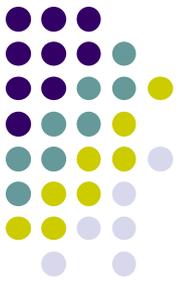
- Coherent and predictable (mutually reinforcing, creating virtuous cycles)
 - FDI flow, disciplined and flexible wage policy, employment creation, education → economic growth, non-confrontational labor, rising wages, savings, low cost access to housing and education → political and industrial peace → macroeconomic stability
 - Low inflation, international competitiveness, low cost of borrowing, encouraged savings, stable currency, development of financial sector, wage discipline → macro economic stability

Summary: Four Principles



- 1) Fiscal discipline helped generate savings and formed basis of macroeconomic stability that inspired confidence
- 2) Use of price incentives in key areas such as healthcare, transportation and labor market and integration with world markets promoted efficient resource allocation

Summary: Four Principles



- 3) Opportunities for participating in economic growth were created and shared widely among the population by raising people's productivity through better health, education and housing
- 4) Policies were well designed (pragmatic, coherent, predictable)



Role of the State

- Invisible hand of the market guided by the strong visible arm of the government
- 1) Entrepreneurial role of SOE / statutory boards (HDB, PUB, PSA, GIC, Temasek, JTC, CPF, SIA, SingTel, DBS Bank, Keppel, SembCorp)

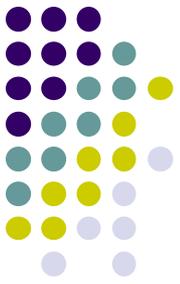




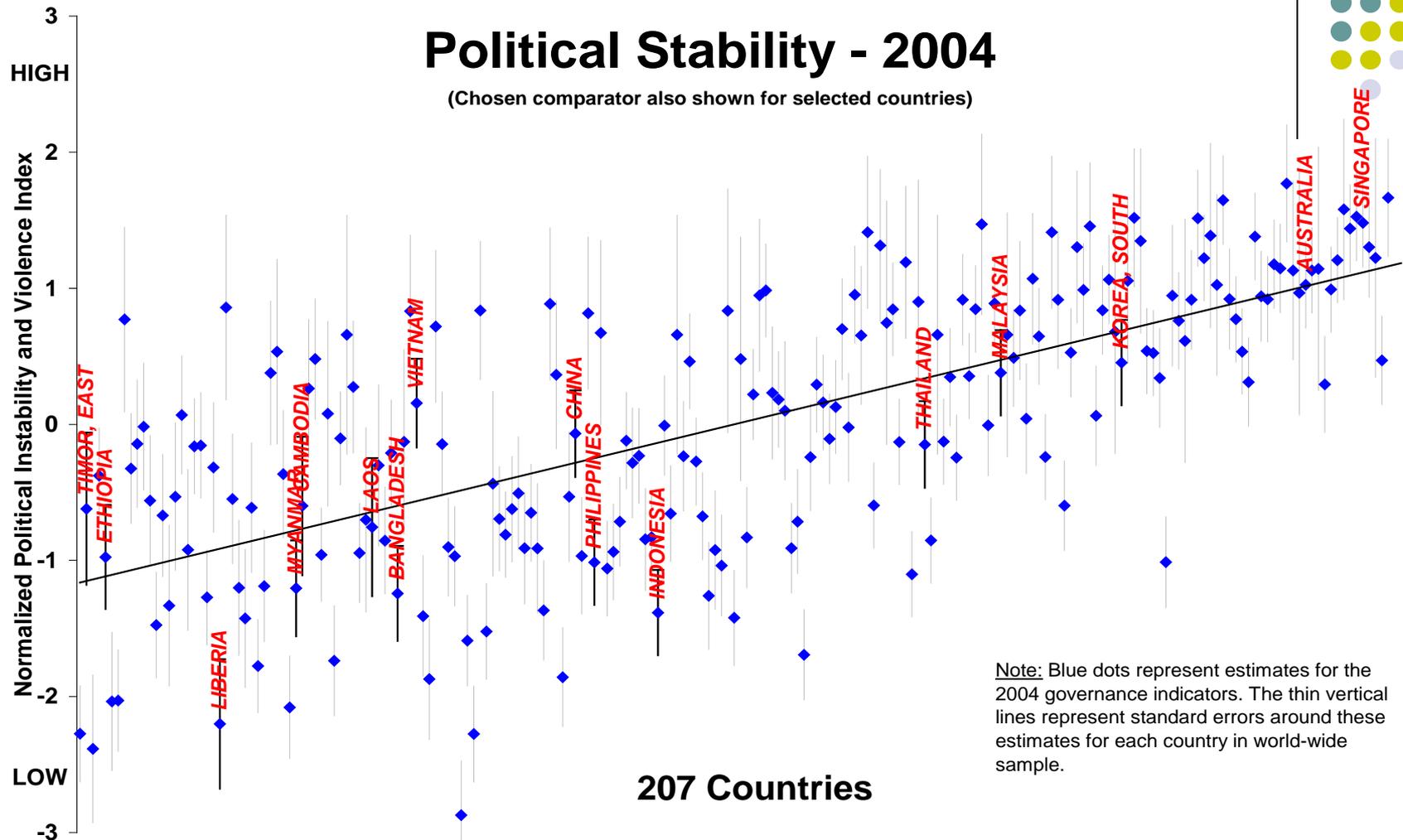
Role of the State

- 2) Selective intervention (guiding private investment in strategic directions through tax concessions, subsidies tied to performance, targeted R&D, labor force training)
- 3) Earning and keeping the people's trust
- 4) Channeling collective emotions toward economic growth

Growth Enhancing Institutions



- **Institutions that support policy implementation**
 - 1) Competent civil service and government
 - 2) Labor market institutions
 - 3) Rule of law / protection of property rights
 - 4) Integrity of governance
 - 5) Social inclusion



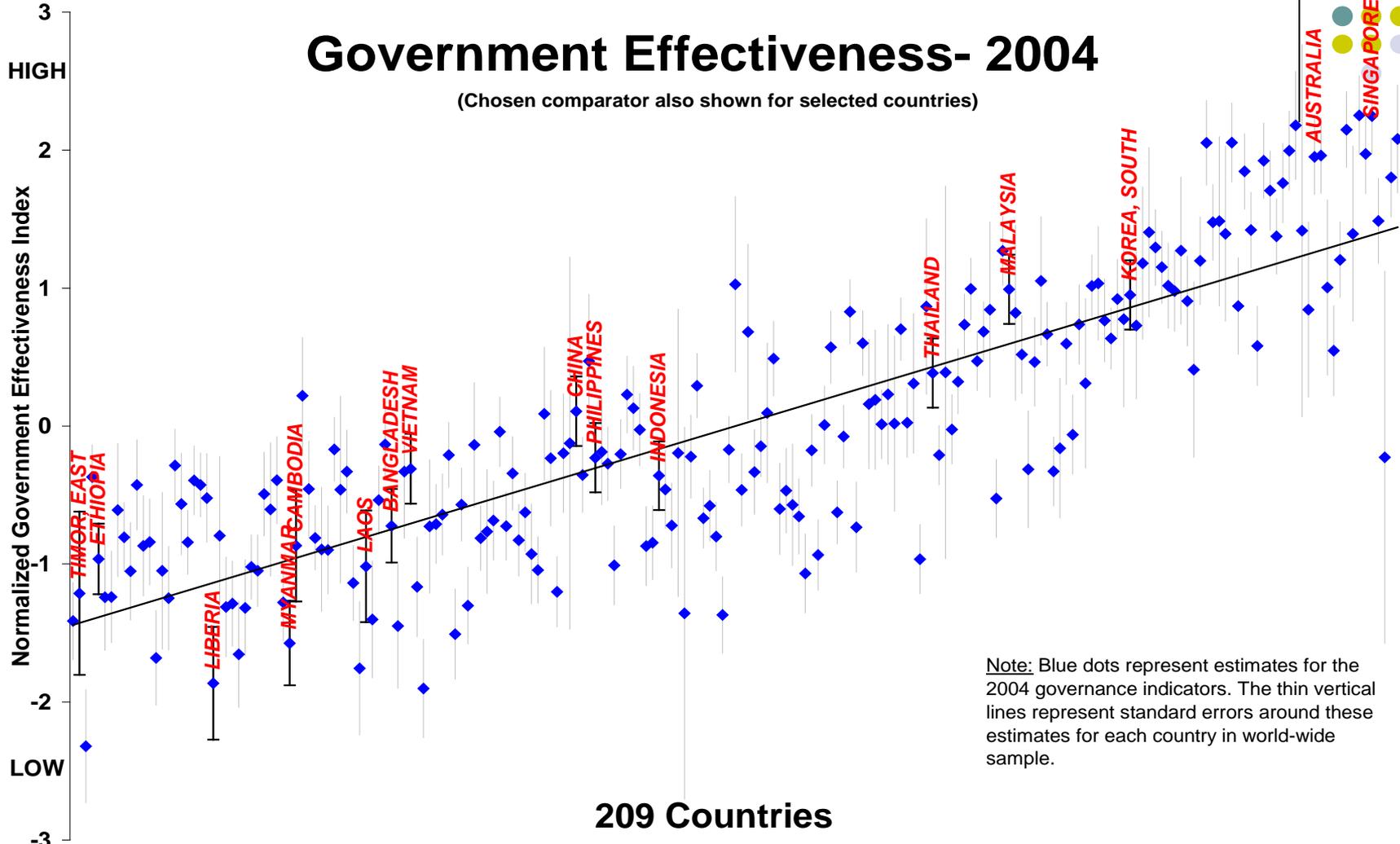
Source: "Governance Matters IV: Governance Indicators for 1996-2004 " by Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi, 2005.

NOTES: The indicators presented here reflect the statistical compilation of responses on the quality of governance given by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries, as reported by a number of survey institutes, think tanks, non-governmental organizations, and international organizations. Countries' relative positions on these indicators are subject to change. Consequently, precise country rankings should not be inferred from this data.



Government Effectiveness- 2004

(Chosen comparator also shown for selected countries)

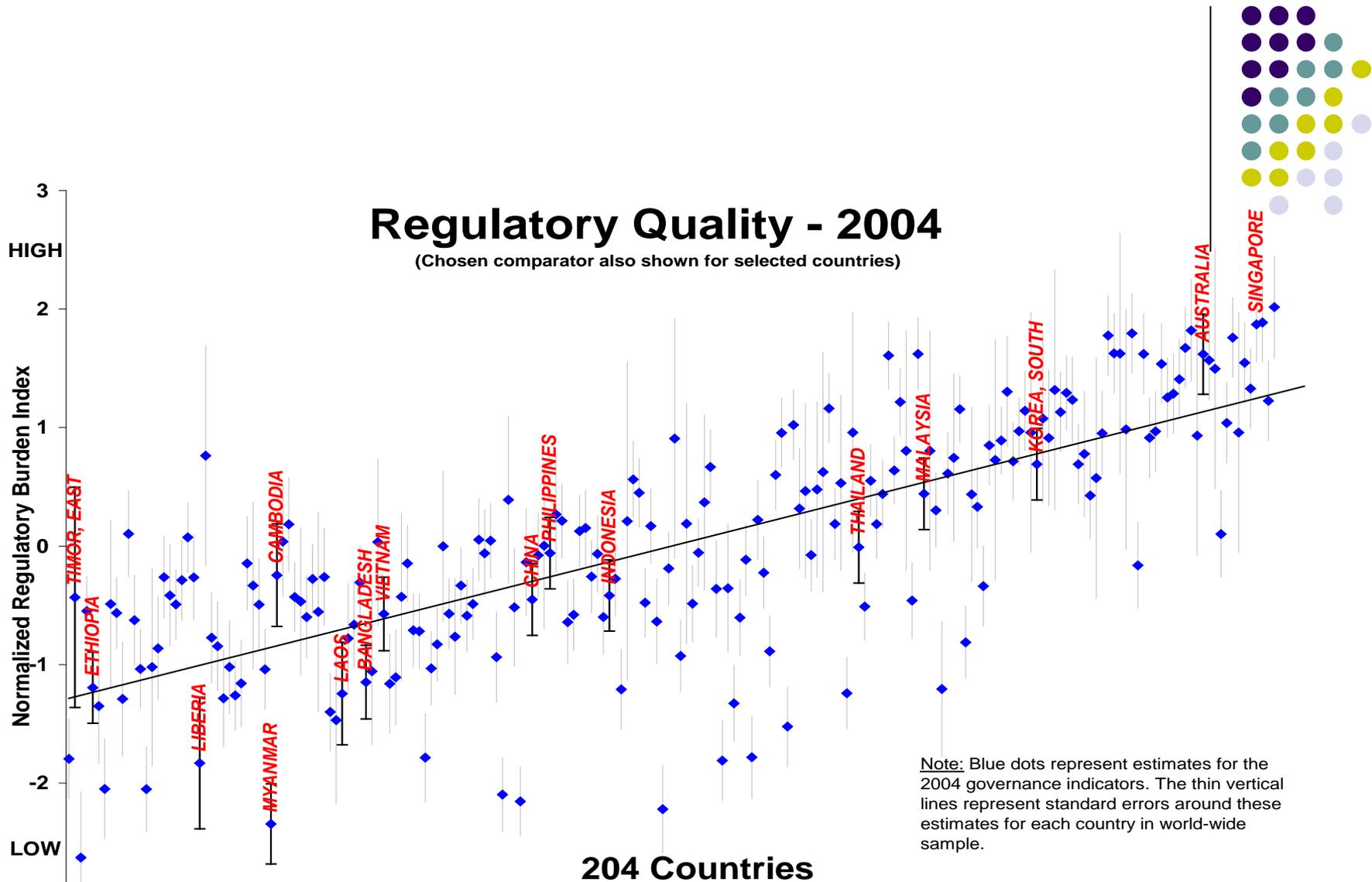


Note: Blue dots represent estimates for the 2004 governance indicators. The thin vertical lines represent standard errors around these estimates for each country in world-wide sample.

209 Countries

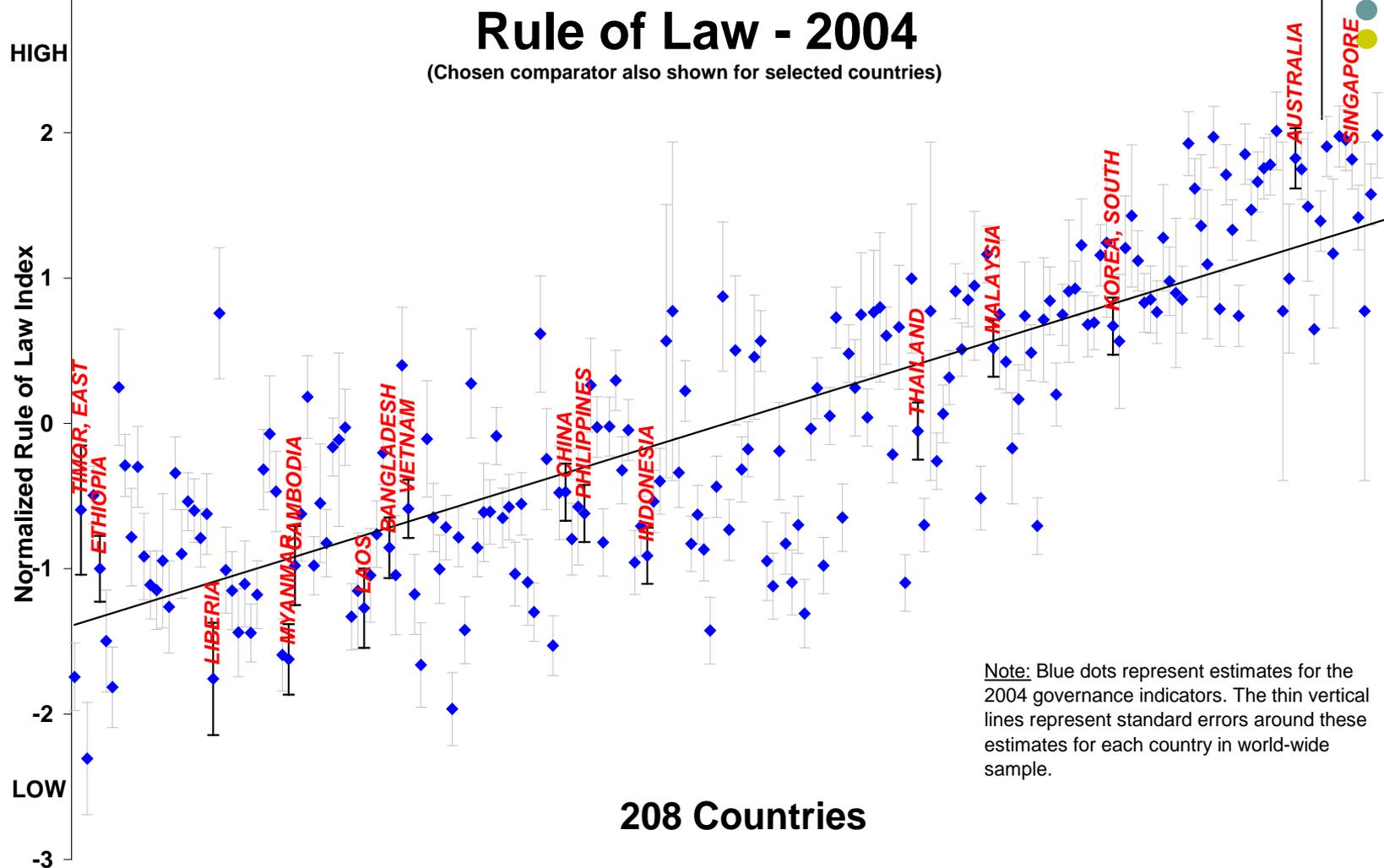
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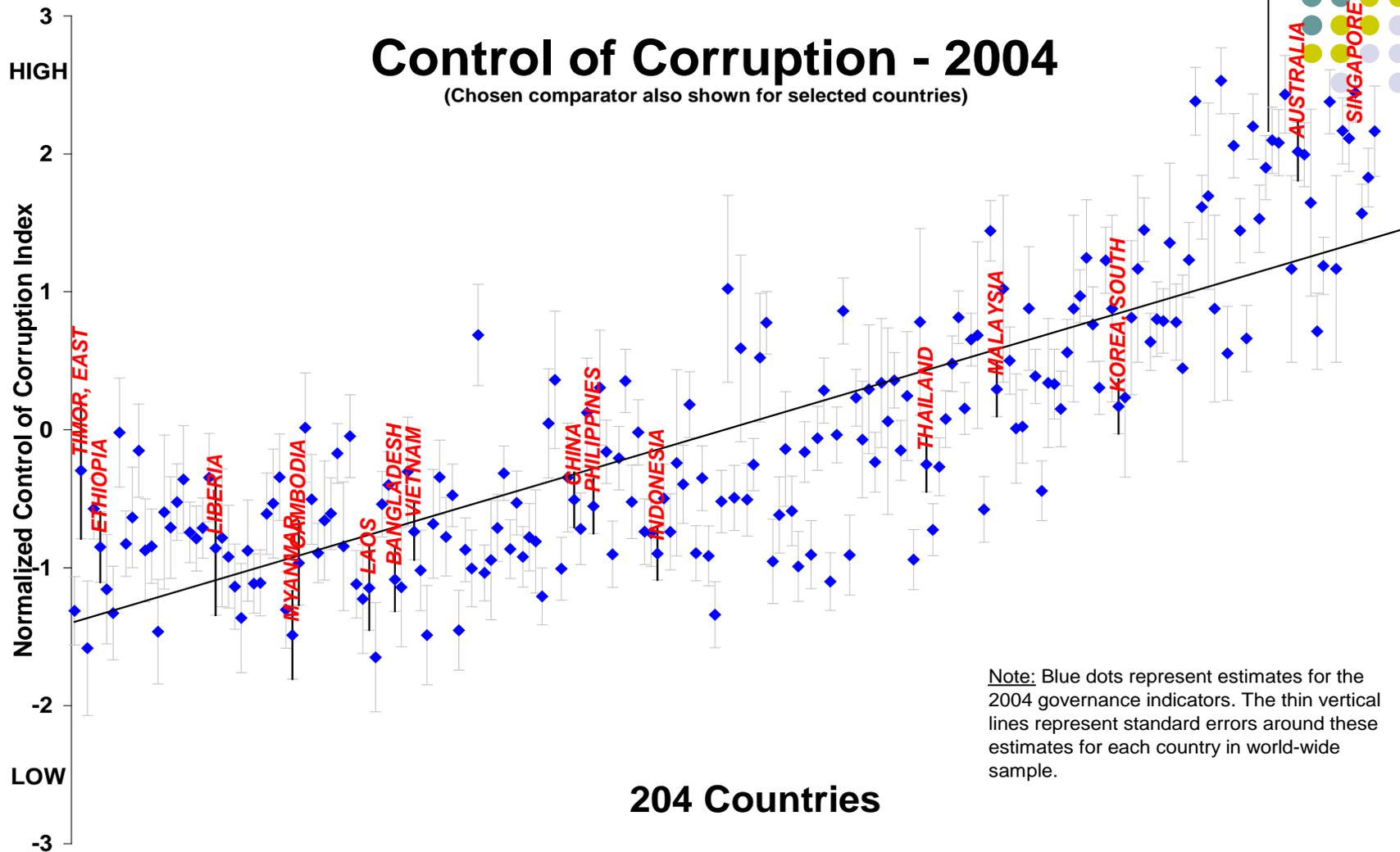
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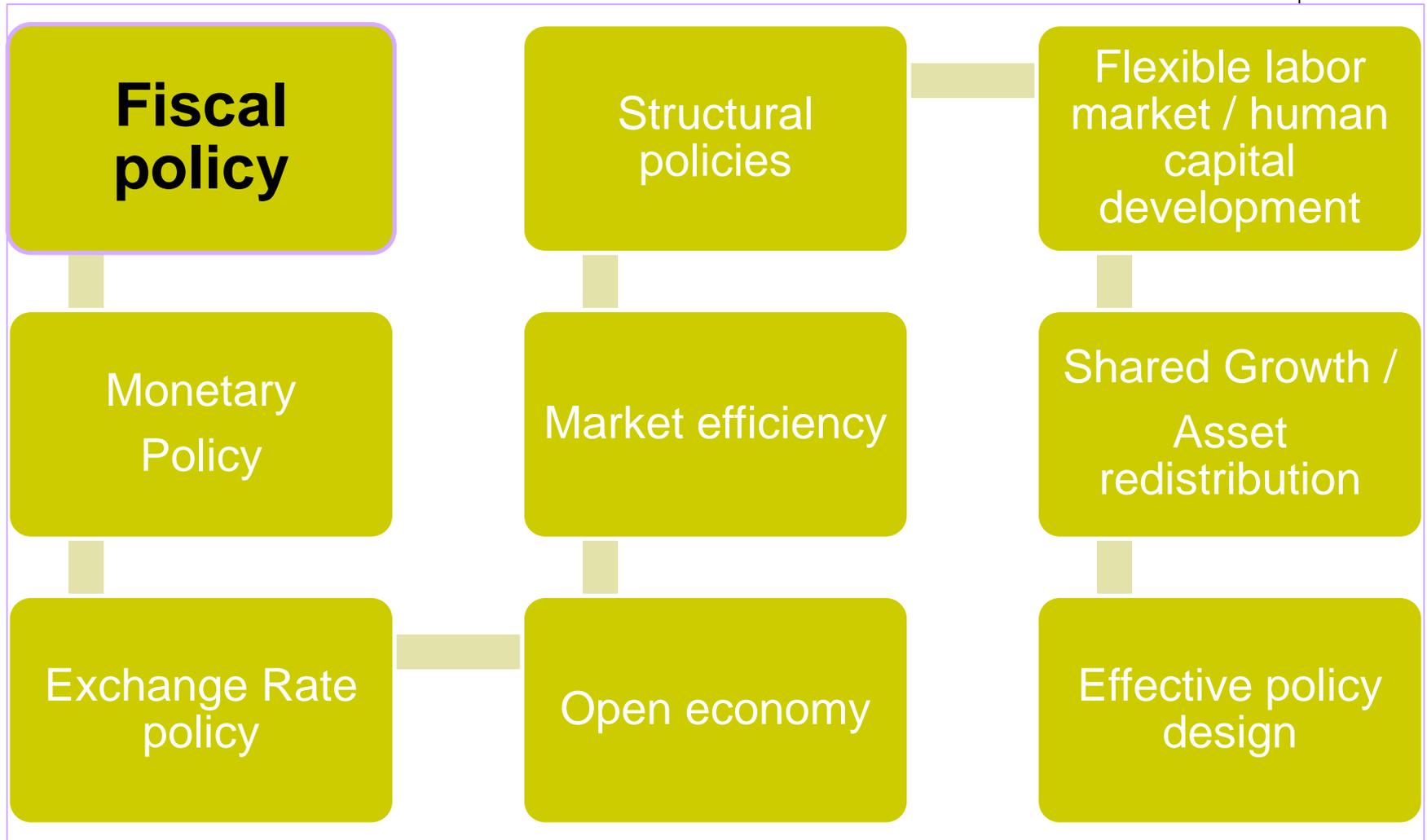


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Drivers of Singapore's Economic Growth



Understanding Singapore

Every day the gazelle wakes up knowing that if it can't outrun the fastest lion, it's going to be somebody's breakfast. Every day the lion wakes up knowing that if it can't outrun the slowest gazelle, it will go hungry.

Old African Proverb

Quoted from S.G. Lim 3/2006

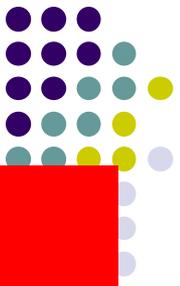


Understanding Singapore

We are moving from a world in which the big eat the small to a world in which the fast eat the slow.

*Klaus Schwab, Founder
World Economic Forum*





Thank You

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