Comparative Experiences of Middle Income Countries

as part of diagnostics for the initiative

Revitalising Indonesia's Knowledge Sector for Development Policy

by

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23 April 2010[1]

[1] *This diagnostic has been commissioned by AusAID's Tertiary Education and Knowledge Sector Unit. The views and opinions expressed in this paper are those of the author only. AusAID does not accept legal liability for material contained in this document.*

OVERVIEW

The concept note to the initiative 'Revitalising Indonesia's Knowledge Sector for Development Policy' proposed a series of comparative briefs to provide snapshots of the institutional landscapes that other, middle income countries had for their knowledge sectors. These comparative briefs were meant to take a broad, historical view.

This is a synthesis of five country briefs. Three briefs take the form of literature reviews of Brazil, Mexico and the Philippines. Two visit reports are based on semi structured interviews conducted with a range of government agencies and research institutes focusing on development planning, policy, analysis and dialogue in Malaysia and Singapore, supplemented with limited literature reviews.

The method of choosing these countries was not scientific, but based on a mix of factors including general similarities in geographic and demographic characteristics, political, economic and social history, availability of studies and, in some cases, proximity.

The chief difference between the literature reviews and the visit reports is the former present a broad picture of how countries have approached their knowledge sectors for development policy. While the visit reports focus more on the relationship between government driven demand for, and subsidisation of, policy research and advice with more emphasis on providing concrete examples of policies and practices.

As a result of reading of substantial literature into the knowledge sector the synthesis, briefs and reports have adopted a broad definition of the term to include:

(a) institutions supporting research, analysis, advice and policy dialogue that informs or drives development policy formation i.e., policies, laws, regulations and mechanisms for financing research;

(b) actors who supply and demand that knowledge including government, thinktanks, universities, individual researchers, NGOs & CSOs;

(c) the knowledge, research, analysis produced as a result of (a) and (b);

The purpose of the synthesis is two fold. Primarily, to assist Indonesian stakeholders consider issues while designing a response unique to Indonesia's circumstances. This synthesis incorporates examples taken from the individual briefs and reports (sometimes in truncated form) but these example not recommendations for technical actions Indonesia should take, merely hooks for Indonesian discussion.

Secondly, to sow the seeds for future study missions by Indonesians to some of the countries covered here. Whether or not such missions occur should be decided in the Steering Committee to the initiative and targeted in terms of composition and outcomes. Mission programs may be designed based on the briefs and reports with additional guidance from the author.

SYNTHESIS

The following is organised into three sections:

1. Indonesia's dilemmas;
2. Comparative experiences: five main issues with examples;
3. Implications for Indonesian consideration.

1. Indonesia's Dilemmas

International literature indicates that Indonesia is substantially behind many other countries in terms of gross expenditures on research and development across all areas of knowledge and enterprise - it even lags behind the Philippines.

Table 1: General Indicators

Indicator	Singapore	Brazil	Mexico	Malaysia	Philippines	Indonesia
Population millions	5	192	106	26	88	232
Category	high income	upper middle income	upper middle income	upper middle income	lower middle income	lower middle income
GNI $US billion	1,411,224	1,575	1,061,444	188,061	170,410	458,159
GNI per capita $US	34,760	7,350	9,980	6,970	1,890	2,010
HDI Rankings	23	75	53	66	105	111
% Population below national poverty line	n.a.	31.0	13.8	5.1	30.0	17.8
Gross Expenditure on Research & Development % GDP	2.61	1.02	0.50	0.64	0.12	***0.05***
Total Researchers	32,198	212,996	89,398	13,416	9,407	51,544
Researchers per million population	6,088	629	460	372	81	205

Sources: World Bank WDI Atlas Method 2008; UNDP HDR 2009; CIA Factbook

The concept note and discussions in Indonesia point anecdotally to how such under-expenditure affects Indonesia's knowledge base for development policy, including:

- government dissatisfaction with the volume, quality or applicability of research
- excessive government reliance on foreign technical advice
- lack of coherent research programs as opposed to short term commissioned studies
- a proliferation of small thinktanks that struggle financially
- limited opportunities for developing Indonesian researcher capacity
- limited Indonesian publications

Preliminary study[2] points to more latent human capacity than previously assumed in Indonesia, and impediments to flows of people and information between governments, research institutions and researchers. It was remarked that Indonesia lacks the *body of knowledge* that results from domestic research programs and evidence, leading to a reliance on imported theories and models. Impediments to Indonesia's human and institutional capacity are being analysed elsewhere.

Such impediments may apply not only to the applied type of research that is most readily visible e.g., commissioned studies, but also to the creation of rigorous, academic research e.g., journal and book publications etc. The two kinds of research are interconnected, because high quality commissioned work is usually produced by people with the relevant grounding and education in disciplinary theory and research method. These people receive their initial training through tertiary education and, whether employed in the government, private or non-government sectors benefit from retaining ongoing links to academia not only to keep abreast of developments in their field but also replicate that capacity for future Indonesian generations. Indonesia cannot attain a domestic capacity for high quality research without paying attention to its sources.

The key message taken from experiences in these countries is that Indonesia needs to treat its knowledge sector landscape as an ***ecosystem*** comprising many interactive parts. A systems wide analysis is more likely to produce a self sustaining sector. Attempts to treat this system as a series of disconnected parts subject to discrete technical interventions will not produce lasting change. The following review of comparative experiences is divided into five main issues illustrated with examples drawn from the individual studies.

2. Comparative Experiences

A. Long Term Thinking & Coherence of Institutional Frameworks

- *Policy makers need to think long term and aim for consistent policy, regulatory, budgetary frameworks that support domestic research and development institutions.*

Brazil, Malaysia, Mexico and Singapore have invested in institutions of education, research thinktanks and tailored government capacity for between 20 and 50 years. The fruits of consistent state effort are more connected institutional landscapes that take account of the human capacity produced by tertiary education, a highly professional civil service and a range of knowledge institutions.

For example, for 30 years or more Singapore has deliberately built up a system of forward planning education outcomes to cater to projected labour force needs. Research and development (R&D) is valued for having a tangible, economic application particularly in the areas of science, technology and innovation (S,T&I). Nevertheless, the government has formed bridges with the private sector to establish a number of

[2] Chaworro MTR, feedback on discussions held with Sumadi, Suahasil, Toisuta, comments at Concept Peer Review inter alia.

autonomous thinktanks within the flagship National University of Singapore e.g., the Centre for Asia and Globalisation and outside government e.g., the Institute for Policy Studies, Institute for South East Asian Studies. The Singapore Government has invested substantially in internal bureacratic capabilities to undertake basic research e.g., the statistical and policy making capacities within the Ministry of National Development, Central Provident Fund Board, the Ministry of Education. Moreover, it has armed its civil servants with the skills to be able to formulate the kinds of enquiries that are relevant to policy formation and implementation on key development issues through its civil service leadership and management training. More importantly, the state enables the bureaucracy to support a range of institutions either directly e.g., the government's creation of the IPS, MoE budget to ISEAS and the National Education Institute or indirectly e.g., through budget spent on outsourcing studies to universities, research centres and foreign consultancies.

Also, Mexico and Brazil have expended substantially on the development of domestic education institutions and research capacity over many decades. These countries started investment in educational institutions in the early 20th century to serve a broad, educational mission. Their universities are among the top 2000 internationally ranked institutions (Table 2) and have served as a breeding ground for research centres, independent thinktanks and researchers.

The large Latin American economies have heeded repeated calls from domestic industry and the OECD to formulate better links between university based R&D to industry requirements. Recent reforms in R&D policies aim to promote greater economic competitiveness through increased coherence of state funding to S,T&I including through higher education, vocational education and training and scholarships as well as industry-linked R&D funds, tax incentives and grants. They have comprehensive systems for administering state support for R&D to S,T&I and the tertiary education systems e.g.,

Box 1: Mexico's National Council for Science and Technology

The National Council for Science and Technology (CONACYT) is Mexico's chief public institution for promoting and supporting scientific and technological activities. CONACYT was established in 1974 to promote education scholarships, but its role has expanded with changes in national policy such that it now administers an extensive system of Public Research Centres, administers various kinds of funds for research and research institutions, administers scholarships and a national system of additional incentives to Mexico's most productive researchers.

Key features of Mexico's national system for science and technology include:

-a national vision which coordinates resources to promote education, research and training and the application of these to Mexican social and economic development;

-a specific line in the federal budget;

- decentralised support e.g., PRCs located throughout the country and mixed funds for use in promoting research aligned to regional development needs;

-support to human capacity for business, higher education institutions and government at the national and decentralised levels;

-promotion of inter-sectoral, national,and international linkages e.g, bilateral agreements with Latin America, US and Europe and international scholarships;

-domestic and international evaluation of performance by the Council for Evaluation of Social Development Programs, reporting to the OECD and UNESCO;

- programs to evaluate, acknowledge and reward high performing researchers e.g., through the National Researcher System (see section on labour force below0;

-comprehensive statistics and reporting.

B. Diverse Demand for Knowledge

- *Government is not the only source of demand, but its demand can underwrite domestic capacity to produce research.*

The governments of Brazil, Mexico, Singapore and Malaysia help sustain independent or semi-independent thinktanks by maintaining long term client-service provider relationships. Sometimes such institutions were created through state intervention or support by political figures e.g., College of Mexico, Singapore's Lee Kuan Kew School of Public Policy and Malaysian Institute of Economic Research. But, Brazil's independent thinktanks, private consultancies and research centres in private universities indicates this is not a necessity. Instead, a key factor appears to be the ability of state to draw on a range of suppliers, although the mechanisms for this vary substantially in practice.

Singapore and Malaysia's government agencies use agency level budgets to commission studies and tender research to both local and international institutions:

Box 2: Malaysian Demand for External Advice

Malaysia's Economic Policy Unit (EPU) of the Prime Minister's Department provides advice that is national security classified. The results of its analyses move into the public domain once it has passed through processes of government to form the national development plans. Nevertheless, EPU makes extensive use of external expertise. Malaysian officials noted a preference to use local expertise from universities, research centres and consultancies where possible, including from Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, the Malaysian Institute of Economic Research and the Institute for Strategic and International Studies. For example, it used economists from the latter to undertake computer general equilibrium modelling of the impacts of Malaysia's entry into various free trade agreements e.g., with the US. EPU also had open posts for positions to attract specialist expertise e.g., in relation to policy reforms on utilities, electricity, petronas, water, engineering who are recruited on a contract basis.

Another way to invite a range of research suppliers is through decentralised mechanisms for procuring research:

Box 3: Mexico's Decentralised Research Funds

Mexico's S&T budget is shared across different federal government agencies reflecting the application of R&D to various areas of public interest i.e., the economy, energy, health, social security etc. In 2008, this budget exceeded $US 3 billion. In 2006, the two largest items in this budget were public education (public universities and institutes of technology) and CONACYT. Over half of this total was described as serving the socio-economic objective of 'general advancement of knowledge'.

CONACYT administers five kinds of funds geared to the research needs of federal, state and municipal governments. The sectoral funds, for example, are formed jointly between 16 federal government ministries and agencies and CONACYT. Research tenders are advertised running the gamut of 'development' issues across health, agriculture, energy, women's participation etc depending on the agency. Public and private universities, research centres, enterprises and non-profit thinktanks can put forward proposals against the specified criteria. A smattering of non-profit thinktanks are obtaining grants as well.

Governments can also open their doors to a range of external institutions and support their capacity to promote public dialogue and contest existing policy settings as often occurs in post-democratic periods.

Box 4: Policy Dialogue in the Philippines

The collapse of the Marcos regime, hastened by the people power movement that formed Cory Aquino's (1986-92) political base, led to a boom in civil society organisation numbers and opened the door to unprecedented levels of policy dialogue with government. Aquino's government stood for democracy, human rights and social development and her background led her to engage with civil society in ways never before seen. Fidel Ramos' administration (1992-98) continued in this vein, engaging with civil society and independent thinktanks on a range of different issues including conflict in Mindanao, macroeconomic reforms, trade liberalisation, maritime territorial disputes and the Asian Financial Crisis.

C. Diverse Supply of Knowledge

- *Diversity of knowledge institutions is a sign of a healthy sector. The government does not have to be the sole supplier or financier of research, but it can (i) supplement expertise, (ii) foster human capacity and (iii) set conducive regulations.*

It is worth underlining the diversity of settings from which Latin American thinktanks operate including public and private universities; civil society and non-government; and the private sector (Table 3 and Table 4).

(i) All five countries have state supported thinktanks, analytical and training capacity created to support development planning and implementation and/or to address shortfalls in specific technical capacity. Some are supported through direct budget allocations and may also access indirect state support e.g., ongoing commissioned work, subsidisation of statistical and other data bases, access to scholarships etc. Some institutions are attached to a government agency, while others have been purposely established outside of the bureaucracy. There is no straightforward answer to the

question of whether it is better for national development research to sit inside or outside government. State funded thinktanks are vulnerable to budget austerities, tensions with the bureaucracy over independence, and may be forced to diversify products, clients and funding sources in any case.

Box 5: Philippine Institute for Development Studies

PIDS was established by Presidential Decree as a non-stock, non-profit government corporation in 1977. It has an Endowment Fund to which the government's first contribution was 7 million pesos and subsequent allocations of about 6 million pesos annually from 2003 to 2009 have been made. PIDS submits an annual work program and budget estimates for approval to NEDAs Director General.

PIDS clients include planners and policy makers in the executive and legislative branches of government, academia, the private sector and media. It produces a range of research materials including the Philippine Journal of Development. Its website provides public access to national income statistics, agriculture and poverty databases, and the Socio-Economic Research Portal. It hosts the Development Policy Research Month. NEDA uses the agriculture database in the MTDP and poverty alleviation research in MDG reporting.

PIDS activities have made critical contributions to government priorities in macroeconomic stabilisation and microeconomic reforms in the last 30 years. But, its capabilities are under severe threat. A Philippine review urged PIDS to communicate better with policymakers and the public, assist government to manage, target and evaluate the impact of public policies, develop wider research networks and more cooperative research. AusAID has contemplated potential grant support to PIDS.

The government may set an implicit value on dedicated capacity. But, it should also be prepared to resource the thinktanks adequately for their role and ensure they do not end up isolated from competitive forces operating outside government:

Box 6: Brazil's Government Thinktank

The Institute of Applied Economic Research (IPEA) produces macroeconomic, sectoral and thematic research to inform public policy. IPEA was established in 1968, attached to the Ministry of Planning and Development, to inform government economic policy making. It rapidly acquired a reputation for prolific, high quality research. IPEA is often involved in joint research relating to key development issues and it has institutional relationships with other federal agencies, notably the Brazilian Institute of Geography and Statistics, multilateral organisations such as the IADB and bilateral partners.

In June 2007, the Secretariat for Strategic Affairs of the Presidency of the Republic of Brazil (SAE) was created to coordinate long-term national planning, develop national strategic options, oversee government and public coordination of long-term development strategies and support implementation of Federal Government proposals. In August, IPEA was moved to SAE supervision. Earlier that year, IPEA contracted a 20 year US$7 million technical cooperation loan from the Inter-American Development Bank to improve capacity to formulate, monitor and evaluate and recommend public policy with $2 million in counterpart funds.

(ii) Governments can establish institutions focused on specific expertise. Brazil, Malaysia and Singapore created dedicated civil service training schools (Table 3) to support public sector reforms. Singapore's civil service is famed for its integrity and

competence which is integrally linked to long term efforts to eradicate corruption. In addition,, civil service remuneration is benchmarked against private sector pay. The high quality of Singapore's civil service corps clarifies government demand for evidence secured from a range of sources and is perceived to contribute to better quality public policy. Brazil and Mexico's introduction of legislative technical expertise was intended to assist parliaments to form better legislation, including surrounding budget reforms.

Countries can also invest more in human capacity through mechanisms such as scholarships and research fellowships.

Box 7: Brazilian Investments in Human Capacity

Latin America sends more students for higher education to US and European universities than any other developing region in the world. Brazil spent an estimated $US78 million on overseas scholarships in 2000. Brazil also has one of the highest rates of articles published in international scientific journals in Latin America, with the volume doubling from 5,088 in 1995 to 9,511 in 2000.

Historically, Brazil's institutions have recognised the country cannot train all the workforce or finance all the innovation required for its development. Sectoral funds administered by MCT and CNPq, financing agencies like BNDES and FINEP, support international research partnerships, industry-university research partnerships, post-doctoral fellowships and scholarships for public and private sector. Certain sectoral funds are financed from taxes on the industry e.g., petroleum and energy research. Sao Paulo has the largest budgets and strongest programs for state support.

Singaporean and Malaysian government agencies and universities provide scholarships focused on publicly identified priorities for technical skills e.g., information technology, medicine, biomedical sciences, engineering etc.

(iii) Governments can create a conducive climate for non-government institutions to operate (Table 4). One route is to diversify its demand to institutions through competitive grant funding e.g., Box 1 and Box 3 Mexico. Similarly, Singaporean and Malaysian government agencies point to leeway to contract external research to domestic universities, independent think tanks and international organisations based on their fitness to undertake the research.

Another is through the regulatory and fiscal environment applied to the non-profit sector. International literature suggests NGO based thinktanks tend to proliferate with democratisation. They attract philanthropic organisation and donor funding on issues of human, civil or democratic rights that previous regimes may have suppressed. They can have more strengths in advocacy and education over policy analysis. They are often dependent on volunteer labour, which makes the organisations susceptible to collapse when strong, capable leaders and administrators move on. Funding and human capacity in the non-profit sector is often unreliable and thinly spread. Yet, such organisations are often invaluable for bridging the information gap between the state and the public. Governments can support such organisations by lifting controls over, or creating greater

incentives for, domestic sources of philanthropy and charity through the regulatory and tax systems to enable such institutions to collect the membership fees and activity based fees domestically. Singapore and the Philippines exemplify such issues:

Box 8: Singapore Institute for International Affairs (SIIA)

The SIIA is Singapore's oldest thinktank established in 1961. It is Singapore's ASEAN ISIS network member. It is a non-profit, non-government institution.

SIIA sees its role as reaching out to all sectors of Singaporean society through the conduct of both public and closed door dialogues, conferences and analyses. Its founding patron is the Lee Foundation. Its activities are entirely funded by foundations, membership fees and corporate sponsorship. It members, friends, donors and council members is a 'who's who' of Singaporean multinational business, domestic business, philanthropic organisations, universities and senior officials.

SIIA operates a very lean machine with only 2.5 permanent research staff and a floating network of researchers drawn from other thinktanks and universities across the city state and internationally. Rather than slim budgets being seen as a constraint, SIIA has portrayed its virtues in enabling the organisation to respond nimbly to conduct research and advocacy activities into rapidly emergent issues. SIIA is all about effective use of networks. As a non-profit it is required to report its financials transparently i.e., budget of $S1.2 million in 2008 which was much less than all other Singaporean thinktanks (see Annex G Singapore Visit Report).

Nowhere are the usual international foundations mentioned among SIIAs donors, which suggests the institution is highly oriented to Singaporean interests (albeit the high presence of multinational firms). Despite its budgetary and administrative leanness, SIIA achieved its first ranking in the Global Go To Thinktank Index in 2009.

Under Singapore law, non-profit organisations are called Voluntary Welfare Organisations which can be registered as public companies limited by guarantee, societies or charitable trusts. Depending on the form of registration tax exemptions on income can range from 50 to 100% while tax deductibility for donations also varies.

CSO and NGO based organisations do not have to have a conflictive relationship with government. SIIA rejects the 'US adversarial think tank model', while the Philippines' post-democratic experience indicates that government can engage constructively with the sector in certain areas of public policy:

Box 9: The Philippines' Vibrant People's Organisations

The Philippines non-profit sector is very strong for the South East Asian region having made gains in the last two decades in terms of a united vision to support sustainable development, upgrading of networking, coalition building and campaigning skills, and the indigenous development and adoption of standards of practice that are widely recognised as good models.

The strong role of Filipino civil society, including the plethora of organisations involved in policy advocacy, is reinforced by conducive regulation. The role of people’s organisations and NGOs in development are esconced in Philippine law i.e., three articles of the 1987 Constitution, the local government code, the Urban Development and Housing Act and the

Women in Development and Nation Building Act. NGO participation in government programs is embedded in the Medium Term Development Plan 2004-10.

Philippine civil society has been self regulating since 1991. The largest NGO coalition, Caucus of Development Networks (CODE-NGO), was the first such group to create a Code of Conduct for Development NGOs in Asia. Six of the largest NGO coalitions in the country established the Philippine Council for NGO Certification (PCNC) in 1998 whose system is recognised by government. The code of conduct and certification system are internationally cited good practice models.

Tax rules assist the sector. Non-stock corporations and non-profit institutions organised exclusively to deliver a wide range of functions, including social welfare and education, may obtain exemptions from income tax on donations, grants and gifts. Other tax benefits accrue to organisations which become an accredited nonstock, nonprofit corporation or 'accredited NGO' e.g., PCNC certification of 'donor institution status' enables an organisation to receive tax-deductible donations. Such arrangemens are generally beneficial, if not perfect i.e., in 2007, NGOs that did not raise funds from domestic corporations were unable to qualify for the status and avoided accreditation, so the PCNC had certified less than 500 of the approximately 6,000 eligible NGOs at that time.

Wherever researchers and analytical skills are required, these skills need to be adequately compensated not only to attract and retain the talent, but to encourage replication. Anecdotally, Indonesia's rewards systems are highly distorted:

Box 10: Researcher Compares Conditions Between Singapore and Indonesia

A researcher who has worked in Indonesia and Singapore points anecdotally to signs in Indonesia that remuneration for research is distorted and not supporting think tanks, researchers or research sustainably.

Singaporean research institutions pay a decent fixed salary which frees the researcher to focus on his main area of expertise. Books are cheaper, and libraries and on-line journals have traditionally been more readily available in Singapore.

In Indonesia, low-base salaries force researchers to look for a range of activities i.e., writing press articles, presenting seminars and lectures, consultancy work and becoming contributors to research projects. The effect of this hunt for income is to distract researchers from focusing on their specialisations e.g., speaking at seminars in Indonesia is more lucrative than doing research. Moreover, while funding has a legitimate role in signalling demand, in Indonesia the balance is too much in favour of research topics being determined by the source of funding. This can interfere with an institution's ability to form long-term research programs.

Indonesian base salaries, resources and conditions need to be raised to competitive levels.

Governments can apply special incentives to researcher retention, repatriation of foreign trained researchers and encourage increased national and international publications. Experience with such schemes, however, point to the need for them to be well targeted to particular objectives and be supported by sufficient employment opportunities and physical infrastructure to work well:

Box 11: Mexican Incentives to Researchers & Research

Mexico's National Researcher System (SNI) introduced in 1984 provides incentives to researchers to produce high quality, original research. The number of Mexican researchers registered with SNI has grown by 11 percent annually to over 14,000 in 2008. SNI members are categorised as Candidates or National Researchers I, II and III. Level III includes a sub-category of Emeritus National Researchers. The fiscal incentives range from an $US800 to $US1300 per month added to salaries.

CONACYT has increased the output and impact of Mexican scientific research. In 2003, the average Mexican researcher was said to have published more papers, and be cited by other researchers more often, than in most comparable nations. SNI researchers accounted for about 85% of Mexican international peer reviewed publications in the ISI Thompson Web of Science database.

5. Assess & Expand International Resources

- *Indonesia may need to clarify its objectives for international networks and assess whether it is maximising opportunities to raise local capacity.*

International networks have formed a valuable resource for institutions and individuals in developing countries, although there may be a long time lag between investments in such partnerships and the benefits becoming evident.

Brazil uses technical advice, research financing and networks with the World Bank, Interamerican Development Bank, Economic Commission for Latin America and the Caribbean, UNDP and the Mercosur free trade area to access research grants and undertake joint research. Mexico has similar arrangements with the US, Canada, the EC, individual European partners and Latin America through its FTAs, and long standing membership of regional and international fora. All Latin American countries have long term links to the IMF. Brazil and Mexico's S,T&I frameworks encourage international research partnerships. In both countries, some of these international links seem to have been inspired by a predisposition among early knowledge institutions to make use of academics taking refuge from other parts of the Hispanic or Lusophone world. Moreover, geographic continuity in the Americas may assist in promoting cross-border cooperation on issues of common concern e.g., Mexican collaboration with the US water sharing, migration and environmental issues.

Asian thinktanks are members of the ASEAN ISIS network and combine resources with ADB, UNDP, and World Bank. The Singapore and Malaysia visits point to openness of government agencies and universities to international influences through adopting and adapting foreign best practice models for civil service training and university partnerships with US, European, Japanese, other East Asian, Australian and New Zealand universities and research centres. Singaporean agencies use study tours to educate civil servants on alternative models for implementing priority policies for urban planning, national savings programs and public service training. Malaysia's EPU

pointed to the discipline of having to pay for advice when commissioning international consulting firms or the World Bank to undertake research outside its capabilities.

The key point is these countries have leveraged domestic capacity from imported skills. For example, the Centre for Asia and Globalisation is fully foreign staffed, but placed within the LKYSPP in order to focus on Singapore's research priorities. The quality of its research will reflect and build on the LKYSPP, NUS reputation. Malaysia's INTAN found it cheaper to internalise previously Harvard provided public service management training. Historically, Mexican institutions like Colegio de Mexico employed academics from Spain and other parts of Latin America which have yielded benefits to the quality of research, educational outcomes and reputation of the institution.

The fact these countries are re-exporting development knowledge points to their success in embedding foreign knowledge in domestic institutions and people. Brazil, Mexico, Malaysia and Singapore have aid programs providing technical cooperation to other parts of Latin America, South East Asia, South Asia and the Middle East. Brazil hosts the International Policy Centre for Inclusive Growth, to which IPEA is a service provider, in the strategic area of the President's Office in partnership with the UNDP. This Centre undertakes applied research, south-south cooperation and learning through policy dialogue, training and evaluation in development policy. The Philippines has developed expertise in community engagement, gender and human rights which donors fund to provide training to lesser developed countries. One of the Philippines' NGOs has become an international NGO and the Philippines created an internationally recognised NGO code of conduct. Mexican anti-poverty programs have entered international development practice and theory:

Box 12: Mexican Poverty Alleviation Programs

Oportunidades was introduced in 1997 (Progresa). This program is designed to reduce extreme poverty among 25 million Mexicans, by providing cash transfers to incentivise access to basic education, health and nutrition. Mexican and Latin American experience with conditional and unconditional cash transfers is influential in international development circles, including Indonesia.

Oportunidades is one of Mexico's many social programs with progressive impacts. The program has been improved to enhance public oversight through definition of an official poverty measure; mandatory evaluation of all federal social policy programs, dissemination of public information on program operation rules, budgets and outcomes, clarification of formulas for distribution, means testing and targeting of beneficiaries. Progresa was intensely studied by the International Food Policy Research Institute. After the 2000 elections, the program was renamed *Oportunidades* and evaluation was shifted to academic institutions like CIDE and made publicly accessible on a government website.

Seguro Popular (Popular Health Insurance) was introduced in 2003 to successfully provide universal health care to 50 million Mexicans. Joint US-Mexican health research team suggested applying the model in the US. Mexican health policy makers used evidence based research to implement the program.

5. Accept Non-Profitability & Externalities

- *Assume that research centres and thinktanks do not make profits. Public funding of research may not be fully reflected in concrete, tangible research output, but create intangible benefits to wider society which are difficult to quantify.*

None of the institutions covered in these five countries are for profit operations, despite being in operation for over 20 years. Even well established, high quality economic thinktanks like PIDS (Philippines), MIER and ISIS (Malaysia) have suffered hits to endowment funds from external shocks like the Asian Financial Crisis. Singapore's IPS began as an independent thinktank, but accepted a merger into the LKYSPP to benefit from three year budget certainty. Brazil's IPEA needed ongoing budget support, top ups to its endowment, and a large multiple year loan to supplement capacity (Box 6).

IDS (Sabah) aspires to become a fee paying consultancy based on a Japanese model of operation that will expand into technical service delivery, as opposed to policy research and advisory capacity, but it is likely this would only be possible based on the more than two decades of State Government of Sabah support. The literature only mentions profit making finance and economic consultancies in Brazil, due to it enormous market size and position as a locus of regional and international finance, banking and industry.

Research centres and thinktanks produce some goods which can be sold to identifiable consumers e.g., commissioned studies and conferences. But, for some goods it may be difficult to recoup the full cost of production or identify all consumers e.g., journal articles, book chapters, free public seminars and media op-eds. While it is difficult to directly attach a market figure to some activities this does not mean they have no value, because they can serve to educate the general public, are accessed by university students and other researchers. Some thinktanks cross subsidise such activities within the operation from revenues from fee paying services and investment income or seek specific grants and donations. Such research contributes to the country's body of knowledge and, while government may not directly pay for such research, it may still influence state policy.

Given that more developed countries do not have many for-profit thinktanks, it is unrealistic to expect Indonesia's thinktanks to earn profits, especially on an annualised basis.

Implications for Indonesian Consideration

Indonesia needs to choose whether it wants a domestic knowledge capacity. The priority and technical solutions are purely dependent on this political decision.

In potential economic size, influence in international relations and regional politics, ethnic diversity and the challenges faced with inequitable distribution of wealth and poverty Indonesia is similar to Brazil and Mexico (Table 1). Mexico is already an OECD member. Indonesia, like Brazil, is one of the BRIIC (Brazil, Russia, India, Indonesia and China) emerging economies with special OECD engagement.

Consequently, the breadth and diversity of the Latin American knowledge sectors is noteworthy. Brazil and Mexico are among the countries with the largest number of thinktanks in the world at 55 and 48 respectively. The Latin American examples have sought to shift towards knowledge based economic growth based on an organic trajectory beginning with investments in education as a way of promoting national economic and social development, with gradual expansion into considerations of links to industry based R&D as these economies have opened up to international trade and economic competition. Brazil has already attained 1 percent of GERD and is aiming for the developed country average of 2 percent, while Mexico is aiming towards 1 percent. Singapore and Malaysia have followed the more accelerated, planned pathway typical of East Asian economies. Apart from differences in speed and deliberacy, all point point to the importance of taking a systems wide approach to the knowledge sector.

If Indonesia does not raise investments in the creation of knowledge, it may lag in achieving an Indonesian understanding of its development problems and solutions. The alternative is to go the way of the Philippines which has a fragmented landscape. Despite a strong historical lead in economic development and education, and select strengths in research and knowledge, its premier economic thinktanks are struggling. The Philippines' GERD is higher than Indonesia's, but the need to turn to donor support throws a question mark over how it will sustain its institutions without ceding some control over their ability to serve Filipino imperatives first and foremost.

Similarities in socio-political histories between Indonesia, the Philippines, Brazil and Mexico indicate that Indonesia's policy makers should not try to control the sector. Under democratisation and regional autonomy both the demanders and suppliers will diversify. Therefore, the government's role rests in setting the policy, regulatory and budgetary frameworks that can help the system to work more fluidly i.e., freer movement of people and information across the institutional landscape under competitive conditions. Indonesia's knowledge sector appears to be suffering from stagnation and impeded flows between all the various parts of the system.

Indonesia's policy makers can show leadership by stating that domestically generated evidence and research is necessary to national development. The Indonesian Government has a moral obligation to consider ways of attaining a broad-based capacity for Indonesians to participate in the development process. This means reorienting from short-term and foreign technical assistance to building the capacity of Indonesian institutions and people. While only the Government can change policy and regulatory settings, there is substantial potential for donor support to implement mechanisms towards those reoriented objectives.

In practice, Indonesian policy makers need to see all diagnostics to assess the feasibility of specific interventions because these must be tailored to a sound understanding of Indonesia's context. This synthesis underlines the necessity of these other diagnostics taking into account complex interactions between government, universities, research centres, civil society and international networks and resources. Some questions raised by the comparative experiences are attached at Annex D.

Table 2 Institutional Rankings (taken from SCImag Thomson Reuters Index)

Rank	Organisation	Country	Sector	Output
	Universidade de Sao Paulo	Brazil	HE	3
	Universidade Nacional Autonoma de Mexico	Mexico	HE	1
	Nanyang Technological University	Singapore	HE	1
	Universidade Estadual de Campinas	Brazil	HE	1
	Universidade Federal do Rio de Janeiro	Brazil	HE	
	Universidade Federal do Rio Grande do Sul	Brazil	HE	
	Instituto Politecnico Nacional	Mexico	HE	
	Universidade Federal de Minas Gerais	Brazil	HE	
	Universidade Federal de Sao Paulo	Brazil	HE	
	Agency for Science, Technology and Research Singapore	Singapore	Govt.	
	Centro de Investigacion y de Estudios Avanzados de	Mexico	HE	
	Universidade Federal de Sao Carlos	Brazil	HE	
	Universidade Federal de Santa Catarina	Brazil	HE	
	Fundacao Oswaldo Cruz	Brazil	HE	
	Universidade Federal do Parana	Brazil	HE	
	Universidade Federal de Pernambuco	Brazil	HE	
	Universidad Autonoma Metropolitana	Mexico	HE	
	Universidade do Estado do Rio de Janeiro	Brazil	HE	
	Empresa Brasileira de Pesquisa Agropecuaria	Brazil	Govt.	
	Universiti Malaya	Malaysia	HEI	
	Instituto Mexicano del Seguro Social	Mexico	Health	
	Universidade Federal Fluminense	Brazil	HE	
	Universidade Federal de Bahia	Brazil	HE	
	Universidade Federal de Santa Maria	Brazil	HE	
	Pontificia Universidade Catolica de Rio de Janeiro	Brazil	HE	
	National University Hospital	Singapore	Health	
	Universiti Kebangsan Malaysia	Malaysia	HE	
	Singapore General Hospital	Singapore	Health	
	University Putra Malaysia	Malaysia	HE	
	Universidade de Guadalajara	Mexico	HE	
	Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran	Mexico	Health	
	Universidade Estadual de Londrina	Brazil	HE	
	Universidade Federal de Pelotas	Brazil	HE	
	Tecnologico de Monterrey	Mexico	HE	
	Universidad de Guanajuato	Mexico	HE	
	Universidade Federal de Lavras	Brazil	HE	
	University of the Philippines	Philippines	HE	
	Instituto Butantan	Brazil	Health	
	Colegio de Posgraduados SAGARPA	Mexico	Govt.	
	Consejo Nacional de Ciencia y Tecnologia Mexico (CONACYT)	Mexico	Govt.	
	Hospital de Clinicas de Porto Alegre	Brazil	Health	
	Universiti Teknologi Malaysia	Malaysia	HE	

	Universidade Federal de Juiz de For a	Brazil	HE	
	Pontificia Universidade Catolica do Parana	Brazil	HE	
	Universidade de Sonora	Mexico	HE	
	Universidad Veracruzana	Mexico	HE	
	Universidade Federal Rural de Pernambuco	Brazil	HE	
	Universitas Indonesia	Indonesia	HE	
	Institut Teknologi Bandung	Indonesia	HE	
	Genome Institute of Singapore	Singapore	Govt.	

Table 3: State Supported Thinktanks & Specific Capacity [3]

Country	Thinktank	Sector	Relation to state
Brazil	Institute of Applied Economic Research (IPEA)	economics	Secretariat Strategic Affairs (President's Office)
Brazil	Foundation Oswaldo Cruz (FIOCRUZ)	public health	Ministry of Health
Brazil	Brazilian Agriculture Research Corporation (EMBRAPA)	agriculture	Ministry of Agriculture and Livestock
Brazil	National School of Public Administration (ENAP)	civil service training	Federal Ministry of Planning, Budget and Administration
Brazil	technical legislative support	budget policy, fiscal reform via parliamentary process	Congress' Joint Committee on Plans, Public Budgets and Auditing and Brazilian Congress
Brazil	School of Government of the Joao Pinheiro Foundation	public policy	State Government of Minas Gerais.
Malaysia	Institute for Strategic & International Studies (ISIS)	international studies	Independent (majority government grants)
Malaysia	National Institute of Public Administration (INTAN)	civil service training	Public Service Department
Malaysia	Institute for Development Studies	economics, socio-economic, development of trade and industry	State Government of Sabah (majority government funded)
Mexico	Centre for Economic Research and Education (CIDE)	economics	Public Research Centre (CONACYT)
Mexico	Post-Graduate School of the Ministry of Agriculture	agriculture	Ministry of Agriculture (SAGARPA)
Mexico	Institute of Economic Research	economics	Mexico National Autonomous University

[3] These are some of the well known institutions, not an exhaustive list.

	(IIEc)		
Mexico	Centre for Public Finance Studies of the Chamber of Deputies – Centro de Estudios de Finanzas Publicas (CEFP)	public finances	Chamber of Deputies
Mexico	also, Law and Parliamentary; Social and Public Opinion; Advancement of Women and Gender Equity; Sustainable Rural Development and Food Sovereignty; and Research and Analysis services.	various	Chamber of deputies
Mexico	National Institute of Public Health (INSP)	6 research centres public health	Ministry of Health
Mexico	Centre for Research and Higher Education in Social Anthropology (CIESAS)	anthropology	CONACYT PRC
Mexico	Centre for Research in Geography “Engineer Jorge L Tamayo” (CENTRO GEO)	geography	CONACYT PRC
Mexico	College of the Northern Frontier (COLEF)		CONACYT PRC
Mexico	College of Michoacan (COLMICH)		CONACYT PRC
Mexico	College of San Luis (COLSAN)		CONACYT PRC
Mexico	College of the Southern Frontier (ECOSUR)		CONACYT PRC
Mexico	Research Institute of Dr Jose Maria Luis Mora (MORA)		CONACYT PRC
Philippines	Philippine Institute for Development Studies (PIDS)	economic and socio-economic development	National Economic Development Agency

Philippines	University of the Philippines, School of Economics (UPSE)	economics	University of the Philippines
Philippines	Development Academy of the Philippines (DAP)	development research and training	Executive Office
Philippines	National Tax Research Centre (NTRC)	tax research and training	Department of Finance
Philippines	Foreign Services Institute (FSI)	diplomatic and international relations research and trainng	Department of Foreign Affairs
Philippines	Statistical Research and Training Centre (STRC)	statistics research and training	National Economic Development Authority
Philippines	Gender and Development Databank	gender statistics	Philippine Commission on Women
Philippines	policy research	gender	Philippine Commission on Women
Singapore	Institute for Policy Studies (IPS)	economic development	Lee Kuan Yew School of Public Policy, NUS
Singapore	Institute of South East Asian Studies (ISEAS)	economics, regional trade, international relations	80% MOE funded
Singapore	various research centres in LKYSPP, NUS	various	LKYSPP, NUS (public higher education institution partially supported via MOE)
Singapore	Civil Service College (CSC)	civil service training	Prime Minister's Office (subsidised by PMO)
Indonesia	Centre for Policy and Implementation Studies (CPIS)	development studies; regional studies; economic issues; social issues; industrial policy; agriculture; environment.	Indonesian Institute of Sciences (LIPI)

Table 4: Prominent Independent Think Tanks

Country	**Thinktank**	**Affiliation**
Brazil	Getulio Vargas Foundation (FGV)	Private, non-profit university

Brazil	Center for Analysis and Planning (CEBRAP)	Independent
Brazil	Tendencias	Profitable consultancy
Brazil	CEBRI Centro Brasileiro de Relações Internacionais	Independent
Brazil	Brazilian Institute of Social and Economic Analyses (IBASE)	NGO non-profit charitable
Brazil	Instituto Liberdade	Pontifica Universidade Catolica do Rio Grande do Sul (independent, research centre in university) in Porto Alegre
Brazil	Centre of Economic Development Studies CEDE	Universidade Estadual de Campina
Brazil	Centro Interdisciplinar e Economia Personaista	Rio de Janeiro
Brazil	Instituto de Estudos Avancados	Sao Paulo
Brazil	Center for Regional Development and Planning	Federal University of Minas Gerais
Brazil	Brazilian Institute of International Relations (IBRI)	non profit charitable
Brazil	Center for Contemporary Studies (CEDEC)	
Brazil	Instituto Fernand Braudel de Economia Mundial (Braudel)	
Malaysia	Malaysian Institute for Economic Research (MIER)	Independent
Malaysia	Third World Network	Independent but regional network.
Mexico	Center for Economic Studies (CEE)	Colegio de Mexico (COLMEX), public university
Mexico	Centre for Economic Research (CIE)	Mexican Autonomous Institute of Technology, private university
Mexico	Center of Studies on Quality of Life and Social Development (CECAVI)	University of the America's Puebla, private university
Mexico	Centre for Research and Analysis FUNDAR	NGO
Mexico	Gender Equity: Citizenship, Labour and Family	NGO
Singapore	Singapore Institute for International Affairs (SIIA)	NGO
Singapore	Lee Kuan Yew School of Public Policy (houses several centres)	National University of Singapore

Singapore	Rajaratnam School of International Studies (RSIS)	Independent
Indonesia	Centre for Strategic and International Studies (CSIS)	Independent
Indonesia	Social Monitoring Emergency Response Unit (SMERU)	Independent

Annex D: Questions for Other Diagnostics

Other countries' experience throws up questions that may be being considered in other diagnostics:

- Does Indonesia's regulatory environment need strengthening?
- Does the regulatory and fiscal regime support domestic philanthropy?
- Should Indonesia support increased research and publication through competitive research grants, industry partnerships or researcher incentives?
- Is Indonesia maximising its international relationships to educate and train Indonesians through scholarships and fellowships?
- Can government agencies procure analysis and form productive relationships with its range of domestic institutions?
- If not, mechanisms would be needed to do these things transparently and accountably?

Brazil's Knowledge Sector

Brazil shares many similarities to Indonesia, including vast geography, large population, a history of military rule and inward looking economic policies. In 1985, the country returned to democratic rule with a new Constitution drawn in 1988. The current Lula da Silva administration has implemented fiscal and monetary policies, retired much foreign debt and promoted further tax and investment reforms. The country enjoyed trade surpluses until the global financial crisis. Brazil has steered a course to greater global economic integration and democratisation. Its level of decentralisation is highly advanced for the region. Nevertheless, poverty and gross inequality are significant problems and, in his second term, Lula has set a priority on equitable and sustainable development.

Table 1: General & Economic

Indicator	Brazil	Indonesia
Land Area km2 millions	8.5	1.9
Population millions	199	240
GDP total $US billions	2,024	968.5
GDP per capita $US	10,200	4,000
Composition of activity % GDP		
agriculture	6.5	14.4

industry	25.8	47.1
services	67.7	38.5
% population under poverty line	26	17.8

Sources: CIA World Factbook

In regional and international affairs, Brazil carries the weight of being not only an upper middle income developing country, but the economic powerhouse of Latin America with an economy larger than all South American countries put together. Brazil has insisted that multilateral banks and bilateral donors treat it as a partner capable of setting its own agenda. It even has a small aid program.

This outline of Brazil's institutional landscape is organised into: science and technology research policy; economic and social development policy capacity; and the role of higher education. Government efforts to build specific capacity for legislative technical advice, civil service training and the government thinktank are also canvassed below.

Science, Technology & Innovation System

Brazil's S&T system dates back to the 1950s, focusing on infrastructure building and human capacity acquisition, and the focus on research and development in S&T continued through the military governments of the 1960s. These public investments enabled Brazil to attain strengths in agriculture, health, petroleum and energy sciences and aviation engineering.

Brazil is pursuing an economic development trajectory based on innovation and knowledge to compete against rivals such as China and India, also with South Korea, Russia and Mexico. While its GERD is high for the Latin American region, Brazil has been encouraged to raise its expenditures towards the OECD average of 2.24 percent by lifting public and private investment, growing industry's share of expenditure, and facilitating greater linkages between academic research and industry demands. The concentration of public spending and activity suggests R&D is less competitive, cost efficient and relevant to the evolving needs of industry.

Table 2: Research, Science & Technology

Indicator	Brazil	Indonesia
Gross Expenditure on Research & Development % GDP	1.02	0.05
% GERD on R&D by Source of Funds		
government	50	84.5
business	48	14.7
higher education	2	0.2
Researchers per million population	629	205
Total Researchers FTE	118,296	42,722
Researchers by Sector		
business enterprise	45,418	253
government	5,910	5,738
higher education	66,092	26,138
private non-profit	876	n.a.
No. S&T Publications	13,000	560
Distribution of S&T Research Workforce by Sector		

universities	70	n.a.
government	15	n.a.
industry	10	n.a.
Share of global scientific publications	2	n.a.

Sources: UNESCO Institute for Statistics

Economics & Social Sciences

Compared to the consistent emphasis on supporting S&T, Brazil has not had a coherent policy towards economic and social development research. The Global Development Network lists 100 institutions for Brazil, the Global Go To Think Tanks Index of 2009 lists Brazil among the countries with the most number of think tanks i.e., 48. Perhaps more impressive is the variety of types of institutions that Brazil has providing research, analytical and advisory services to government, the public and the private sector. Some of the better examples of these are noted below:

Public research centres are affiliated with government, most focus on S&T which is less relevant to this brief, but two exceptions significant to Brazilian health and agricultural policy and development are worth highlighting:

Box 1: Public Research Centres & Public Goods

The Foundation Oswaldo Cruz (FIOCRUZ) is allied to the Ministry of Health and is one of the world's leading public health institutions. FIOCRUZ conducts scientific R&D into biomedical sciences. It is renowned for its work in helping Brazil address early public health issues such as bubonic plague and sanitation, malaria etc, and is a major producer of yellow fever vaccines.

The Brazilian Agriculture Research Corporation (Embrapa) has also been a leader in agricultural sciences research and development, playing a critical role in Brazil becoming one of the world's largest agribusiness producers and exporters. Embrapa is affiliated to the Ministry of Agriculture and Livestock.

University based research centres began to appear in the 1980s. These centres form their own research agenda autonomously from university management and are generally not funded by university budgets but through research, consulting work and outreach activities.

The Getulio Vargas Foundation (FGV) is one of the top five policy making thinktanks in the world. Primarily a private, non profit higher education institution with a reputation for excellence in graduate education, FGV is well regarded for its academic research into macro and microeconomics, finance and business, law, health, poverty, unemployment and environment and sustainable development. It has research programs into education, justice, politics and social sciences. It undertakes commissioned work for the government, private sector, World Bank and Inter-American Development Bank (IDB). FGVs Brazilian Institute of Economics (IBRE) also has an well regarded reputation in applied economics.

Other well known social sciences research centres include the Research Center on Public Policy (NEPP) at the University Campesino, Research Center on Higher Education (NUPES) and Research Center for International Relations (NUPRI) at the University of Sao Paulo.

Economic policy expertise is well consolidated in Brazil's central bank and ministry of finance. Equally, the administration has access to many private sources of economics and finance expertise. As one of the large three economies of the region, Brazil is served by 20 *multinational banks* e.g., Banco Santander, BBVA etc, as well as major domestic banks BRADESCO, ITAU and UNIBANCO. Banks typically have strong economic research departments employing post-graduate qualified, full time economists and analysts. Through high media presence, organisation of conferences, closed door briefings to government, and senior management mobility between the financial sector and government posts, the banks influence policy.

Brazil also has a relatively high number of *for-profit consultancies* which sell data and analysis to banks, corporations and the public sector. Tendencias, for example, has an annual budget of about US$3 million and 60 staff of whom 85 percent are economists.

Economic *thinktanks* emerged during periods of significant socio-political change. The Center for Analysis and Planning (CEBRAP) and the University Research Institute of Rio de Janeiro (IUPERJ) were founded by political exiles and dissident foreign trained graduates returning to Brazil after the 1964 military coup, with the help of the Ford Foundation and MacArthur Foundation funding. Some thinktanks became well known for providing more reliable statistics than the government e.g., the Getulio Vargas Foundation (FGV) created a general price index (IGP-M) during Brazil's high inflation period.

Civil society organisations blossomed during Brazil's transition to democracy from the 1980s and by the 1990s Brazil had some 5,000 civil society organisations covering the gamut of development issues. Their main activities are technical assistance, education and advocacy, but 7.4 percent conduct research and policy analysis. Brazil's CSOs have significant influence over public policy. The 1988 Constitution formally recognised the role of civil society, paving the way to the federal, state and municipal governments forming policy councils with civil society in major areas such as health, children's rights, and rural development. Brazil's CSOs also use their networks and collaborate well on issues of national concern e.g., in 1993 a coalition of NGOs and networks spearheaded a national Anti-Poverty Campaign and in 1995 Rede Brasil formed to monitor the activities of the World Bank and IDB development programs. The Brazilian Institute of Social and Economic Analyses (IBASE), active in budget transparency, is a prominent CSO thinktank.

Overarching Policy & Funding

Brazil's administrative and financial arrangements for national science, technology and innovation is complex and vast. Structures outlined (Diagram 1 Annex B) here do not relate to the kinds of research capacities dealt with in this paper specifically.

Science and technology research budgets are determined annually, as part of Brazil's four year pluri-annual plans (PPA), which are coordinated by the Ministry of Planning, Budget and Administration (MPOG). Consistent with Brazil's traditional focus on science, technology and innovation (S,T&I), changes in recent years strengthen government R&D financing to industry and foreign trade objectives. There is no block funding to federal public universities or other public R&D

organisations for research, apart from budgetary allocations. Brazil administers an array of sector funds, grants, loans, scholarships and fellowships. The National Plan for Science, Technology and Innovation 2007-2010 sets out how the government links S,T&I objectives to economic and social development.

The main institution determining research policy is the Ministry of Science and Technology (MCT). MCT supervises the National Agency for Financing Research Projects (FINEP) which manages the main umbrella research National Fund for Science and Technology Development (FNDCT) and Sector Funds. MCT also supervises the basic research funding arm National Research Council (CNPq) and a network of public research organisations. Other ministries involved in defining and implementing policy and executing the research budget include MPOG, Finance and agencies answering directly to the President, among many others.

The Ministry of Education (MEC) sets policy and financing for federal universities, hence supports academic and university based research. The Coordinating Agency for Graduate Education (CAPES) is part of MEC, sets policy on financing and evaluating graduate education. The National Bank for Economic and Social Development (BNDES) is the oldest (but not only) funding institution. As highlighted in Box 1 (below), the public research organisation Fiocruz and mixed public research enterprise Embrapa are, differently, funded by the Ministry of Health and Ministry of Agriculture, Fisheries and Livestock, respectively.

The 2007-10 Action Plan involves a budget of R$46.2 billion 46 percent of which is spent by MCT. In 2007 MCT budget was US$2.6 billion (Diagram 2 Annex C).

In relation to development policy research and analysis, the Ministry of Planning, Development and Budget and the Secretariat for Strategic Affairs of the Presidency of the Republic (SAE) should be noted.

Funding to independent research organisations and thinktanks presents a mixed picture. Until around 2000, Brazil's CSOs avoided government support, substantial amounts of donor assistance were channeled to NGOs and most CSO revenues came from fee based services. Endowments are not common and most NGOs have operated on funding well under $US1 million per annum. Cuts and restructuring of donor and foundation assistance forced CSOs to rationalise and seek income from the private sector, government, multilateral development banks, fees and services.

Typically for a developing country, Brazil's CSOs rely substantially on fee based services revenues. Brazil's CSOs are active in pushing for social equity and environmental sustainability of development based on widespread community recognition of their role and they operate in a relatively friendly policy environment, particularly since democratisation. The peak association for NGOs (ABONG) has 300 affiliates and is supported by Oxfam, EED, Ford Foundation, Kellogg Foundation and ICCO. Substantial debate surrounds the pros and cons of donor funding.

Higher Education & Labour Force

Brazil has the largest higher education system in Latin America, comprising over 2,000 higher education institutions and 4.5 million undergraduate students. The

system has been shaped by reforms in 1931 and 1968, including key changes such as the introduction of full-time contracts for academics in public higher education institutions and promotion of graduate (masters and PhD) education. A relatively number of its higher education institutions are listed in the Thomson Reuters SCImago rankings 2000 institutions worldwide (see Table Synthesis).

But, the system suffers from stratification and inequities i.e., some 178 universities are research institutions, while the majority focus on teaching. Substantial literature criticises the inequities and regressive impact of Brazil's systems of rewards to researchers and research. Brazil appears to be addressing major concerns such as provision of more market oriented masters degrees and financing of university-industry links to encourage more applied, rather than basic, research to help put the country on a knowledge and innovation-led economic development path.

Notwithstanding its flaws, the higher education institutions are recognised as the main training ground for Brazil's qualified labour force. Moreover, the country has succeeded in its deliberate policy of increasing post-graduate education. Brazil produces more masters and PhD graduates than any other Latin American country i.e., in 2000, Brazil awarded 18,000 masters and 5,000 PhDs and by 2007, 132,500 students were enrolled in masters and doctoral programs. By 2010, Brazil aims for 95,000 doctorates per year. Brazil has over 100,000 full time researchers, mostly in sciences and engineering, with some 12 percent educated in social sciences and 24 percent in the humanities.

Salaries & Incentives

CNPq and CAPES administer incentives to researchers, research groups and research projects, however objective studies of how these systems work have proven elusive.

Although, one study of 750 academic economists in 31 departments of economics (public and private universities) has strongly suggested that incentives, generational change and competition can have positive impacts on the quality of academic economic research, as measured by international publication. The study found that Brazil's economists performed poorly compared to other countries in international publication and the base of productive economists was narrow. But, between 1999 and 2006 performance improved. Private institutions offered greater flexibility than public universities and incentives such as higher salaries, greater job mobility and direct pecuniary rewards for publishing internationally. Whereas, CAPES and CNPq incentives included higher grants for research, travel and study abroad for research re-use and networking. The number of private institutions had grown and introduced greater competition between economic research institutions and researchers. Consequently, government research agencies had to review some incentives to encourage more international publications.

Government Demand & Capacity

From the 1960s to 1990s, Brazilian government demand for research, analysis and technical advice grew steadily across a range of issues: urban policies, public planning, education, housing, public transport, public health, urban and rural poverty, local administration and state reform, democracy and the role of civil society.

Government demand led to substantial outsourcing of research and analysis, although the consistency and quality of the research has raised questions whether sufficient rigour and method was taught to enable high quality public policy analysis:

Box 2: Teaching of Public Policy

Two institutions with the kinds of rigorous graduate courses suitable for training high quality graduates at the Getulio Vargas Foundation (FGV) and the School of Government of the Joao Pinheiro Foundation of the State Government of Minas Gerais.

Both institutions have established masters programs in public administration of national standing targeted to training professionals and scholars to advise in the formulation, implementation, monitoring and evaluation of public policies. The authors note common positive features such as a structured curriculum with mandatory courses in research methodology, Brazilian Government organisation or society, public policy analysis, theory of organisations, administrative law, public finance, macroeconomics and micreconomics, and the like.

Other important factors include structured mentoring and tutoring of students, collaborative research, and extensive use of international links. These institutions utilises links with the Harvard Kennedy School, MIT, London School of Economics among others for student exchanges and hire international faculty.

Civil service reform and training have probably supported sound technical expertise in the federal bureaucracy. The federal bureaucracy recruits such competencies through competitive entrance examinations in tax administration, budgeting, control, economic planning, accounting, central banking, social security and legal positions within the Executive. Public sector employment conditions, including tenure and competitive salaries, are also attractive:

Box 3: Civil Service Training

The National School of Public Administration (ENAP) was formed in 1986 under the Public Service Development Centre Foundation (FUNCEP). Its creation was influenced by German and French models. FUNCEP was dissolved in 1990. From 1995, ENAP courses played an integral role in implementing Brazil's civil service reform and professionalisation of civil service managers. ENAP is attached to the Federal Ministry of Planning, Budget and Administration. It has a Masters Program in Public Policy Management and a Masters Program in Planning and Budgetary Procedures initially targeted to the education and training of an 'elite' federal civil servant corps. ENAP is part of a national network of public administration schools in Brazil's states and has extensive links with international schools.

Brazil is one of a small number of developing countries to create specialist technical expertise in support of its legislature:

Box 4: Legislative Technical Advice

In the 1990s, Brazil created a well resourced technical capacity for supporting its parliament in legislative decision making that has been compared with that existing in older democracies in the UK, France and the US. The Congress' Joint Committee on Plans, Public Budgets and Auditing is supported by a Research Office of 35 tenured professionals. In total, the Brazilian Congress has an advisory Legislative Consultancy comprising 245 full time employees, of which 190 offer a range of specialist expertise. Such staff are required to have post graduate qualifications, prior executive experience or have worked for the National Audit Offices, and are selected by competitive exam. Their work includes preparing technical papers and supporting deputies. The Senate has a technical support service of 308 consultants, selected through competitive examination, of which 22 are economists. See Annex C.

This technical capacity is seen as promising for assisting Brazil to institute better budget policy and fiscal reform e.g., Brazil ranks high internationally for budget transparency. Although, criticisms have been levelled at potentially inefficient duplication of expertise in both houses.

Recent developments with Brazil's government thinktank is worth particular note:

Box 5: Government Thinktank

The Institute of Applied Economic Research (IPEA) produces macroeconomic, sectoral and thematic research to inform public policy. IPEA was established in 1968, attached to the Ministry of Planning and Development, to inform government economic policy making. It rapidly acquired a reputation for prolific, high quality research. The institution has weathered political changes, including its researchers being brought under the civil service reforms of the 1980s and some loss of government support for national development planning in the 1990s. Through the 1990s to 2000s management became more independent, but more removed from the policy making process to the extent the institution faced a crisis by 2005. Large IDB donations were acting as research budget, rather than building capacity, question marks appeared over Brazilian ownership of research and relevance to government. Notwithstanding such difficulties, the quality of IPEAs research has mostly maintained its reputation.

Lula's second term brought changes. In June 2007, the Secretariat for Strategic Affairs of the Presidency of the Republic of Brazil (SAE) was created to coordinate long-term national planning, develop national strategic options, oversee government and public coordination of long-term development strategies and support implementation of Federal Government proposals. In August, IPEA was moved to SAE supervision. Earlier that year, IPEA contracted a 20 year US$7 million technical cooperation loan from the Inter-American Development Bank to improve capacity to formulate, monitor and evaluate and recommend public policy with $2 million in counterpart funds.

IPEAs website describes its institutional relationships with other federal agencies, notably the Brazilian Institute of Geography and Statistics, multilateral organisations such as the IADB and bilateral partners. Its status and mandate defined in legislative instruments dating back to 1967. IPEA is often involved in joint research relating to key development issues.

International Forces

Historically, Brazil's institutions have recognised the country cannot train all the workforce or finance all the innovation required for its development. Sectoral funds administered by MCT and CNPq, financing agencies like BNDES and FINEP, support international research partnerships, industry-university research partnerships, post-doctoral fellowships and scholarships for public and private sector. Certain sectoral funds are financed from taxes on the industry e.g., petroleum and energy research. Sao Paulo has the largest budgets and strongest programs for state support.

In higher education, Latin America sends more students to US and European universities, particularly to Spain, Italy and France, than any other developing region in the world. For example, Brazil spent an estimated $US78 million on overseas scholarships in 2000. Brazil also has one of the highest rates of articles published in international scientific journals in Latin America, with the volume doubling from 5,088 in 1995 to 9,511 in 2000.

Brazil uses technical advice, research financing and networks with the World Bank, Interamerican Development Bank (IADB), Economic Commission for Latin America and the Caribbean (ECLAC), UNDP and the Mercosur free trade area. It is even

supporting international development policy research capacity by hosting the International Policy Centre for Inclusive Growth (IPC-IG) in SAE and providing IPEA services. IPC-IG undertakes applied research, south-south cooperation and learning through policy dialogue, training and evaluation in development policy.

Implications for Indonesia

The comparisons between Indonesia and Brazil are evident. Indonesia has joined the ranks of the BRIICS (large emerging economies) comprising Brazil, Russia, India, Indonesia, China and South Africa. These countries are not OECD members, but have enhanced engagement with the OECD. Several features of Brazil's experience are worth bringing to Indonesian attention.

Brazil's knowledge sector has been built on strong educational foundations, with federal, state and private universities being internationally ranked and contributing to internationally cited research.

Brazil's policy links S,T&I objectives to national plans for economic and social development. Policy changes in recent years strengthen government R&D financing to industry and foreign trade objectives. The national policy framework links into state level institutions and resources and the business sector.

The Brazilian government has taken increased heed of domestic industry pressure and OECD scrutiny to focus the outcomes of R&D infrastructure and expenditure on S,T&I. This has meant tying state funded research, scholarships, fellowships, tax incentives among a range of instruments more closely to generating applied research in S,T&I. Social sciences and economics have probably indirectly benefited from the overarching policy climate and framework.

Brazil's knowledge sector landscape is populated with a diversity of types of research centres, thinktanks and universities. Some are specialised in areas that have been major priorities for the nation's development e.g., agricultural sciences, health sciences and medicine and which have been attached to or supervised by ministries.

The Institute of Applied Economic Research has had problems in the past, but the Presidency valued this think tank enough to elevate its position and ensure more resources went into it (see Box 5). This experience may resonate with Indonesians concerned about domestic economic planning.

Different regions of the country, Sao Paulo, Minas Gerais, Campinas etc have universities and research institutions catering to regional priorities and drawing on the strong economic and business sectors there. Brasilia is the seat of government, but not financial capital. Geographic dispersion of institutions will be noted by Indonesia which faces substantial intra-regional disparities in facilities and services.

Brazil has private, profit making consultancies, due to the high concentration of domestic and international banking and financial services in Brazil. Intuitively, Indonesia may have less room to spawn profit making consultancies given strong, existing banking and financial centres in South East and East Asian neighbours.

By contrast, Brazil's proliferation of CSOs operating on a non-profit basis may look familiar to Indonesia. McGann (Foreign Policy Institute Global Think Tanks Project) expressed concern that Brazilian attempts to limit tax benefits to non-profits could have a negative impact on this sector.

Indonesia may be particularly interested in Brazil's efforts to build technical capacity to support implementation of public sector management, civil service leadership and legislative functions.

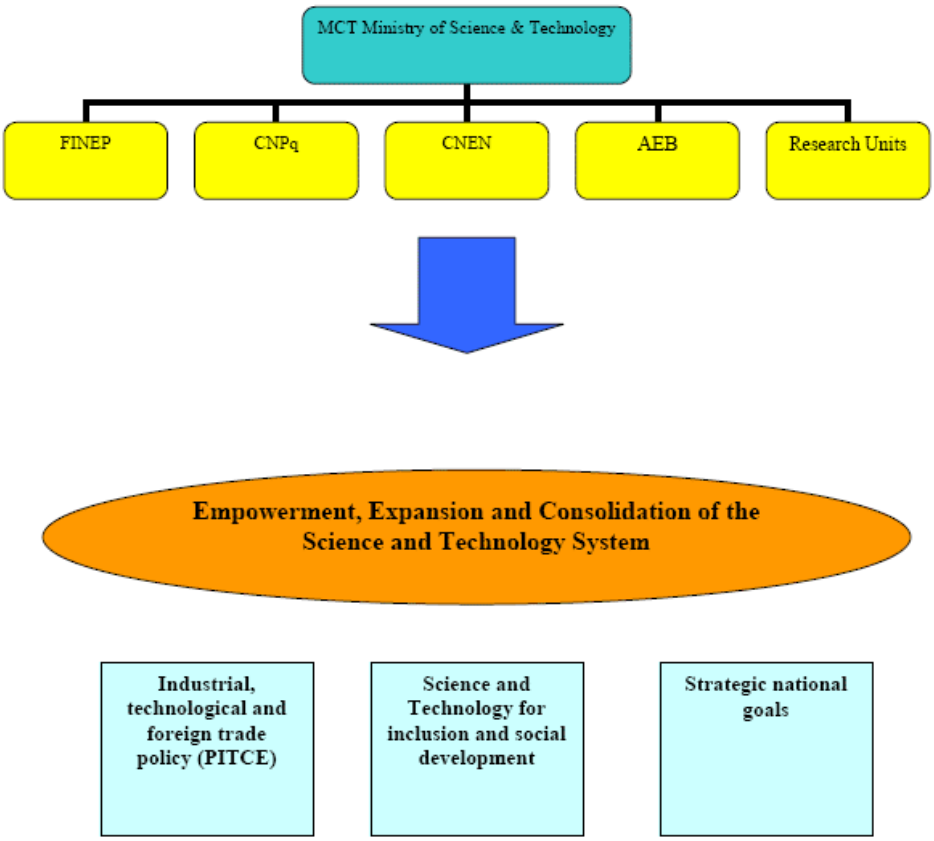
It is interesting to note the study suggesting improvements to national and international publishing of economic studies as a result of private institutions introducing more competitiveness (against public universities) in the form of higher salaries, job mobility and pecuniary rewards for publishing.

Brazil created the Coordinating Agency for Graduate Education (CAPES), within the Ministry of Economic, as a specific agency to raise the quality of post-graduate studies. CAPES and CNPq also operate incentives such as grants for research, travel and study abroad for research re-use and networking and international publishing. Indonesia appears to see foreign post-graduate degrees as better and may be interested to learn whether Brazil's approach to lift the quality of domestic post-graduate degrees has been successful.

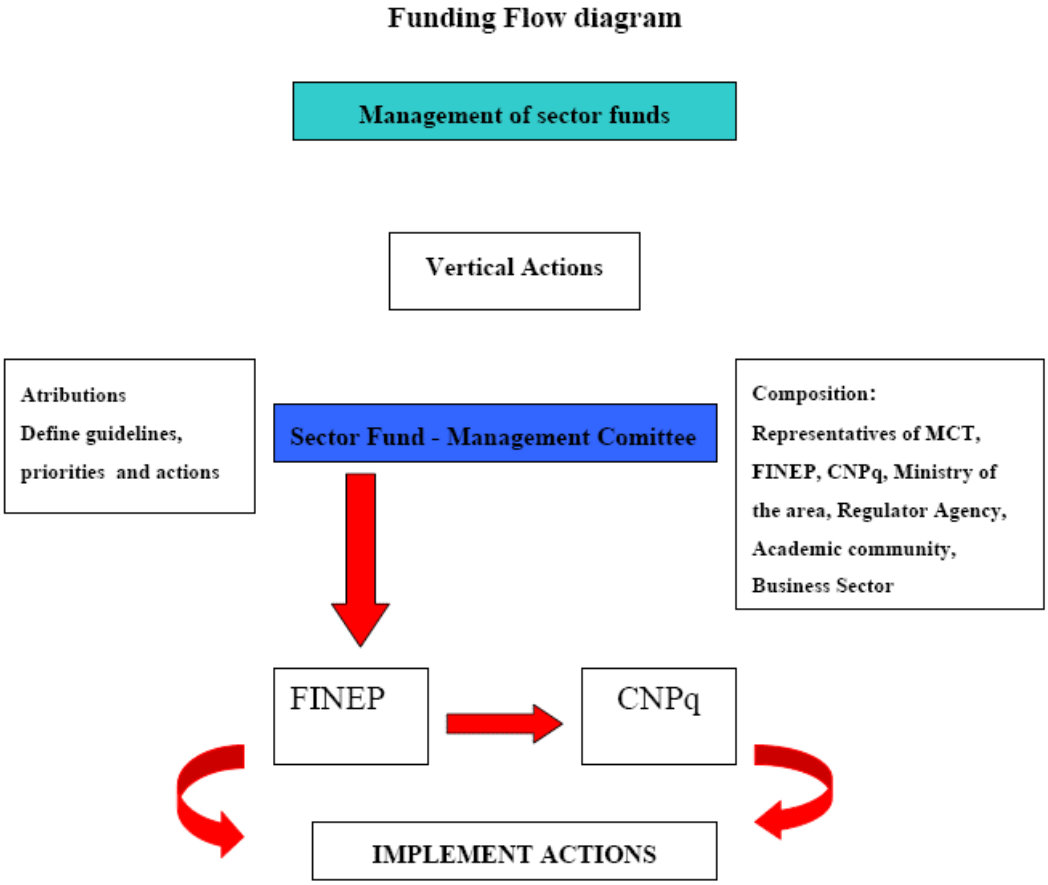
Brazil's evolution towards south-south cooperation on development policy signals some success in exporting its growing capabilities. Moreover, it is a sign of how well Brazil's institutions are able to network with regional and international bodies to extend opportunities for development research of international relevance.

Annex B – Overview of Structure (taken from Botelho Erawatch p47)

Structure of Research System - Organogram



Annex C: Overview of Funding Flows (taken from Botelho, Erawatch).



Annex C: Number of Full time Technical Staff by Area of Expertise in the Brazilian Congress (lower house) 2006

Area	Name of Area	No. Analysts
I	Constitutional Law, Electoral, Municipal, Administrative, Legislative Process and Judiciary	17
II	Civil Law and Procedural Law, Penal and Procedural Penal, Family, Author, Successions, Private International	11
III	Tributary Law, Taxation	10
IV	Public Finance	5
V	Labour Law and Procedural Labour	11
VI	Agrarian Law and Land Policy	4
VII	Financial System, Commercial Law, Economic, Consumer Rights	10
VIII	Public Administration	10
IX	Politics and Economic Planning, Economic Development, International Economics	8
X	Agricultural and Rural Politics	7
XI	Environment and Environmental Law, Territorial Organisation, Urban and Regional Development	8
XII	Mineral, Hydro and Energy Resources	6
XIII	Urban Development, Traffic and Transportation	7
XIV	Social Communication, Information, Telecommunications, Postal System, Science and Technology	6
XV	Education, Culture, Sports, Science and Technology	10
XVI	Public Health, Sanitation	6
XVII	Security and National Defence	5
XVIII	International Public Law, International Relations	4
XIX	Political Science, Sociological Science, History and International Relations	7
XX	Writing and Parliamentary Speech	15
XXI	Social Security and Social Security Law	7

Source: Taken from Santiso and Whitehead Table 1 p52.

Annex D: IPEA Organisational Structure & Areas of Expertise

Areas of Research

Agriculture, Agricultural and Agrarian Politics
Foreign commerce and External Investment
National and Regional Accounting
Management, Dissemination and Evaluation of the Program
Demography, Labour Market and Employment Work
Macroeconomic Modelling and Analysis
Education, Poverty and Inequality
Statistical and Quantitative Methods
Urban and Regional Studies
Public Finances and Financial Policy
Infrastructure, Privatisation and Models for Regulatory Economics
Environment, Geography and Sustainable Development
Public Policy and Planning
Quality, Productivity and Industrial Modernisation
Social Security and Health
Information and Communication Technologies
Tax Reform and Revenues
Reduction of Costs to Investment and Financial Intermediation
Exporting and Competitive Import Substitution
Technological qualification and Innovation
Reduction of the Social and Regional Inaqualities.

Mexico's Knowledge Sector Landscape

Several features of Mexico's circumstances and experience resemble Indonesia's. Mexico has vast territory, natural endowments of minerals, fossil fuels, arable land and labour. Its population of 105 million is ethnically and linguistically diverse. Until the financial crisis of the 1980s, it pursued an inward economic and import substitution trade policy. A technocratic leadership introduced economic and trade reforms that have integrated Mexico into the global economy. In 1986, Mexico acceded to the GATT. In 1994, it acceded to the North American Free Trade Agreement and joined the OECD. In 2000, popular elections elected Vicente Fox as President, ending 72 years of one party government (Table Annex A general features).

In the last half century, Mexico has been transformed from an impoverished country to an upper middle income country and the world's 13th largest economy. Mexico's levels of gross income, economic activity in manufacturing and services and human development index point to higher levels of development than Indonesia (Table 1). Yet, it still faces similar problems to Indonesia of heavy (fiscal) reliance on oil revenues and high poverty levels. On the positive side, Mexico's poverty alleviation programs are internationally studied and replicated.

Table 1: Economic Indicators

Indicator	**Mexico**	**Indonesia**
Economic Group	Upper Middle Income	Lower Middle Income
GNI $US billion	878	373.1
GNI per capita $US	8,340	1,650
Agriculture % GDP	3.6	13.8

Industry % GDP	25.3	46.7
Services % GDP	71.1	39.4
Human Development Index (HDI)	0.829	0.728
HDI rank	52	107
% population below national poverty line	18	17

Sources: World Bank, OECD and UNDP Statistics, CIA Factbook,

History of State Support to Higher Education and Research

Mexico's education and research sector have been state supported and endorsed for over 80 years. Presidents approved state resources for conducting seminal research projects into Mexico's pre-Columbian archeology, history and anthropology, which research assisted nation building and reinforced the legitimacy of their administrations. State funding boosted the number of institutions of higher learning and built human capacity in education, training and research.

Mexico's best known institutions emerged from the 1930s, including the National Autonomous University of Mexico, Economic Culture Foundation, National Institute for Anthropology and History and el Colegio de Mexico. By the 1960s, Mexican social scientists began to turn their attention to development issues, studying the effects of political power, social inequity and poverty. By 1970, research was becoming a professional occupation. A crucial development was institutionalisation of the state's role in promoting science and technology, research and development through an act of Congress that created the National Council for Science and Technology:

Box 1: National Council for Science and Technology

The National Council for Science and Technology (CONACYT) is Mexico's chief public institution for promoting and supporting scientific and technological activities. CONACYT was established in 1974 to promote education scholarships, but its role has expanded with changes in national policy such that it now administers an extensive system of Public Research Centres, administers various kinds of funds for research and research institutions, administers scholarships and a national system of additional incentives to Mexico's most productive researchers.

Some key features of Mexico's national system for science and technology are:

-a national vision which coordinates resources to promote education, research and training and the application of these to Mexican social and economic development;

-a specific line in the federal budget;

- decentralised support e.g., PRCs located throughout the country and mixed funds for use in promoting research aligned to regional development needs;

-support to human capacity for business, higher education institutions and government at the national and decentralised levels;

-promotion of inter-sectoral, national,and international linkages e.g, bilateral agreements with Latin America, US and Europe and international scholarships;

-domestic and international evaluation of performance by the Council for Evaluation of Social Development Programs, reporting to the OECD and UNESCO;

- programs to evaluate, acknowledge and reward high performing researchers e.g., through the National Researcher System (see section on labour force below0;

-comprehensive statistics and reporting.

Regulatory Environment

Mexico's regulatory framework for science and technology (S&T), research and development (R&D) is comprehensive. In short, Mexico has sought to respond to criticism the system promoted more basic, than relevant research. And, while the system was costly, it was not producing enough research or S&T graduates who could contribute to an economy increasingly exposed to competition from innovative countries like China and Brazil (Table 2).

In the last decade, the government has strengthened laws and policies to free up the responsiveness of Mexico's S&T research institutions to domestic and international market forces e.g., garner higher industry participation in the conduct and financing of research, increase the number of S&T graduates, and encourage more international research partnerships and financing. Some key reforms include:

- the Science and Technology Bill (LCyT) of 2002 which, inter alia, strengthens linkages between science and technology research, education and public institutions of higher learning;

- the CONACYT Organic Law of 2002 which aligns the operation of this agency to LCyT objectives and elevates it to report to the President;

- restructuring of the CONACYT Public Research Centres to reorient them to market forces i.e., introduction of tax incentives for industry based research, incentives for higher education and research institutions to form more international links to support scholarships and joint research and development;

- the Special Science and Technology Program (PeCyT) 2001 to 2006 which introduced new instruments e.g., sectoral funds and sought to increase post-graduate trained researchers[4];

Over the same period, the Fox administration continued with public anti-corruption initiatives begun in the late 1990s. Some changes were motivated to protect and attract foreign investment, meet Mexico's international treaty obligations, and deliver on the administration's electoral promises. They also had potentially positive ramifications for independent analyses and public debate of economic and social development issues. Some notable changes were the:

- Federal Law on Transparency and Access to Public Government Information of 2002;

- creation of the Federal Institute for Access to Public Information in 2002;

[4] From1998 to 2005, the government initiated a USD662.9 million Knowledge and Innovation Project to assist Mexican private enterprise and higher education institutions to create and apply knowledge to support economic and social development. USD300 million of this was World Bank loan. While the dates for the program slightly precede the policy changes noted here, the two developments appear related.

- strengthening of the Law on the Federal Budget on transparency, accountability and performance evaluation;
- strengthened government audit through a reorganised Auditor General's Office;
- the Law on Budget and Fiscal Responsibility of 2006.

State Support to Research & Researchers

Table 2: Research and Researchers

Indicator	Mexico	Indonesia
Gross Expenditure on R & D % GDP (GERD)	0.53	0.05
Researchers per million population[1]	464	205
Total researchers nationally	48,401	42,722
Business enterprise researchers	24,367	253
Higher education researchers	16,691	26,138
Government researchers	6,589	5,738

Sources: UNESCO Institute for Statistics, CONACYT.

As Table 2 indicates, in some respects Mexico is ahead of Indonesia in terms of gross R&D output and number of researchers employed by enterprise. However, Mexico recognises that its performance is under par i.e., while its GERD has risen over the long term, it remains below the OECD average of 1 percent. Mexico has targeted raising its GERD to 2.25 percent of GDP by 2012.

Mexico's science and technology (S&T) budget is shared across different federal government agencies reflecting the application of R&D to various areas of public interest i.e., the economy, energy, health, social security etc. In 2008, the government's S&T budget exceeded $US 3 billion. In 2006, the two largest items in this budget were public education (public universities and institutes of technology) and CONACYT. Over half of this total was described as serving the socio-economic objective of 'general advancement of knowledge'.

Table 3 depicts elements of the CONACYT system which are not comparable to Indonesia. In 2008, CONACYTs budget was around $US 1 billion, 40 percent of which went to the Public Research Centres (PRCs). CONACYT supported over 2,500 pieces of peer reviewed research of which 75 percent were published by PRCs.

Table 2: CONACYT System

Item	No. or Value
Federal Expenditure S&T MXN pesos millions	40,952
Federal Budget CONACYT MXN pesos millions	13,652
Federal Budget CONACYT PRCs MXN pesos millions	5,361
Researchers registered SNI 2008	14,681
No. Female SNI researchers	4,805
No. SNI researchers in PRCs	1,337
Expenditure SNI system 2008 MXN pesos million	1,990

CONACYT scholarships national 2008	26,918
CONACYT scholarships international 2007	2,398
No. articles published by PRCs 2008	1,978

Sources: CONACYT

Special Incentives to Researchers

The National Researcher System (SNI) was introduced in 1984 to overcome problems in retaining highly trained researchers in the sector. Of Mexico's entire researcher workforce (Table 2), about 30 percent are registered with the SNI. In turn, the PRCs employ 9 percent of this subset of the workforce. Since SNI researchers are considered the best qualified and most productive.

SNI rewards researchers who consistently produce high quality research. SNI researchers are categorised as Candidates or National Researchers I, II and III. Level III includes a sub-category of Emeritus National Researchers. To qualify for SNI registration, researchers must meet periodic evaluations conducted by CONACYT. SNI registration is open to all researchers in the country, whether employed in public or private research institutions or universities. The fiscal incentives range from $US800 to $US1300 per month added to base salaries.

Mexico claims the SNI has been effective in raising research output and quality. For instance, in 2003, SNI researchers accounted for about 85 percent of Mexican international peer reviewed publications in the ISI Thompson Web of Science database. The scheme has led to substantial growth in the numbers of registrants i.e., the number of SNI researchers has grown by 11 percent annually from 1984 to over 14,000 in 2008. Universities and thinktanks highlight SNI researchers to signify the quality of their research centres and faculty. But, questions exist about cost effectiveness and performance measurement (see Monitoring & Evaluation below).

CONACYT collects gender disaggregated data. Less than half of SNI researchers are women, which is better than 21 percent in 1991. But, Mexico has recognised its weakness and aims to achieve gender equity in CONACYT programs.

State Support

As illustrated in Box 2, despite the different status of Mexico's thinktanks most have been state sheltered to some extent. PRCs like CIDE receive CONACYT budget. But independent institutions, like COLMEX, can benefit from CONACYT funds or grants, employment of CONACYT scholarship recipients or SNI registered researchers and work commissioned by government agencies too:

Box 2: Public Institutions of Higher Education & Research

El Colegio de Mexico (COLMEX) is one of Mexico's most prestigious universities, established in 1940 under President Lazaro Cardenas. COLMEX is well known for its research into economics and public policy. For example, COLMEX led demographic studies on the introduction of birth control in the 1960s which influenced the government to introduce Mexico's first population policy in 1974. Mexico's population policy helped reduced birthrates by 50 percent as well as link family planning to social development. COLMEX studies on urban growth also led to the adoption of a national urban development policy.

Continuing in this vein, in 2002 COLMEX partnered with Mexico's Secretariat of Energy, National Commission on Energy Conservation, and the US Center for Clean Air Policy to conduct multistakeholder dialogue with NGOs, academia and industry to design renewable energy options for Mexico (under NAFTA). The dialogue was funded by a grant from the Global Environment Fund.

COLMEX has an endowment fund. Its academic and research independence is protected by law.

The Centre for Economic Research and Education (CIDE) specialises in: public administration; economics; international relations; law; politics and history. Its research aims to increase the quantity and quality of information available to citizens and promote public debate. CIDE is a PRC.

CIDE prides itself on academically rigorous research published in leading refereed international journals. Its faculty are composed of Mexican, US, Latin American and European staff selected according to competitive performance standards. 57 of its faculty hold PhDs and 50 of these are SNI members. Faculty participate in international networks and CIDE regularly receives academics visitors from major foreign universities.

CIDE has a Liaison and Development Office to promote, undertake and administer innovative academic projects to improve public policy on issues of national development. Such issues include indigenous voting behaviour, natural gas pricing schemes, public service reform, performance assessments of public bodies, regulatory frameworks for telecommunications markets, and evaluation of Mexican living standards. It has developed databases that provide systematic information on living standards, public opinion and foreign policy.

CIDE also has sponsorship from international foundations to develop and coordinate the annual Award for Local Government and Management to disseminate cases of best practice and published public education brochures on Mexico's budget and public expenditure programs.

Changing Government Demand

Under the PRI, administrations had the power to formulate highly centrist economic policy and use trusted institutions to undertake their research. There was limited need for government or bureaucracy to engage with dissenting views. In the wake of the financial crisis in the late 1980s, for example, Mexico's leadership appointed well educated, experienced and connected economic technocrats to steer Mexico through fundamental economic and trade reforms. These figures had access to sound technical advice from multilateral institutions, banks, financial institutions and Mexican economic thinktanks to serve the leadership's priorities. Moreover, they were in a good position to ignore opposition because civil society was weak and fragmented. On particularly politically sensitive issues, like adjustment of Mexico's agricultural sector to NAFTA entry, USAID financed dialogue with civil society, research and countermeasures to help soften the blow.

On the other hand, Mexican leaders could not afford to ignore public interest in poverty alleviation, because much of the population has been affected by poverty. Mexico has leading experience in implementing poverty alleviation programs. Due to the socialist orientation of the PRI, it has suited the administration's political ends to put these programs high on the election platform. Early versions of such programs were susceptible to pork barrel. But growth in transparency of decision making and a

broad based societal interest in seeing these programs targeted to the poor has militated for the introduction of objective measures and mandatory evaluation to reduce misappropriation of funds:

Box 3: Poverty Alleviation Programs

Mexico has many poverty alleviation programs, those known internationally include *Oportunidades* (Opportunities) and *Seguro Popular* (Popular Health Insurance).

Oportunidades was introduced in 1997 (as Progresa). This program is designed to reduce extreme poverty among 25 million Mexicans, by providing cash transfers to incentivise access to basic education, health and nutrition[5]. Mexican and Latin American experience with conditional cash transfers is influential in international development circles, including in Indonesia[6].

But as Mexico's democracy has progressed, mechanisms have been introduced that have made such large federally funded programs more open to public view. Progresa was intensely studied by the International Food Policy Research Institute. After the 2000 elections, evaluation of the program was shifted to academic institutions like CIDE and made publicly accessible on a government website. The program was renamed *Oportunidades* in 2002.

From 2002, important changes were made to assist public oversight of the poverty orientation of *Oportunidades* i.e., definition of an official poverty measure; mandator evaluation of all federal social policy programs, dissemination of public information on program operation rules, budgets and outcomes, clarification of formulas for distribution, means testing and targeting of beneficiaries[7]. *Oportunidades* is one of about half of Mexican social programs which are progressive in impact.

Seguro Popular was introduced in 2003 to provide universal health care to 50 million Mexicans. This program has been judged highly successful and is much studied in international development circles. A joint US-Mexican health research team even suggested the model could be applied in the US. Mexico's Minister for Health, Julio Frenk, has published articles underlining that Mexico's health policy makers used evidence based research to implement the program[8].

Government Demand & Independent Advice

72 years of PRI government, and a political machinery with tentacles into all aspects of Mexican life, did not leave much room for critical views. Limited demand may account for Mexico's relatively small number of independent think tanks compared to the rest of the Americas. The situation has been changing, although it would be simplistic to attribute the increased visibility of Mexico's independent thinktanks to the advent of democratic government alone. More likely, several factors were involved: democratic regime, freer media and foreign donors wanting to fund civil society advocacy when the time was right. The strengthened regulatory environment might also have helped.

[5] www.presidencia.gob.mx 'Programa Oportunidades' Martes 8 de Abril de 2008.
[6] Son, H. H. (2008) 'Conditional Cash Transfer Programs: an effective tool for poverty alleviation?' ADB ERD Policy Brief No. 51.
[7] Yarahuan (2007)
[8] Frenk, J., (2006) 'Bridging the divide: global lessons from evidence-based health policy in Mexico' The Lancet 368(9539):954-962, p955.

For instance, new independent thinktanks like the Fundar Centre for Analysis and Research (created in 1999) rode a wave of interest in budget transparency in 2000. CIDEs analysis of Mexico's budgets identified lack of transparency as a key obstacle to proper social development spending. From 2002 to 2003, Fundar successfully exposed misappropriation by the Department of Health of USD19 million to an anti-abortion organisation, which funds had been earmarked for HIV/AIDS programs. Fundar's research relied on data gathered under the revised public information laws. An effective, targeted media campaign drew on the technical advice of the CSO Communication and Information for Women. Fundar is part of the International Budget Partnership and relies on several foreign foundations.

While independent thinktanks appear on Mexico's landscape, it is unlikely they will supersede the universities and research centres since, by outward indications, the demand is strong. CONACYT alone administers five kinds of funds geared to the research needs of federal, state and municipal governments. The sectoral funds, for example, are formed jointly between 16 federal government ministries and agencies and CONACYT. Research tenders are advertised running the gamut of 'development' issues across health, agriculture, energy, women's participation etc depending on the agency. Public and private universities, research centres, enterprises and non-profit thinktanks can put forward proposals against the specified criteria. A smattering of non-profit thinktanks are obtaining grants as well.

Monitoring & Evaluation

Mexico's LCyT enhanced the transparency and accountabilty of S&T policy by mandating performance evaluation of CONACYT administered programs. Similarly, the Mexican government created the National Council for Evaluation of Social Policy (CONEVAL) in 2006 to improve external evaluation of all federal government social programs. CONEVAL evaluates programs administered by the Ministry for Social Development (SEDESOL) and CONACYT. For example, CONEVAL evaluated CONACYTs administration of the SNI in 2008 and is critical of several flaws that do not permit measurement of the program's performance against its objectives.

Private sector and academic organisations also conduct external evaluations e.g., in 2004 and 2005, of over 100 programs with direct subsidies and transfers, more than 60 percent presented external program evaluations to Congress[9]. As noted in the section dealing with independent thinktanks, Mexico has made legislative and institutional changes strengthening oversight of the budget process.

International Networks

Mexican institutions appears to have an aptitude for tapping into foreign support. There's no one answer to how they manage to achieve this, but various factors are likely to put Mexican institutions in a good position to do so.

Mexico's foreign networks have a long history. For much of the 20th Century, Mexico's political stability made it the home for intellectuals fleeing repressive regimes in Argentina, Chile, Uruguay and Spain e.g., Colegio de Mexico took in

[9] Yarahuan p9.

exiles fleeing the Franco regime. Mexicans helped found regional institutions like the Latin American Faculty of Social Sciences.

At a foreign policy level, Mexico has been active in regional and international fora[10]. In fact, its geographic location sandwiched between the US, Central and South America, its resource wealth and battles over territory would argue for the country to develop a strong capacity to manage external relations. US-Mexico research focuses on issues of abiding interest like migration, labour movement and water sharing. Mexico's entry into NAFTA boosted the appetite for trade and investment research. Mexico also benefits from regional and international institutions i.e., the Inter-American Development Bank (IDB), Organisation of American States, UN Economic Commission for Latin America and the Caribbean, the World Bank, UNESCO, OECD[11] and UNDP. Many of these relationships entail research grants, cross country research project financing and research networks.

Mexico uses its foreign policy capacity to straddle the north-south divide and promote discussion of international development e.g., it hosted the 17th International Aids Conference in 2008, Doha Development Round WTO 5th Ministerial Conference in 2003, and UN Financing for Development Conference in 2001.

Mexican universities and thinktanks have deep and strong affiliations with counterpart organisations in the US and Europe that support student and academic exchanges and joint research e.g., the Kennedy School Center for International Development, Harvard University and Institute for Technology and Higher Education of Monterrey collaborate on post-graduate public policy and administrative studies.

CONACYT has various mechanisms promoting internationalisation of S&T including working with the Ministry of Foreign Affairs to promote international cooperation, international post-graduate scholarships and international cooperation funds (of which there is one with the European Union).

Many thinktanks cite foreign donors. Non-profits such as the Centre for Development, Fundar, Ethos Foundation depend on research support from the Ford Foundation, Friedrich Naumann Foundation, William and Flora Hewlett Foundation, Konrad Adenauer Foundation, Tinker Foundation and the like. Although, it should be noted these foundations do not limit their support to the non-profit sector in Mexico.

Conclusions & Implications for Indonesia

Key features of Mexico's landscape worth Indonesian attention include:

Mexico's administration of a coherent and extensive state framework for linking higher education institutions, academic research, R&D in S,T&I to social and economic development. Mexico does not have an overarching 'national development planning' mechanism, nor has it set up an exclusive thinktank for such policy. Instead, its policy and regulatory framework ***includes*** many suppliers of knowledge.

Mexico's university sector has taken many decades to build, a number of its institutions have international profiles for education and academic research. Its state

[11] The current Secretary General of the OECD Jose Angel Gurria is a highly regarded Mexican economist and diplomat

apparatus has a ‘habit’ of tapping into evidence produced in Mexican universities and research centres. Part of that habit is based on a strong sense of pride in those institutions. Part of the habit may be encouraged by high quality Mexican leaders facing no barriers in moving between different spheres i.e., government, business and academic e.g., Box 3 and the formation of a technocratic economic team to lead the country out of a financial crisis in the 1980s.

Mexico’s systems for distributing state largesse to support research activity is deconcentrated. The sectoral funds give government agencies say over research priorities. CONACYT administers the funds on behalf of agency or industry counterparts centrally, but the terms, conditions and beneficiaries are decentralised. Its administration is made transparent through external CONEVAL evaluation and clear guidelines, proposed research and recipients are available on the internet.

Research is a valued activity. PRCs are directly state funded, but even these operate autonomously and conduct research with a range of domestic and international partners. CIDE is often partnered in development research with UNDP, World Bank, IADB etc. Other institutions conduct joint research with NAFTA, ECLAC etc. Government agencies even contribute to research eg., CONACYT and the Post-Graduate School of the Ministry of Agriculture (SAGARPA) are listed among the top 2000 research institutions worldwide (see SCImago Table in Synthesis).

Mexico has given importance to human capacity to research, mentor and publish through a range of CONACYT research funds, grants, scholarships (see Box 1).

Many bilateral and multilateral organisations, foreign foundations, international partnerships and research networks. CONACYT supports international agreements, but universities individually pursue such links.

The economy is vibrant enough to support an economic development thinktank to which a domestic banking corporation provided funds see Annex A CIDAC.

Mexico’s institutions have collaborated to design and implement internationally renowned anti-poverty programs pointing to substantial Mexican capacity for applied development research (Box 3).

A study tour is highly recommended (see Annex B list).

Annex A: Table of General Indicators

Indicator	Mexico
Population millions	106.7*
Population growth ave. %	1.3*
Land area thousands km2	1964.4*
Indigenous/ethnic populations millions	12.7
No. languages spoken	62
Literacy rate 15-24 yo %	98.2
Tertiary enrollment %	27[2]
Public expenditure on education % GDP	5.5[2]
Political Systems	
Government Description°	federal republic, multiparty democracy
Key Offices of Government°	President, bicameral national congress
Administrative Divisions°	32

Sources: World Bank List of Economies July 2009; UNESCO Indonesia-UNESCO country Programming Document 2008-2011; UNDP 2008 Statistical Update; OECD Statistics; CIA World Factbook; OECD Economic Survey Mexico 2009

Annex A: Glossary of Acronyms

CECAVI	Centre for Studies on Quality of Life and Social Development
CEE	Centre for Strategic Studies
CEFP	Centre for Public Finance Studies
CIDAC	Centre for Development Research
CIDE	Centre for Economic Research and Education
CIDA	Canadian Agency for International Development
CIE	Centre for Economic Research
COLMEX	School of Mexico
CONACYT	National Council for Science and Technology
CONEVAL	National Council for Social Policy Evaluation
ECLAC	Economic Commission for Latin America and the Caribbean (UN)
FCE	Economic Culture Foundation
FLACSO	Latin American Faculty of Social Sciences (Chile).
GATT	General Agreement on Tariffs and Trade
GERD	Gross Expenditure on Research and Development
HDI	Human Development Index
IIEc	Institute of Economic Research
IMF	International Monetary Fund
INMUJERES	National Institute for Women
ITAM	Autonomous Institute of Technology Mexico
ITESM	Institute of Technology and Higher Education of Monterrey
NAFTA	North American Free Trade Agreement
OAS	Organisation of American States
OECD	Organisation of Economic Cooperation and Development
SALUD	Ministry of Health
SEDESOL	Ministry of Social Development
SEGOB	Ministry of Interior (or Government)
SEP	Ministry of Public Education
SNI	National System of Researchers
UDLAP	University of the Americas Puebla
UNAM	National Autonomous University of Mexico
UNDP	United Nations Development Program
UNESCO	United Nations Education, Science and Culture Organisation
USAID	United States Agency for International Development
WB	World Bank

Annex B: Government Agencies, Institutions of Higher Education, Research Centres & Think Tanks

Institution	Focus	Comments
Federal Government Agency		
National Council for Science and Technology - Consejo Nacional de Ciencias y Tecnologia (CONACYT)	As per Box 1	Overview of programs, funds, scholarships, public research centres etc.
Ministry of Interior – Secretaria de Gobernacion (SEGOB)	Government policy coordination role. Mexico's National Development Plan 2007-12.	Overview of coordination between SEGOB and other agencies on issues of high policy priority and how these relate to the National Development Plan.
Ministry of Social Development – Secretaria de Desarrollo Social (SEDESOL).	Social development policy and programs.	Overview of SEDESOLs role, and relationship to research on social development policy inc. what is disseminated by its Publications and Research unit. Administration of *Oportunidades* program see Box 3.
National Institute for Women – Instituto Nacional de las Mujeres (INMUJERES).	Gender equity in public policy, administration, including actions to reduce violence against women, indigenous women's rights etc.	Overview of 'National Program of Equality between Women and Men' which cuts across all agencies' work and is included in Mexico's National Development Plan. The National System for Equality between Genders to provide equal opportunity in all areas of federal, state and municipal public administration. How does it procure research to support government gender and development priorities.
Ministry of Health – Secretaria de Salud (SALUD)	National health policy and programs.	Overview of SALUDs role and relationship on health policy and programs. Administration of the Nationa System for Social Protection in Health *Seguro Popular* program see Box 3..
Ministry of Education – Secretaria de Educacion (SEP)	National education policy and programs..	Accreditation of tertiary institutions. Role in procuring research for education policy implementation and evaluation.
National Council for Evaluation of Social Development Policy – Consejo Nacional de Evaluacion de la Politica Desarrollo Social (CONEVAL).	Parastate agency which has objective to improve the efficiency, effectiveness and budgetary performance of social development policy by evaluating and monitoring social programs and policies and poverty measurement.	Overview of role in evaluating Federal government social development policies and programs including CONACYT. CONEVAL draws on expertise of six academics appointed for four year terms. In 2007 World Bank was contracted to study and make recommendations on features and criteria used by

				CONEVAL which appears linked into similar units in IBD, World Bank, IMF, UN, ECLAC and OECD.	
Research Centre or Think Tanks Partly Public Supported					
Institution	**Founded**	**Research Unit**	**Focus**	**Status**	**Comments**
School of Mexico - El Colegio de Mexico (COLMEX)	1940	Center for Economic Studies (CEE)*	*COLMEX has 6 study centres. In addition to CEE are centres for history; linguistics and literature, international studies, demographic, urban and environmental, sociology; and Asian and African studies.	Public institution of higher education.	Extensive library; prestigious journals; impressive ex-alumni; links to Yale University, Whittney and Betty MacMillan Centrer for International and Area Studies 'Fox International Fellowships'.
Centro de Investigacion y Docencia Economica – Centre for Economic Research and Education (CIDE)	1974	-	economics, public administration, international studies, political sutides, legal studies and history.	Public Research Centre (CONACYT)	See Box 2.
Mexico National Autonomous University – Universidad Nacional Autonoma de Mexico (UNAM)	1940	Institute of Economic Research (IIEc) ind. 1968.	many areas of macro and microeconomic research.	Public university.	Relationship in providing policy analysis and advice to government etc.
Mexican Autonomous Institute of Technology - Instituto Tecnológico Autónomo de México (ITAM)	1946	Centre for Economic Research (CIE)* est. 1993.	*ITAM has 13 research centres, apart from CIE: on economic analysis and research; technology development; applied economics and public policy; applied statistics; competitiveness; private and public law; inter-american studies and programs; socio-economic assessment of programs; international	Private university.	CIE aims to become a leading international research center with links to international scientific community.

			centre for pension research; and alternative justice. It also has 5 business centres.		
Institute of Technology and Higher Education of Monterrey – Instituto Tecnologico y de Estudios Superiores de Monterrey (ITESM)	1943	Centre for Strategic Studies (CEE)	CEE is a network of professors, researchers and consultants which generates research into various areas of public policy.	Private university.	CEE operations and Kennedy School – ITESM Linkage for Public Policy Education.
University of the Americas, Puebla – Universidad de las Americas Puebla (UDLAP)	1940	Center of Studies on Quality of Life and Social Development (CECAVI)	quality of life, education, psychology, communication, economics, sociology and anthropology	Private university.	Research projects funded by EC, Ford Foundation, Children's Fund Mexico, and CONACYT
Centro de Investigación para el Desarrollo en Mexico – Centre for Development Research in Mexico (CIDAC)	1984	-	democratic and economic development; human rights and democracy; economy; social development; Mexico-US relations.	Independent thinktank established from the Institute of Bank and Finance (IBAFIN). It has a trust established with a grant from major banking corporation BANAMEX. Enjoys grants from Ford Foundation, Friedrich Naumann Foundation, William and Flora Hewlett Foundation, IDB among other international foundations and private corporations.	Projects, publications and funding model and governing board comprising well known members of academia, business community and public officials.
Centro de Analisis e Investigacion (FUNDAR) – Centre for Research and Analysis FUNDAR	2003	-	monitoring public policy through applied research, critical scrutiny and linkages with civil society	Independent thinktank.	Donors include Ford Foundation, Hewlett Foundation among others, has received funds for

			actors; citizens participation, government and budgetary transparency, rule of law, sustainable equity and human rights.		joint work with SEDESOL and partnered with International Budget Partnership.
Gender Equity: Citizenship, Labor and Family – Equidad de Genero, Ciudadania, Trabajo y Familia	1999	-	sexual and reproductive rights; legal abortion; specialisation in analysis of gender equity and public financing issues including Federal budget and revenue policy impacts.	Civil society organisation/NGO advocacy.	Included in the International Budget Partnership; has collaborated with FUNDAR on study of Mexican public finances; has collaborated with INMUJERES.
Legislative Advisory					
Centre for Public Finance Studies of the Chamber of Deputies – Centro de Estudios de Finanzas Publicas (CEFP)	1998	-	Assists legislative work by providing objective, impartial and timely technical assistance and analytical infomration on Public Finances as required by Legislators in the Chamber. It also provides technical assistance to the Commissions of Congress of the Union with budgetary impact studies of budget initiatives.	Legislative advisers.	Mexico's Chamber of Deputies is supported by six 'Study Centres' including CEFP: Law and Parliamentary; Social and Public Opinion; Advancement of Women and Gender Equity; Sustainable Rural Development and Food Sovereignty; and Research and Analysis services.

The Philippines: Institutional Landscape

The Philippines and Indonesia share such characteristics as similar ethnic, cultural and linguistic heritage, archipelagic geography, large populations, European colonial rule and post-colonial military dictatorships (see Annex A). Until the 1960s, the Philippines was a development leader in Southeast Asia. The Philippines main

comparative advantages today includes widespread English language ability and relatively high levels of tertiary educated workforce. Its main disadvantage has been an inability to maintain consistent levels of economic growth, leaving it with high levels of poverty and inequitable wealth distribution, although it fares better in terms of human development and gender equity (Table 1)

Table 1: General & Economic Indicators		
Indicator	**Philippines**	**Indonesia**
Total population millions	88	240
GDP $US billion PPP (2009 est.)	318.2	914.6
GDP per capita $US (2008 est.)	3,300	3,900
agriculture % GDP	14.7	14.4
industry % GDP	31.6	48.1
services % GDP	53.7	37.5
Human Development Index (HDI)	0.751	0.734
HDI rank	105	111
% population below poverty line*	30	17.8

Sources: CIA Factbook, UNDP *Philippine poverty estimate 2003, Indonesia 2006.

Prior to 1986, government primarily sourced development policy research and analysis from institutions established by the state. Democratisation opened policy making processes to universities, civil society, political parties and independent thinktanks. The supply of knowledge has grown and diversified, but uneven quality and maintenance of human capacity and funding shortfalls are problems.

Universities & Education

The Philippines' tertiary sector has never enjoyed high levels of public funding compared to primary and secondary education. Conversely, private sector service provision and financing has been encouraged since WW2. The high demand for, and supply of, higher education has helped the Philippines achieve a high proportion of tertiary educated workers (Table 2). Over 30 percent of its workforce have a tertiary qualification, which compares well to levels in Singapore, Japan, NZ and Australia as opposed to Indonesia's less than 5 percent. In 2000, the Philippines had 5 million tertiary educated workers compared to Indonesia's less than 1 million. Such numbers are notable given Indonesia's population is over twice as large. Feminine access to higher education is also better i.e., the Philippines had a gender parity index of 1.23 compared to Indonesia's 0.79 in 2005.

Table 2: Education		
Indicator	**Philippines**	**Indonesia**
Adult (15 years and older) literacy rates	93.4	92
Female	93.7	95.2
Male	93.1	88.8
Public Expenditure on Education		
as % of GDP	2.5	3.5
as % of total government expenditure	15.2	17.5
Total enrolment in tertiary education (thousands)	2,484	3,755
% female	54	50
% private	66	74
Gross enrolment ratio in tertiary education	28	17

male	25	17
female	32	17
Estimated tertiary education workers 2000	2,142,000	501,000

Philippine educators recognise the country cannot rely on past investments and are concerned that higher education institutions do not produce enough research through lack of capacity, resources and incentives e.g., in 2004-05 only 9 percent of university faculty had PhDs. This deficiency is seen as an obstacle to domestic development and ambitions to export tertiary education services to other parts of Asia. Only three of the Philippines' top universities promote research i.e., the University of the Philippines (UP), De La Salle University (DSLU) and Ateneo de Manila (ADMA). In 2009 UP is ranked 63rd (equal with University of Gadjah Mada) DSLU 76th and Ateneo 84th in the top 200 QS Asian University rankings.

Research and Development Spending, Workforce and Output

As indicated in Table 3, the Philippines' total spending on research and development, particularly government sources, has fallen. Gross expenditure on research and development declined from 0.2 percent in 1992 ($US 134 million) to 0.14 percent of GDP ($US 52 million) in 2003. In 1992, state budget accounted for 70 percent of this total, by 2002 this had fallen to 36 percent.

The total number of research workers declined from 15,600 in 1992 to 9,325 in 2002, with the largest decline in the government sector. While 71 percent of the workforce is employed in government and public higher education institutions, full-time employment is highest in private business at 84 percent and government at 73 percent. Full time employment falls away substantially in higher education to 39 percent, due to competing teaching and extension obligations.

Nevertheless, the higher education sector has a higher proportion of post-graduate workforce i.e., 28 percent of personnel with PhD and 33 percent with master's degrees compared to 5 percent of personnel in government with PhDs, and 24 percent with master's degrees.

Table 3: Research & Development

Indicator	**Philippines**	**Indonesia**
Gross Expenditure on Research & Development % GDP (GERD)	0.14	0.05
GERD by source of funds %		
Business Enterprise	62.6	14.7
Government	25.6	84.5
Higher Education	6.0	0.2
Private Non-profit	0.7	-
Abroad	4.8	-
Researchers per million population	50	205
Total R&D personnel FTE	6,896	42,722
Female % HC	48.2	29.2
R&D personnel by sector		
Government	2,193	5,738
Higher education	1,971	26,138
Private non-profit	40	-
Business Enterprise	2,692	253

Science & Technology Publications from the Web of Science 2005	486	560

Sources: UNESCO Institute for Statistics

The Philippines continues to train people for employment in agricultural sciences. Its capacity for agricultural research is renowned, in particular the University of the Philippines Los Banos houses national research centres awarded Centre of Excellence status by the Commission on Higher Education Development (CHED) and hosts several international research centres such as the International Rice Research Institute. Philippine capacity in engineering, technology and medical sciences, on the other hand, is not keeping up. Its ratio of researchers to total population and international science publications even lag behind Indonesia.

If this general profile for deployment of the Philippines' human capacity for research holds true for development policy capacity in particular, it implies that labour has been leaving government and what remains is either concentrated in particular areas of stretched thin. The universities are a source of highly qualified researchers, but (see Box 1) who may not be as well paid as in government, private sector or donors.

Socio-Economic Planning, Development & Government Thinktanks

The Philippine Government sets Medium Term Development Plans (MTDP), currently for the period 2004 to 2010. The National Economic Development Authority (NEDA) is the country's economic development and planning agency, responsible for formulating and coordinating the MTDPs, which are passed by the Philippine Congress. NEDA was established by the Philippine Constitution and reorganised by Executive Order of 1992. Its Board is chaired by the President, its Director General and Vice Chairman of the Board is the Secretary of Socio-Economic Planning. NEDA is divided into offices which command some eight areas which undertake technical research and analysis to support policy and planning across a range of national and regional development priorities e.g., agriculture, national planning and policy, social development and so forth. In sum, its like Bappenas.

The Philippines has created several government thinktanks, for example the National Tax Research Center (NTRC); the Development Academy of the Philippines (DAP); the Philippine Institute of Development Studies (PIDS); the Foreign Service Institute (FSI) and the Office for Strategic and Special Studies of the Armed Forces of the Philippines (AFP-OSSS). Most were created prior to 1986 by Presidential Decree and attached to a ministry from which they draw budget. Some serve a dual purpose of training and career development and research e.g., NTRC and FSI. DAP is wholly educational and meant to be financially self sustaining. PIDS focuses on research:

Box 1: Philippine Institute for Development Studies

PIDS was established by Presidential Decree as a non-stock, non-profit government corporation in 1977. PIDS' Endowment Fund was intended as a sustainable source of funding comprising contributions, donations, grants or loans from domestic or foreign sources, government subsidies and other income raising activities. The government's first contribution was seven million pesos and subsequent allocations have been made through NEDAs annual budget i.e., averaging under 6 million pesos annually from 2003 to 2009.

PIDS submits an annual work program and budget estimates for approval to NEDAs Director General. Its research is organised around the themes of economic policy choices,

policies for sustainable human development, and institutional development and good governance. It has about 40 researchers, three visiting fellows and additional administrative staff. Its senior researchers have post-graduate qualifications, including PhDs from US, Japanese, Canadian and European universities. It produces a range of research materials including the Philippine Journal of Development.

PIDS clients include planners and policy makers in the executive and legislative branches of government, academia, the private sector and media. Its website provides public access to national income statistics, agriculture and poverty databases, and the Socio-Economic Research Portal. It conducts a range of activities, including hosting the Development Policy Research Month. While not NEDAs sole source of data, NEDA cites PIDS' agriculture database in the MTDP and poverty alleviation research in MDG reporting.

PIDS' research is of a consistently high quality. Its activities have made critical contributions to supporting government priorities in macroeconomic stabilisation and microeconomic reforms in the last 30 years. Yet, PIDS is showing signs of decline.

Around 2000, a Philippine review conducted urged PIDS to become more responsive to government by presenting clear, practical findings to communicate better with policymakers and the public. It noted potential for PIDS to assist government with managing and targeting programs and evaluating the impact of public policy e.g., disaggregating poverty statistics according to gender and language group, or data on the impacts of public investments on different income groups and gender. It recommended PIDS develop networks with domestic, foreign, public and private research institutions and engage in more cooperative research, particularly on non-economic issues.

In 2009, an AusAID commissioned study noted that PIDS was unable to keep statistical databases up to date. Budget austerities and declining real salaries (see Annex B) were eroding its base of highly qualified economists. Across the economics profession there was a tendency for Filipino institutions to hire more locally educated staff, while highly trained economists were finding commissioned work and employment with international organisations more lucrative. Coupling such observations with other studies criticising standards for research training in Filipino higher education institutions points to long-term concerns for the maintenance and replication of research capabilities.

University Based Thinktanks

The Philippines top three universities have been striving to foster a research culture through significant reforms. First, each has specifically dedicated top-level administrators to the conduct and facilitation of research as an integral function i.e., the Office of the Vice chancellor for Research and Development at UP, the Vice President for Academics and Research at DLSU and the Office of the Academic Vice President and University Research Council at ADMU.

Second, these universities spend on infrastructure that nurtures a research climate e.g., facilities, equipment, resources, and research management polices. Moreover, they provide adequate technical and logistical (administrative) support to faculty e.g., generating resources, fund management, project development, publication, dissemination, marketing and copyright of research.

Third, they have well established research policies and agendas that support knowledge in various disciplines in the interests of national development. They have clear policies, guidelines and procedures for conducting research. Also, research training is provided to faculty and researchers.

Fourth, various incentives exist to attract and keep researchers. These include actively forming networks with local and international institutions. Direct research incentives to academics come in the form of support to attend conferences, present papers, research load credits and honoraria, assistance to publish, and research grants. High quality research work is recognised through awards such as professorial chairs, university fellowships, awards for outstanding research and sabbatical research projects.

This infrastructure clearly facilitates research on various development issues. For example, DSLUs Social Development Research Center is conducting an Assessment of the Child and Family Welfare System in the Philippines with UNICEF support. A research project of the Centre for Social Policy of the Ateneo School of Government, the Affiliated Network for Social Accountability in East Asia and the Pacific, has a start up grant from the World Bank. Each university lists an array of partners including domestic and international foundations, government agencies, foreign universities and donors. The La Salle Institute of Governance lists CIDA, DAP, Department of Interior and Local Government, the National Anti-Poverty Commission and Asia Foundation, while the Angelo King Institute (also DLSU) lists partnerships with IDRC, Konrad Adenauer Foundation and PIDS.

Civil Society & Non-Government Thinktanks

The Philippines has one of the most well developed civil society sectors in the developing world. Between 3,000 and 5,000 work in development. The Philippines experience of democratisation and political pluralism has urged spectacular growth of the sector. But the professionalisation and institutionalisation of this sector results from a complex of historical, political and social forces. A significant factor enabling CSOs to interact with government and participate in policy making has been the political tone set by different administrations.

Philippines' civil society has its roots in Catholic organisations organised during the Spanish colonial period, although US administration also led to the formation of secular foundations. During Marcos' regime (1965-86) the centralised nature of government decision making, and ideological aversion, excluded civil society from policy making. Marcos's government focused on domestic issues and produced most analysis in-house. CSOs were often anti-establishment and/or focused on delivering community development. Throughout the Marcos era, some CSOs acquired highly regarded reputations delivering effective social services to the poor. Some thinktanks also cut out a niche providing data and analyses on socio-economic issues as alternatives to government sources e.g., Ibon Foundation.

The collapse of the Marcos regime, hastened by the people power movement that formed Cory Aquino's (1986-92) political base, led to a boom in CSO numbers and opened the door to policy dialogue with government. Aquino's government stood for democracy, human rights and social development and her background led her to engage with civil society in ways never before seen. Ramos' administration (1992-98) continued in this vein, engaging with civil society and independent thinktanks on a range of different issues that occupied his administration's attention, notably resolving conflict in Mindanao, macroeconomic reforms, trade liberalisation, maritime territorial disputes and the Asian Financial Crisis. Relations between

government and civil society deteriorated dramatically under Estrada (1998-01), whose government was beset by corruption, political scandals and ineptitude. The relationship between government and civil society improved again under Arroyo (2000 onwards), although her administration is under close scrutiny and criticism for retrograde steps on constitutional and electoral reform.

When domestic political and social forces are aligned, the Philippines has made substantial policy advances, gender policy being a prime example. The attention to gender equity in the Philippines is strong and well established with an institutional history dating back to the start of the 20th Century. The National Commission on the Role of Filipino Women was formed in 1975. In 1987, the national Constitution affirmed women's equality with men. In 2008, the commission was installed under the Office of the President, renamed the Philippine Commission on Women (PCW), and made responsible for the Magna Carta of Women affirmed the role of women in nation building and promoting the equality of women under law

The Philippines has passed many measures to strengthen the role of women in development. These include the Women in Development and Nation Building Act of 1992 (RA 7192 stipulating that women can enter into contracts, secure loans and gain equal access to credit and land reform programs), and the Philippine Plan for Gender Responsive Development 1995 to 2025

It is worth emphasising that the Philippines' experience in gender issues results from the confluence of many years of consistent advocacy by women's organisations, energetic leadership and civil society seizing the opportunities of the democratic change of 1986. Not only are the legal reforms remarkable, but the formulation and carriage of policy. Bilateral and multilateral donors have financed Filipino initiatives to produce research and analysis that is fed into policy which is, in turn, monitored during implementation.

Box 2 – Gender Responsive Budgeting

The Philippines was one of the first developing countries to introduce a gender and development (GAD) budget in 1995, which earmarked 5 percent of local and national government budgets for programs and projects to benefit women. Gender responsive budgeting is legally supported by the RA 7192 and the General Appropriations Act.

GAD Budgets are used to implement government agency plans based on the priority areas of the Framework Plan for Women ie., promoting women's economic empowerment; protection of women's human rights; and strengthening gender responsive governance. Department of Budget and Management, NEDA, Department of the Interior and Local Government and PCW are involved in planning and implementation.

NEDAs review of implementation of GAD in 2006 found that of 164 programs totalling US$5.2 billion that 51 percent were gender responsive, but 33 percent were gender blind. Problems included agency non-compliance, donors not responding to surveys, lack of sex disaggregated data and need to align GAD budget policy with Public Expenditure Management reform. GAD ran into problems as a result of its crude formula of allocating 5% of agency budgets to non-specific gender activities. With some modifications to gender responsive budgeting (eg., introduction of community based monitoring system), the Philippines has documented various successes at the local level.

For example, the Women's Action Network for Development, UNIFEM and the EU conducted an evaluation of the budgets of Sorsogon (health sector) and Hilongos Leyte (agricultural sector) from a gender perspective. After one year of research, capacity building and advocacy the project resulted in incorporation of the gender impact analysis into the local budget decision making processes, improved competence of local government units to make gender responsive plans and budgets to deliver results against the MDGs; and improved capacity of civil society.

Interestingly, much of the analysis of the impact of gender budgeting appears to emanate from Filipino researchers. Many instances can be cited of reporting on CEDAW, the MDGs or gender responsive budgeting authored by Philippine researchers, which suggests that although the Philippines is actively teaming with international organisations such as UNIFEM, CIDA, UNESCAP or USAID it has institutional capacity to 'own' the analysis and, by implication, the results[12].

Regulatory & Fiscal Conditions for Non-Profit Sector

The key achievements of the non-profit sector in the last twenty years have been the widespread adoption of a united vision to support sustainable development, upgrading of networking, coalition building and campaigning skills, and the indigenous development and adoption of standards of practice that are widely recognised as good models. These developments have come about due to the following factors.

The strong role of civil society, including the plethora of organisations involved in policy advocacy, is reinforced by conducive regulation. The role of people's organisations and NGOs in development are esconced in Philippine law i.e., three articles of the 1987 Constitution, the local government code, the Urban Development and Housing Act and the Women in Development and Nation Building Act. NGO participation in government programs is embedded in the MTDP 2004-10.

Philippine civil society has been self regulating since 1991. The largest NGO coalition, Caucus of Development Networks (CODE-NGO), was the first such group to create a Code of Conduct for Development NGOs in Asia. Six of the largest NGO coalitions in the country established the Philippine Council for NGO Certification (PCNC) in 1998 whose system is recognised by government. The code of conduct and certification system are internationally cited good practice models.

Tax rules assist the sector. Non-stock corporations and non-profit institutions organised exclusively to deliver a wide range of functions, including social welfare and education, may obtain exemptions from income tax on donations, grants and gifts. Other tax benefits accrue to organisations which become an accredited nonstock, nonprofit corporation or 'accredited NGO' e.g., PCNC certification of 'donor institution status' enables an organisation to receive tax-deductible donations. Such

[12] In 2004, NEDA reported in the MTDP that it did better than Indonesia and Thailand in gender development and gender empowerment indexes, but criticised the lack of the gender disaggregated data needed to measure differential poverty incidence and the impact of microfinance initiatives, the persistence of the earnings gap and lack of women in elected office. The Philippines is objective in reporting its progress on CEDAW. The National Statistical Coordination Board conducted an analysis (in collaboration with UNIFEM, UNESCAP, other government agencies and Philippine women's NGOs) and recommended areas where gender statistics should be improved. Many other instances can be given of an internal capacity not simply to analyse but the awareness that these tools can be used to effect positive changes.

arrangement are generally beneficial, if not perfect i.e., in 2007, NGOs that did not raise funds from domestic corporations were unable to qualify for the status and avoided accreditation, so the PCNC had certified less than 500 of the approximately 6,000 eligible NGOs at that time.

Two sets of problems confronting the sector will be familiar to Indonesia. The first is an unreliable resource base. Most CSOs rely on membership fees, donations, subsidies and other fee earning activities, hence struggle financially. This kind of profile is typical of many developing country NGOs. Many depend on ODA and local and multinational companies, whose funding is often project based. Competition for funds is made worse when ODA falls.

The second problem is linked to the first and that is thinly spread managerial and analytical capacity. CSOs founded by energetic, charismatic leaders are prone to fumble once these figures depart. Highly trained researchers, good managers and fund raisers are relatively scarce compared to the enormous numbers of CSOs working nationally and regionally across a broad diversity of development issues. Nevertheless, it is encouraging that the Filipino CSOs and donors do not turn entirely outside the country to address such problems, because local institutions can provide training and capacity building in key skills like resource mobilisation.

Summary & Implications for Indonesia

The Philippines is an interesting comparison for Indonesia.

Under democratisation, the Philippines saw a blossoming of research and advocacy groups and more inclusive policy dialogue.

- *It is highly likely these are the same forces that have been operating in Indonesia since the overthrow of the Suharto regime and further promoted by decentralisation.*

PIDS has suffered financial and resource shortfalls and debates with government over role and relevance over the years pointing to the difficulties such institutions embedded in government can face when budget austerities come into play.

- *The problem PIDS has had balancing research independence, securing resources and funds may be similar to that faced by Indonesian centres like LIPI. Some of the questions raised include whether there is a need to revise research agenda to retain relevance when other research centres may have appeared on the scene eg., the university thinktanks; whether it is necessary for governments to fully fund such institutions at all or whether it might be better to allow them to become more diversified and to sell their product to a wider range of buyers including donors.*

Underspending in the Philippines tertiary education sector and its flagship thinktanks like PIDS point to the danger of the state not investing in such institutions. Filipino institutions have been adept at tapping into ODA and partnerships with international foundations and other institutions. It is not clear, however, how much Filipino institutions are able to foresee the Philippines domestically taking over the funding of most research relating to its domestic development.

- *By analogy, the question for Indonesia is not whether its thinktanks and research centres are partially foreign subsidised today, but whether they can conceive of a game plan for creating a viable domestic market for knowledge to which they can gradually shift the balance over time as Indonesia continues to develop.*

Research centres in the university sector, non-profits and civil society have mushroomed, lending the Philippines the moniker of being the most vibrant democracy in the region because debate and scrutiny of government policy is so open. This growth appears supported by formal structures.

- *Indonesians may wish to hear about the regulatory and tax arrangements supporting indigenous foundations and NGOs; and the infrastructure universities have adopted to help research centres obtain government projects, access foreign donor research grants and conduct research.*

Rampant growth of NGO based advocacy groups has led to fierce competition for funding and scarce human capacity and encouraged thinktanks to turn to ODA and international foundations in the Philippines.

- *An analysis of benefits and disbenefits of reliance on foreign sources of funding and balances of funding sources could be a useful area for further study for Indonesia's institutions.*

Some select Philippine thinktanks and research centres are listed at Annex A.

Annex A: A Select List of Philippine Thinktanks and Research Centres

Acronym	Full Title	Type of Institution	Focal Area
Economic, Socioeconomic, Political Economy			
APC	Asian Institute of Management Policy Centre	non government/emerging from business management school	research and policy studies on domestic and regional competition challenges and contributions of private sector to public policy formation (competitiveness and economic development).
CSP	Center for Social Policy, Ateneo School of Government	university research centre	
IBON Foundation		non profit CSO	socio economic data and analysis
LSIG	La Salle Institute of Governance	university research centre De La Salle University	
NTRC	National Tax Research Centre	attached agency of the Department of Finance	fiscal policy and tax administration
PIDS	Philippine Institute for Development Studies	non-stock, non-profit corporation	economics
SDRC	Social Development Research Center	university research centre De La Salle University	
UAP (formerly the Center for Research and Communications)	University of Asia and the Pacific	Opus Dei	economics
Politics, Foreign Policy, Security, Governance & Other			
AFP-OSSS	Office for Strategic and Special Studies of the Armed Forces of the Philippines	government	
CODE NGO	Caucus of NGO Development Workers	non profit CSO	budget transparency
DAP	Development Academy of the Philippines	government owned and controlled corporation	

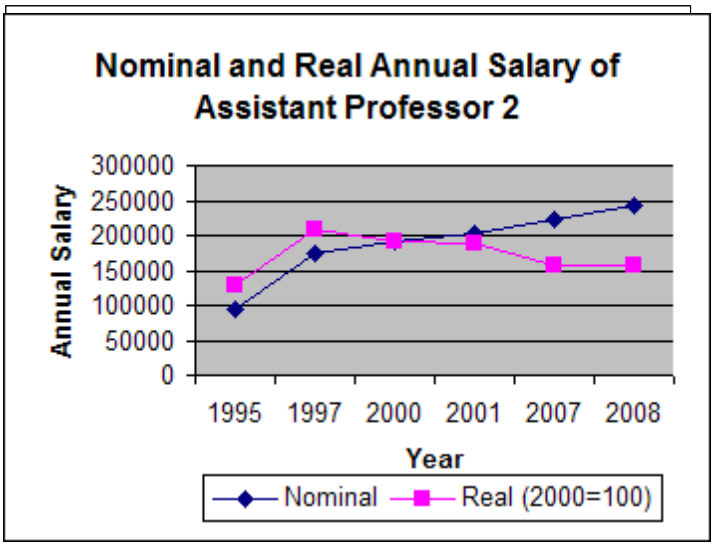
FSI	Center for International Relations and Strategic Studies of the Foreign Service Institute	government	international relations, strategic defence studies, foreign policy
Haribon	Haribon Foundation	non profit CSO	environment
IMDI	Institute for Migration and Development Issues	non profit CSO	
IPD	Institute for Popular Democracy	Akbayan/democratic party	
ISDS	Institute for Strategic and Development Studies	independent	national and global security issues, international relations
NIPS	National Institute for Policy Studies	Liberal Party	
SMC	Scalabrini Migration Center	non profit CSO	
Gender			
	Development Institute for Women in Asia Pacific	university educational and research	
Gabriela	Gabriela Network		
	Institute of Women's studies, St. Scholastica's College	NGO mass organisation	advocacy
	Manila Center for Gender and Women's Studies, UP	university educational and research	
WAND	Women's Action Network for Development		
	Women's Studies and Resource Center		
	Women and Development Program, College of Social Work and Development , UP	NGO mass organisation	
	Women's Resource and Reserarch Center, UP Diliman	university educational and research	
Mentioned in Training Context			
AF	Association of Foundations	national network of 134 NGOs and foundations	

AIM	Asian Institute of Management	private educational	
CLCD	Centre for Leadership, Citizenship and Democracy	University of the Philippines, National College of Public Administration and Governance	
IRRR	International Institute of Rural Reconstruction	US charity with Asian HQ in Philippines	
PBSP	Philippine Business for Social Progress	private non-profit foundation	
VFR	Venture for Fund Raising	non-profit NGO	

Annex B

Salaries of Assistant Professors of Economics Philippine Universities (Taken from Hill & Balisacag 2009).

	1995	1997	2000	2001	2007	2008
Nominal	94788	174456	191904	201504	221652	243816
Real (2000=100)	129491.8	209935	191904	188674.2	156313.1	157320.9
CPI (2000-100)	73.2	83.1	100	106.8	141.8	154.98



Report on Visit to Malaysia

Overview

This report is based on a visit to Kuala Lumpur and Kota Kinabalu, Sabah to examine the relationship between government development agencies and research. It is based on a literature review, semi-structured interviews and printed matter collected during the visit. The government agencies visited include the Economic Planning Unit which is responsible for coordinating Malaysia's national development planning processes. The research institutions visited were the: Malaysian Institute for Economic Research, Institute for Strategic and International Studies and the Institute for Development Studies. The National Institute of Public Administration was visited on civil service capacity. Background on Malaysia is attached at A. This report is divided into sections:

1. National development planning
2. Government policy research
3. Civil service capacity
4. Research Institutions: independence, sustainability and influence
5. Implications for Indonesia

1. National Development Planning

Malaysia uses a development planning model. While various economic and social ministries contribute to national development planning and implementation, but the Prime Minister's Department centrally coordinates the plans. Malaysia applies planning along three time horizons of long term (30 year); medium term (5 year) and short term (1 annual). The long term is usually set out in a vision statement and Malaysia Plan, the medium term operationalise these in the form of the OPPs, and the short term is articulated in annual budgets.

2. Government Policy Research

The Economic Planning Unit (EPU) of the Prime Minister's Department (PMD) plays a central role in coordinating policy, conducting and commissioning economic studies supporting medium and long term national development planning. EPUs work is aligned to supporting and putting shape to the broad policy directions set by the executive. It operates with great certainty in planning for analytical, research and resource needs over the course of the five year, medium term development plans. Its current work supports the 9th Malaysia Plan to move up the value chain and improve service delivery. EPU is engaged in formulating the 10th Malaysia Plan, which will emphasise public policy directions for taking Malaysia in the direction of building a 'knowledge based economy'.

EPUs advice is security classified. The outcomes only move into the public domain once the analysis has already been distilled through the development planning process. Nevertheless, while the direction of knowledge and information is unidirectional, EPU makes extensive use of external expertise. Malaysian officials noted a preference to use local expertise from universities, research centres and consultancies where possible, including from Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, the

Malaysian Institute of Economic Research and the Institute for Strategic and International Studies. For example, it used economists from the latter to undertake computer general equilibrium modelling of the impacts of Malaysia's entry into various free trade agreements e.g., with the US. EPU also had open posts for positions to attract specialist expertise e,g., in relation to policy reforms on utilities, electricity, petronas, water, engineering who are recruited on a contract basis.

EPU also draws on international expertise when issues demand. These include Boston Consulting Group, Price Waterhouse Coopers and McKinsey & Company. It also collaborates with multilateral development banks and organisations such as the World Bank, IMF, ADB and UNDP. EPU has a number of examples of commissioning or collaborating with these institutions. In 2009, for example, Malaysia's government financed the World Bank and IMF to undertake the second Investment Climate Survey. EPU contracted the Georgia Institute of Technology, and collaborated with the Department of Statistics and UNDP in its publication 'Knowledge Content in Key Economic Sectors in Malaysia Phase II' of 2009. It is working with Malaysia's Treasury and the World Bank on labour requirements and skills demands for taking Malaysia in the direction of building greater human capital. It has collaborated with the UNDP on Malaysia's progress against the Millennium Development Goals. All EPU publications are freely available on the internet.

EPU uses a mix of mechanisms to outsource advice, including direct appointment and tendering.

EPUs total staff numbers about 530 including administrative and support staff. About 60 percent have policy or analytical related roles. Civil service salaries are roughly benchmarked with private sector jobs. The salary is not above market rates, but benefits of being in the civil service include subsidised housing or rental and domestic and overseas scholarships schemes funded by the Malaysian Government. For instance, the Public Service Department targets some 100 scholarships for civil servants per year at graduate certificate, masters and PhD levels. EPU also took advantage of in-service training opportunities e.g., World Bank and IMF capacity building programmes.

EPU pointed to the importance of sound statistics. The Department of Statistics is responsible for collecting and collating statistics, which includes the Household Income Survey conducted every two years, but EPU is the custodian of the HIS due to its importance to formulating and implementing development plans. EPU was keen to point out that in 2010 Malaysia will be conducting its first dedicated Household Expenditure Survey as well. MDI has in-house statisticians.

EPU officials thought budgetary, human and other resources as equally important. They said that the EPU was in a powerful position to defend its budget i.e., the Permanent Secretary of PMO is the Chairman of the National Development Planning Committee. EPU pointed to the role of the Management Committee comprising the Treasury, Central Bank, EPU among other agencies which insisted that economic development issues

remain a high priority for resourcing. Similarly, the Main User Committee played an important role in determining statistical resources in Malaysia.

3. Civil Service Capacity

The British established Malaysia's Staffing Training Centre in 1959 to provide training to officers on practical administrative functions. Today, the National Institute of Public Administration (INTAN) is supervised by the Public Service Department and hopes to become a world class public sector training institute. It began expanding rapidly in the 1980s and by 2001 had established six campuses around the country.

INTAN sees demand for its training continuing to increase because of growth in civil servant numbers. Malaysia has about 1.2 million civil servants. INTANs market is protected by mandatory civil servant training. INTAN provides about 1,000 courses covering 40,000 to 50,000 persons per annum.

INTANs services are fully federal government funded. It does not even recover costs through transfers from federal or state government agencies. Government policy explicitly links the civil service to delivering public services efficiently and honestly. Such a substantial investment in INTAN signals the priority the government places on having a fairly standard curricula for civil service training across the country.

Despite the emphasis on building Malaysian capacity to train government workforce and leadership, it does not do this alone. INTAN is networked with a number of ASEAN countries, including the Civil Service College of Singapore. It has a long-term collaboration with the Harvard School of Government. This relationship grew out of early programs for sending its senior officials to Harvard for post-graduate degrees, until it was determined that it would be more economic to bring this kind of training to Malaysia instead. INTAN has partnered with the National Harvard Club of Malaysia and the Charles River Centre to develop its Advanced Management Development Programme, which started providing training for senior civil servant executives in 2009. Similarly, the pre-existing Advanced Leadership and Management Programme is modelled on US teaching of new public management.

4. Research Institutions

According to the Global "Go-To Think Tanks" Index Malaysia has 18 think tanks, three of which appear in the index's international rankings and Asia's top 40. The Malaysian Institute of Economic Research (MIER) and the Institute for Strategic and International Studies (ISIS) are two nationally and internationally highly regarded thinktanks.

ISIS is Malaysia's oldest think tank. It was established by Cabinet Decision in 1983. It conducts research in the areas of defence, security and foreign affairs; national and international economic affairs; nation-building; science, technology, industry, energy and natural resources; international understanding and cooperation.

MIER is Malaysia's top ranking economic research institute. It was first mooted in the Prime Minister's Economic Panel and later promoted by the Council on Malaysian Invisible Trade (COMIT). MIER is a company limited by guarantee in 1985 and began operation in 1986. It has research divisions for Macroeconomic Surveillance and Forecasting, Policy Studies, Industry Studies and Area Studies. Its principal functions are to research economic and financial issues and organise symposiums and conferences. Its operations and activities are funded by a combination of grants, endowment fund income, project financing and consultancy fees.

IDS was set up in 1985. It responds to the Chief Minister's office, departments of both federal and state governments. Some 80 percent of its funding comes from the federal budget, but its role is to advance Sabah's development plans in line with national development aspirations.

This report is purposely biased towards MIER, ISIS and IDS as examples where development policy remains a predominantly government function, there is also a high propensity for government to be primary client and financier of research. The structure and purposes of ISIS, MIER and IDS will be familiar to Indonesians. The key points to note are that these institutions were set up by past Malaysians leaders on the premise that the country and government(s) would benefit from a Malaysian capacity to analyse economic development policies. They emphasise research that is action-oriented, which feeds into policy and presents implementable options. They may be set up as independent, non-profit think tanks. But, in practical terms a balance is struck between independence, influence and financial sustainability or certainty.

Independence

Institutions close to government receive clear signals about purpose and demand for their research. For example, ISIS was established to provide members of the executive with direct access to research and analysis. Prime Ministers and Deputy Prime Ministers commonly ring the Chief Executive of ISIS to discuss policy concerns. Past leaders issued instructions directly on what issues needed to be studied urgently.

As another example, IDS was established by the government to serve the needs of Sabah's state economic development. It put forward to government the framework for the Sabah Development Corridor (SDC) which was subsequently adopted as Sabah's medium term development plan. Its five year research plan is based on this framework. It retains close relationships with the State Economic Development and Investment Authority (SEDIA). IDS is sometimes directly tasked by the Chief Minister to conduct public meetings and seek broader opinions on certain issues e.g., introduction of levies on plantations and housing prices. IDS raises funds through its research programs, seminars and roundtable discussions, and public consultations. But in truth, its main client is the government and the institution had a direct hand in determining the state's development plan against which it has geared its forward research planning.

While institutions will provide policy options, they do not necessarily expect those options to be adopted. For example, in 1987 ISIS contributed to the internal government debate about how the country should respond to the Asian Financial Crisis. Then Prime Minister tabled two possible responses: impose controls on capital out flows from the country and to take the national currency out of trade. However, the Chief Executive of ISIS thought the second of these options was not a good idea. The Prime Minister tasked ISIS to come up with arguments regarding these actions for him to consider and, subsequently, ISIS put forward 21 reasons objecting to the proposals. In the event, the Prime Minister overrode all opposition, but ISIS felt it had performed its role by studying and putting forward other alternatives.

Influence

For government, access to expertise presumably improves the quality of policy. For the researchers, their involvement in such activities can give them both a better sense of government priorities as well as opportunities to influence policy.

For example, IDS noted that during the AFC Sabah was one of the few states in Malaysia that weathered the crisis well because it benefited from oil palm commodity exports, demand for which remained strong. The government asked IDS to organise a roundtable between government, growers and export industry to enable a temporary 'export tax' to be imposed to help the government raise revenues to soften the impact of the AFC. Since land for the plantations was originally allocated through government action, it was felt this was easier to negotiate with the exporters.

IDS pointed to the example of sharing of oil and gas revenues between the State and Federal Governments. In Malaysia, States are only allowed 5 percent of the revenues collected by the Federal Government. IDS helped Sabah's leadership put a case to the Chief Minister which argued for additional development funds to be allocated to Sabah under the 10th Malaysia Plan for spending on infrastructure, hospital and schools. The result did not change the 5 percent allowed under federal law, avoiding setting any precedents for other states and saving face for Petronas and Federal Ministers. But it secured 'development compensation' for Sabah from its oil and gas production.

As another example, IDS pointed out that because Sabahs borders are porous, illegal migrants is an ongoing problem. IDS studies indicated that the inclusion of illegal migrants in poverty statistics inflated figures and made it difficult to accurately target programs. Its analysis led to the exclusion of illegal migrants from poverty head count, while also supporting arguments for migrants to have some form identification.

Sustainability

MIERs income and expenditure statements for 2008 and 2007 illustrate the financial constraints. Its project expenses exceed revenues. Its administrative expenses are the largest single cost item. In 2007 it had an operating deficit, in 2008 an operating surplus. The largest single operating cost was staff costs, while the largest credits were

government grants and interest income from bonds. MIERs endowment has not fully recovered from the effects of the Asian Financial Crisis (AFC). At its worst, MIER even temporarily drew on its endowment principal to cover salaries.

Research and resource efficiencies are possible. For example, MIER cut back on research where demand is falling i.e., Area Studies have been partially absorbed into Policy Studies. ISIS has significantly reduced staffing numbers in the last 20 years. At its peak, ISIS had about 48 researchers, today it has about 22. ISIS considered its staffing lean given its range of research areas.

Another response is to strengthen linkages with government. For example, five years ago ISIS began presenting its forthcoming research programs to the Prime Minister for approval as a way of securing grants. ISIS insists that it takes the initiative in putting a program forward and that the government does not change the proposals much, but it admits to taking care to choose research programs that fit with the policy climate.

Institutions diversify their activities. Both MIER and ISIS earn income from commissioned projects and consultancies for a range of clients including government ministries e.g., the EPU and MITI, multilateral bodies such as the World Bank, ADB, UNDP and government linked corporations among others.

IDS has a long term plan to become a consultancy based operation, based on Japanese models. Its wants to shift from making recommendations and bridge the policy gap by applying knowledge to development projects. It pointed to the kind of applied work it was doing e,g., developing an 'agropolis' in five major areas of the state, livestock industry development including a Halal Park, tourism development. IDS planned to make this transition gradually by 2025 as it continued to work in implementing the Sabah Development Corridor Plan.

These institutions have all been in operation for more than 25 years, but none are financially self sustaining even when the government guarantees a substantial proportion of their work. For example, MIER has relied on repeated injections of government funding. It received its launching grant from the government (the main component of its original endowment) in 1986. The Government topped up this endowment in 1989, 1997 and 2004. The Government made grants to cover MIERs operating expenditure for the five years from 2006 to 2010. Moreover, MIER acknowledges substantial support for operating costs and through the Queen’s Exchange Program from the Canadian International Development Agency from 1985 to 2001 (when this support ceased). In addition, as a non-profit MIER is entitled to tax exemptions for government grants, donations and contributions, although its investment income is taxed.

The Balance

Where government is the main consumer of development research, and subsidises its provision, it will tend to dictate the terms. Malaysia’s government expects ISIS and IDS to provide classified papers and closed door dialogues on issues that are politically

sensitive. For example, in 2007 ISIS researched the impacts of the international commodity crisis on Malaysia to help the government formulate options for combating food hoarding and questions surrounding subsidies. All governments do this.

But no matter how sound the evidence, only strong research leaders can challenge certain political decisions. For example, in response to the AFC, Prime Minister Mahathir proposed two actions i.e., limit capital outflows and take the national currency out of international trade. Parts of Cabinet and ISISs Chief Executive disagreed with the second move. ISIS assembled 21 options which the Prime Minister considered, but disregarded. ISIS had fulfilled its obligation to provide as objective a standpoint as possible, but it was up to the government to determine the course of action. Apparently, Mahathir was willing to consider alternatives because of his respect for the head of ISIS, and trust and confidence in the analysis that the institution would produce.

5. Implications for Indonesia

Malaysia maintains a national development planning framework. Research, analysis and advice is fed into the formation of development plans and strategies. Malaysia's institutions are in command of the development agenda. When government agencies buy research, they strive to determine the questions and sources. Malaysia's institutions are not insular, but procure external expertise to supplement or build domestic capacity.

For example, EPU has substantial in-house capacity but commissions analyses from institutions outside government. It favours local think tanks and universities, but contracts expertise from international development banks and consultancies where appropriate and justifiable in relation to development planning processes and its budget.

- *This raises the question whether Indonesian Government agencies have sufficient leeway to determine research questions and identify the best value sources for such expertise within the scope of their budgets and responsibilities. Such capability rests on also having accountable and transparent systems for procurement.*

Malaysia's financing of national INTAN training points to the government valuing sound civil service management and leadership. Moreover the INTAN replication of Kennedy School of Government training modules points to internalisation of foreign expertise:

- *It is not clear how well Indonesia has linked civil service training to better public policy and service delivery or whether it makes the most of opportunities to expand training and education through relationships with Malaysian institutions like INTAN.*

Malaysian Governments helped establish external institutions to create avenues for objective analysis and alternate policy options. But, in 25 years of existence, Malaysia's top institutes are stil not profit making, but occasionally require injections of funds.

- *As a less wealthy and developed country, it is unrealistic for Indonesia to expect its thinktanks to be profitable. Some activities may be profitable and cross subsidise others, but most institutions break even or run at an occasional operating loss.*

Directly commissioned papers and closed door dialogues indicate potential policy impact, but policy influence is difficult to measure directly. The fact the government (and GLCs) have continued to support institutions like ISIS, IDS, MIER points to an implicit value on the *existence* of these institutions and the *range* of functions they perform e.g., seminars, conferences, published research papers, book chapters and contributions to the media. Thinktanks produce diverse products for different audiences. Some activities earn income, but not all and ongoing state subsidisation points to an implicit valuation of intangible services and assets whose costs are not recoverable from the market.

- *Similarly, the value of Indonesia's thinktanks should not be based on their production of commissioned studies alone. To be effective, these institutions need scope to interact with various sectors of society, generate research responding to community concerns, debate proposals, inform the public, become repositories of knowledge that is shared with the public and foster expertise that can be imparted to future Indonesian generations. These are all 'services' and many have intangible values. A shift in culture and attitude towards Indonesia's researchers and institutions may be helped by Indonesian leaders expressing commitment to supporting all these services.*

Sabah's IDS points to a research capacity to meet that state's development priorities but within the framework of national aspirations.

- *Similarly resource endowed regions of Indonesia might benefit from a regional research capacity that can respond to more localised priorities. IDS experience of forming partnerships with donors (Japan), international networks with foreign researchers (Australian scientists) and aligning work to local export and trade directions (SEDIA) may be instructive for certain Indonesian purposes.*

Annex A: Background on Malaysia & Malaysian Institutions

Malaysia is a federal state, with a constitutional monarchy and parliamentary government. The country became independent of British rule in 1957. It shares similarities with Indonesia in terms of cultural background, ethnic groups, Muslim majority and national language. Its population is 26 million.

Soon after independence, Malaysia began implementing plans to develop from being a largely agrarian, commodities based economy to an industrialised nation. Early import substitution policy was eventually dismantled in favour of economic liberalisation and deregulation. Malaysia has since become an externally oriented economy that generates substantial wealth from exports of manufactures, including electronics and electrical products. Alongside Indonesia, it remains one of the two largest exporters of palm oil in the world. It is an attractive destination for foreign direct investment in the Southeast Asia region. In 2008, its GDP was $US384 billion, making it the 28th largest economy in the world. Services and industrial activity account for over 90 percent of GDP. Per capita GDP is $US15,200. Malaysia ranks 66th on the UNDP Human Development Index.

The Malaysian Government asserts its role in development planning, but attributes the country's success in sustaining growth and development to getting the basics right i.e., setting sound development policies, good economic management, promoting private investment, developing human resources and providing good physical and institutional infrastructure. Malaysia stresses its success is not due to a single policy, but different policies applied at different times. It emphasises flexibility and pragmatism in its policy making, taking five key lessons from experiences to date:

- government can chart national directions, but not crowd out the private sector;
- growth and development should be equitable to provide for political and social stability;
- poverty should be eradicated through income earning opportunities, not hand outs;
- prudent, flexible and pragmatic government is crucial i.e., policies must be adjusted to changed circumstances and extenuating market forces e.g., rapid policy shifts during Asian Financial Crisis;
- government should be pro-business to encourage private investment, entrepreneurship and innovation.

Malaysia's political and economic history has led it to stress economic development which seeks to redistribute shares of ownership of national wealth i.e., corporate equity from foreigners towards indigenous Malays. The Bumiputera policy has set targets for rebalancing national asset ownership between Malays, other Malaysian ethnic groups and foreigners. While this policy has been much criticised, it is seen as critical to social harmony and avoiding tensions and riots as occured in 1969.

Malaysia's national development policies can be broken down into periods:

1957-1970: economic and rural development, export oriented and laissez faire policy, led to high average growth of 6% per annum, but poor distributional outcomes which precipitated riots in 1969. National development plans were articulated in the form of the First Malaya Plan 1956 to 1960 and First Malaysia Plan 1965-70.

1971-1990: the New Economic Policy (NEP) sought to eradicate poverty irrespective of race and to restructure society. The NEP emphasised socio economic goals alongside economic growth to encourage social and religious harmony and national unity. NEP adopted strategies to reduce absolute poverty, raise income levels and increase employment opportunities. The policy was predicated on rapid economic growth to create absolute increases in new wealth (rather than simply redistributional measures), although the Bumiputera policy was introduced to redistribute shareas of national ownership in enterprise indigenous Malays, other ethnic groups and foreign ownership. The Second Malaysia Plan took place under NEP.

1991-2020: Vision 2020 envisions Malaysia as a fully developed country with a high standard of living and balanced social development. The National Development Plan replaced the NEP and provides the strategy for the first decade of Vision 2020. The National Vision Policy (2001-10) seeks to build a resilient and competitive nation and knowledge based society which, among other things, includes generating domestically driven growth, domestic investment and indigenous capacity.

Development Planning Processes

occurs on three planning horizons. Long term plans span 30 years, within which each decade's strategy is in the Outline Perspective Plan (OPP). The medium term, five years plans operationalise OPPs. Annual budgets articulate short-term planning. Currently, Malaysia is implementing Vision 2020 and the National Development Plan, OPP3 (2001-10) and the Ninth Malaysia Plan (2006-10). The medium term plans are subject to mid-term review, last conducted in 2008.

The highest decision making body on economic and socio-economic matters is the ministerial level National Planning Council (NPC) which is the economic arm of the Cabinet. The highest development policy making forum is the National Development Planning Committee (NDPC), chaired by the Chief Secretary and comprising senior government officials. Malaysia's medium and long term plans for national development are prepared by the Economic Planning Unit (EPU) of the Prime Minister's Department. EPU plays a central role in coordinating policy on national development.

1. <u>Economic Planning Unit, Prime Minister's Department (EPU)</u>

The EPU was established in the Prime Minister's Department in 1961. It plays a central role in formulating national development plans in interaction with line ministries and agencies through inter-agency planning groups (IAPGS) for which it acts as Secretariat. The EPU helps match projects to macro plans for each sector. Following agreement by

IAPGs on development directions, policies and priorities are submitted to the NPC for consideration and tabled by Cabinet in Parliament.

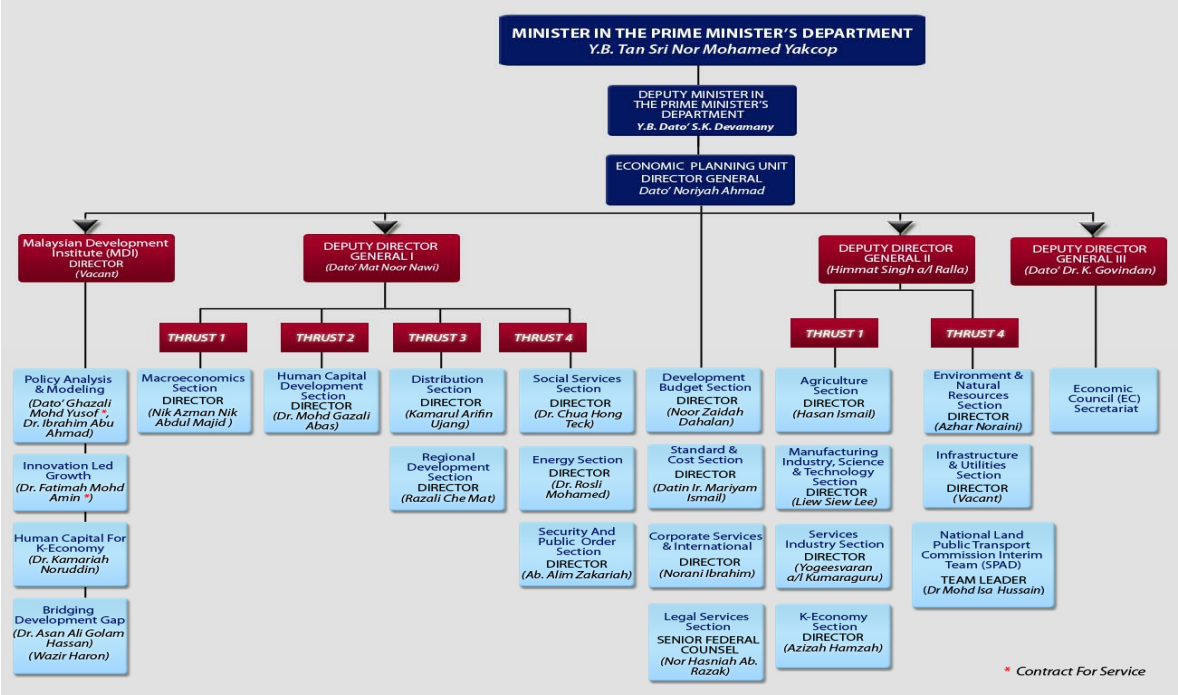
Consultations with the private sector and civil society occur regularly. Formal institutional consultations occur in the formulation of the OPPs e.g., an Economic Consultative Council was formed drawing on all sections of society including government, industrial association and their representatives, academics, trade unions, political parties, religious organisations, youth organisations, professional bodies, NGOs, interest groups and individuals. IAPGs can also contain private sector and civil society representatives. The EPUs main functions are to:

- Formulate policies and strategies in development planning
- Prepare long and medium term plans
- Prepare development programs and project budget
- Monitor and evaluate the achievement of development programs and projects
- Advise government on economic issues
- Initiate and undertake necessary economic research
- Plan and coordinate the privatization programme& evaluate its achievement
- Coordinate Malaysia's involvement in the Growth Triangle Initiatives
- Initiate and coordinate bilateral and multilateral assistance
- Manage the Malaysian Technical Cooperation Program

EPU emphasises that planning machinery and processes are not rigid, but responsive to changes in domestic and external conditions. Planning at three horizons allows revision and incorporation of new information into rolling plans e.g., the EPUs monitoring of the economic situation in collaboration with the Treasury, Central Bank, other economics ministries and multilateral institutions results enabled it to take into account shortfalls between targets and actual outcomes and shift annual and medium term plans in the face of the Asian Financial Crisis.

EPU documents suggest a sound internal policy making and analytical capacity. The EPU was restructured with expanded roles for private sector partnerships, long-term strategic research and economic modelling to strengthen its effectiveness. The structure cuts across sectors and is based on the Five Thrusts in the National Mission expressing objectives of the Ninth Malaysia Plan i.e.,

Thrust 1: Moving the economy up the value chain;
Thrust 2: To raise the capacity and innovation and nurture a 'first class mentality';
Thrust 3: Addressing persistent socio-economic inequalities;
Thrust 4: Improving the standard and sustainability of quality of life;
Thrust 5: Strengthening institutional and implementation capacity.



2. <u>National Institute of Public Administration (INTAN)</u>

The National Institute of Public Administration (INTAN) is the training arm of the Public Service Department, Malaysia. It began as the Staff Training Centre in September 1959 to provide training to officers on land administration, financial administration, office management and local government administration. INTAN was established at Jalan Elmu in 1972 to provide formal training to government officers. INTAN rapidly expanded in the 1980s and in 1983 established the Northern Regional Campus (INTURA) in Sungai Petani, Kedah; the Eastern Regional Campus (INTIM) in Kemaman, Terengganu and the Southern Regional Campus (IKWAS) in Kluang, Johor. INTAN's main campus, located at Bukit Kiara Kuala Lumpur was officially opened in 1984 and INTAN Jalan Elmu then became the Central Regional Campus (INTENGAH) in 1998. Increasing demand for INTAN's training programmes then necessitated the establishment of two other regional campuses. The Sarawak Campus in Kuching, Sarawak was established in 1999 while the Sabah Campus in Kota Kinabalu, Sabah was set up in 2001. INTANs vision is to become a world class public sector training institution. Its mission is to develop human resource in the public sector through quality training.

Malaysia's best known development policy research institutions appear mostly independent of government, apart from one in Sabah:.

3. <u>Malaysian Institute of Economic Research (MIER)</u>

MIER is an independent, non-profit organisation devoted to economic, financial and business research that serves as a think-tank for the government and the private sector. It was first mooted in the Prime Minister's Economic Panel and later promoted by the

Council on Malaysian Invisible Trade (COMIT). It was incorporated as a company limited by guarantee on 30 December 1985 and began operations on 2 January 1986.

The research activities of the Institute are organised into four research divisions, namely, Macroeconomic Surveillance and Forecasting, Policy Studies, Industry Studies and Area Studies. The research projects undertaken by the Institute are mainly applied and policy-oriented, focusing on economic, financial and business issues and provides advice on macroeconomic management, development and future economic perspectives. Its objectives are:

- bridge government, the private sector and universities, and become a focal point for economic, financial and business research in the country;
- commissioned economic research projects for the public and private sectors;
- collaborate with other research institutes, at home and abroad, on topics of relevance to the country;
- publish and disseminate the results of research work, organise symposia and conferences to promote exchange of ideas and views;
- provide occasional training for officials from government agencies and private sector organisations;
- and cater for the research and training needs of countries outside Malaysia.

The Institute is governed by a Board of Trustees, which sets its policy directions. An Advisory Panel provides guidance to the Institute in the planning of its research activities. The Executive Director is the chief executive officer, supported by a team of full-time research and support staff members. The Institute also engages a number of associate research fellows and consultants and hosts interns, both local and foreign.

The Institute's activities are funded partly by investment income from an Endowment Fund established with contributions from private corporations and the government. The Institute currently also receives an annual grant from the Government of Malaysia. Direct project funds as well as consultancy fees make up the bulk of the Institute's budget.

4. Institute of Strategic and International Studies Malaysia (ISIS)

The Institute of Strategic and International Studies (ISIS) was established on April 8, 1983. It is an autonomous and non-profit organisation that conducts independent research in the areas of: defence, security and foreign affairs; national and international economic affairs; nation-building; science, technology, industry, energy and natural resources; international understanding and cooperation.

ISIS has been at the forefront of some of the most significant nation-building initiatives in Malaysia’s history, such as contributing to the Vision 2020 concept and as the consultant to the Knowledge-Based Economy Master Plan initiative. The Institute has also played a role in fostering closer regional integration and international cooperation

through forums such as the Asia-Pacific Roundtable, the East Asia Congress and the Network of East Asian Think-Tanks (NEAT). ISIS Malaysia's seven core objectives are:

- undertake research in the five central areas of research as well as to conduct long-term analysis of public policies on national and international issues;
- facilitate dialogue on national and international issues through the organization of seminars, conferences and other activities between key stakeholders;
- provide channels for key stakeholders from the various fields to exchange opinions and research in an open and constructive atmosphere;
- disseminate information on research findings and other pertinent activities undertaken by or on behalf of the Institute;
- provide library facilities on relevant subjects pertaining to national and international issues;
- collaborate and cooperate with other bodies within or outside Malaysia for the furtherance of its objectives;
- assist and guide students and researchers to conduct research on national and international issues.

5. Institute for Development Studies, Sabah

The Institute for Development Studies (Sabah) or IDS is an autonomous, non-profit making research organisation. Established by the Sabah State Government on 1 August 1985, IDS is devoted to carrying out policy and problem-oriented research on socio-economic and public administrative development issues. IDS also serves as a think tank to the Sabah State Government. IDS was incorporated as a company limited by guarantee on 1 April 1986. Prior to its incorporation, the Institute functioned under the name of the Institute for Public Policy Analysis (IPPA). The vision of IDS is to be a premier research institute in Malaysia on development issues.

The fundamental objective of IDS is to promote and develop research-based decision-making process in government with regard to policy formulation and implementation. To achieve this objective, the Institute performs the following functions:

- conducts problem-solving research on administrative and socio-economic development, and submits policy proposals to the government for consideration;
- analyses and evaluates policy proposals submitted by the public and presents recommendations to the State Government for possible implementation;
- organises seminars, forums and discussions with the aim of tapping public opinions on problems and issues which can affect socio-economic development in Sabah; and
- maintains a high quality information system.

Among the strategic research programmes that have been identified are: Resource Development Programme; Enterprise Development Programme; Tourism and Environmental Programme; Agricultural Development Programme; and Economic Monitoring Programme.

The main funding sources of the Institute are (1) Grants from the Sabah State Government, (2) Grants from international funding agencies, and (3) Sale of IDS Publications.

Report on Visit to Singapore

Overview

This report is based on literature review, semi-structured interviews and materials gathered in Singapore. The visit to Singapore incorporated meetings with government agencies, research centres and thinktanks to examine Singapore's landscape for development policy research (Annex A). These were the Ministry of National Development (MND), Ministry of Education (MOE), Central Provident Fund Board (CPF), Civil Service College (CSC), Centre for Asian and Global Studies (CAG), Institute for Policy Studies (IPS), Institute for South East Asian Studies (ISEAS) and Singapore Institute for International Affairs (SIIA)[13]. Sections are as follows.

1. National Development Planning
2. Government Research & Analytical Units
3. Government to Researcher Relations: funding, independence & influence
4. Civil Service Capacity
5. Human capacity development
6. Looking Outwards for Knowledge
7. Resources & Incentives
8. Implications for Indonesia

1. National Development Planning

Singapore does not have a single national development plan. The Prime Minister's Department coordinates policy and forms a framework linked to the budget.

[13] International Development Research Centre office was also visited, but yielded nothing of direct relevance to this report given its focus on the region rather than Singapore. But, AusAID should keep contacts with IDRC on design and implementation of this initiative. IDRC has a wealth of experience and expertise that might be useful for advisory services or donor partnering.

Ministries, agencies and statutory boards contribute to policy in their areas of responsibility and are responsible for implementation and evaluation. Singapore's current national vision is to achieve a 'high-skilled people, innovative economy, distinctive global city' to support inclusive and sustainable growth for the next five to ten years. In 2009, the Prime Minister formed an Economic Strategies Committee to form recommendations and implementable priorities are reflected in the 2010 budget. Details on Singapore's background is in Annex B.

2. Government Research and Analytical Units

MND and CPF have specific areas dedicated to research, analysis and statistics (Annex C). They identified cases of research impact on policy delivery.

For instance, MND noted the shift in national policy emphasis on land and housing planning since 2004 away from concerns with the hardware and physical infrastructure, towards 'soft' infrastructure with a greater focus to outcomes that encourage community, social and ethnic harmony and environmental sustainability. MNDs mission was now,'An Endearing Home, A Distinctive Global City' in which issues such as the variety and quality of housing, encouraging more private ownership of housing and improving the social impact of building projects were important.

This shift in emphasis made it possible for MND to use economic research to shape options for a major land development at Marina Bay. Marina Bay is highly valuable real estate in the central business district. The government could have simply sold the real estate to property developers to recoup the revenues. Instead, MND conducted an initial study weighing the options and recommended instead mixed development of the area to provide commercial, residential, entertainment and environmental values to the Singapore community e.g., including an iconic 'sky garden' and state of the art public transport systems. This initial study was used to convince the head of MND on the case for commissioning a rigorous international cost benefit analysis and modelling from which the Marina Bay development has since proceeded. This is closer to the goals of Singapore's Master Plan for a good quality of life, enhance the business environment, preserve and enhance Singapore's physical identity to encourage Singaporeans to feel 'rooted' in the country.

CPF implements policies from the Ministry of Manpower. CPF research often surrounds data collection and impact surveys. CPF is responsible for managing Singapore's self funded retirement scheme whose funds are invested in healthcare and housing services. This national savings plan is an internationally successful model for ensuring that retirees have adequate funds to provide for ongoing needs. The CPF Advisory Board on Investments, Pensions and Insurance anticipated a problem arising from the ageing population. Under existing pension systems, retirement income ends at 82 years of age, but an increasing proportion of Singapore's ageing population is surviving beyond this age. Consequently, the CPF investigated options for meeting the shortfall in funding. CPF researchers examined the policy options through a combination of analysing their own data, tapping into expert panels and international experience gained through study tours. Such in-house analysis helped convince the government to switch from voluntary, to the introduction of mandatory, life annuities with the change to be rolled out from 2009 to 2013.

3. Government to Researcher Relations

The Institute of Policy Studies (IPS) and Centre for Asia and Globalisation (CAG), in the Lee Kuan Yew School of Public Policy of the National University of Singapore, the Institute for South East Asian Studies (ISEAS) and Singapore Institute for International Affairs (SIIA) conduct research on a range of issues pertinent to Singapore's long-term development. These include macro and microeconomic issues, socio-economic issues such as how health or education services interact with Singapore's ethnic mix, international trade and foreign policy.

These institutions represent a spectrum of types. The IPS is entirely government funded and its chief client is the government. The ISEAS is predominantly state funded, but produces a range of work for general Singapore public consumption, the private sector and international organisations and donors. CAG is a relatively new centre focusing on emerging, non-traditional security issues. SIIA more resembles a NGO-based advocacy think tank.

Broad impressions emerge from looking at these institutions. First, Singapore began with limited indigenous research capacity and institutions. The creation of think tanks like ISEAS which is 40 years old, and IPS which is over 20 years old, is consistent with the leadership's attempts to direct state resources into domestic analytical capacity to assist in advancing national development priorities for domestic and international policy.

Second, some say the think tank sector is underdeveloped, but in terms of numbers and rankings Singapore compares very well internationally (see Annex E).

Third, there are complex interactions between the funding, influence and independence of these institutions from government.

Funding

Anecdotally, social science researchers face better and more competitive conditions in Singapore than Indonesia (Box 1 Annex F). While figures are patchy, the impression is that government is a substantial financier of research institutions (Annex G).

ISEAS is in a unique position of having some 90 percent of its funds drawn from MOE which covers its operational costs and library. The rest of its research project funds have to be raised from donors both domestic and multilateral.

CAG was also in a very good funding position, given its place within LKYSPP of the NUS. For example, at NUS academic salaries had become more competitive in the last decade to attract good researchers and academics. Salary and conditions could include research assistants, cars and housing. The NUS endowment even enabled the university to fund its own scholarships to foreign and international students.

By contrast, most of SIIAs funds come from membership fees and fee based activities, which meant it had a lean resource base typical of an NGO. It draws on its membership network for donations and references to other potential donors to finance research projects. Researchers are drawn from the university sector or other research

centres and are not paid for their work, but recompensed through public recognition of their analyses. A chief difficulty for SIIA was the culture in Singapore for philanthropists and companies to prefer donating funds in return for concrete works of charity. Getting funding for less intangible goods like advocacy and the promotion of public dialogue was a hard sell. SIIA does not even have the administrative capacity to apply for most competitive funding grants from the government or donors. But, despite such privations SIIA had achieved its first ranking in the Global Go-To Think Tanks Index of 2009, which was generating more interest in its work.

ISEAS funding is a legacy of Singapore's early administrations prioritising Singapore's place, economically and politically, in the world. The institute focuses, for example, on research studying the implications of ASEAN membership, WTO and FTA negotiations. ISEAS has carved out a niche for offering an Asian perspective and is commissioned by the government, international donors and multilateral development banks to undertake such research. Its library is excellent and it publishes a wide range of books and studies focusing on Southeast Asian issues, including for international centres like the Indonesia Project, ANU. Established with the support of Singapore's first post-independence Prime Minister, ISEAS has strong historical ties to the government. 90 percent of its budget comes from the MOE. Its Director is also an Ambassador of Singapore's Foreign Service who regularly meets with officials to assess what is on the policy agenda. Even with all these links, ISEAS produces research for public consumption. The ASEAN Research Centre of ISEAS conducts studies and capacity building work on ASEAN, of which Singapore is an active member. ISEAS is one of four think tanks that MFA identifies in its annual budget.

Influence

IPS was created by government as a research institution to sit outside of government, but in reality a core part of its work it to provide analysis that is considered by senior members of the Singapore Government i.e., its researchers are predominantly Singaporean nationals. IPS stressed that it presented options rather than recommendations, to separate out its role from the decision making process. For example, it initiated the Forum on Economic Restructuring (IFER) in 2002 which was distilled into a comprehensive report regarding structural reform of the economy for immediate and medium term action. IPS was inspired by the government's formation of an Economic Review Committee (ERC) in late 2001 to 'formulate a blueprint to restructure the economy' to initiate the forum and report which was presented to the Deputy Prime Minister in an effort to contribute to the policy debate. IPS tries not to be academic, but to provide research in a way that government officials will read.

On the other hand, IPS also stressed that 'it does not simply tell the government what it wants to hear, it looks at issues that Singapore's policy makers *need* to hear'. For example, IPS noted that race and ethnicity were sensitive subjects, but it was important to debate them. IPS pointed to a book resulting from its Ethnic Relations Project. These studies apparently contributed to a policy debate about the effects of racial stereotyping and influenced changes in teacher training and debate about multiple language education in its schools. These examples do not prove policy impact, but IPS developed a general sense of where its research might have influenced thinking through interaction with government figures and bureaucrats.

Independence

There is space for independent research in Singapore, but within implicit parameters. Singapore's institutions do not attack government policy. This may be attributed to many factors. Historically, Singapore does not have a tradition of political pluralism. Researchers see opposition as less constructive than trying to work with government.

Academics and researchers are not considered self censoring, but sensitive to the policy climate. NUS research centres had academic and administrative autonomy. These conditions allow academic researchers to focus on their expertise while accessing good resources and income. For example, IPS used to be a not-for-profit public company until it merged with the LKYSPP, NUS in 2008. This might lessen its independence, but IPS gained predictable three year budgets. A chief benefit to CAG of being in LKYSPP was the reputation of the School and its endowment. These enabled it to attract international researchers in health, energy, political and democratic governance and environmental sustainability not available in Singapore.

The SIIA is the closest equivalent to the ideal of an independent non-profit think tank. Its research and advocacy is determined by the organisation's membership. While there were downsides in the form of lean budgets, a benefit of being small was the 'nimbleness' with which it could respond to issues needing urgent public attention. Its advisors, patrons, friends and donors cut across all sectors of Singapore society. But even with the typical NGO profile, SIIA rejected outright the US adversarial model and said that it prefers to 'work with' government and decision makers.

Singapore's think tanks collaborate with government. Some contend the bureaucracy has coopted academics and researchers. Whatever the case, the dynamic has served the country well insofar as it has allowed centres to emerge, be financially sustainable, produce substantial amounts of knowledge and inform policy making on national development over the last 40 years. Not all state intervention is direct i.e., contributions to endowment funds, MOE budget to higher education and directly commissioned studies gives some measure. Less tangible is the state's role in cultivating an environment where flagship institutions like NUS have successfully fostered the emergence of the LKYSPP and think tanks which have won international reputations, networks, and funding from the private sector, philanthropists and donors.

4. Education & Human Capacity

MOE supervises the state education system from basic through to tertiary. While Singapore has many private providers, its best universities are state funded. The state has substantial control over the education system, which is designed to produce graduates who are readily employable. Education outcomes are linked into workforce planning processes i.e., MOE works with MOM, Ministry of Trade and Industry (MTI), industry and employer organisations, trade unions and tertiary institutions to forecast labour force needs in terms of degrees or vocational training.

Singapore's long term trajectory has moved from industrial development, from goods to services exports and is rapidly heading towards a knowledge-based economy which sets the context for policy towards higher education. Singapore stresses linking education to competitive areas with industrial and services export applications e.g.,

sciences and technology, engineering, biotechnology and medicine, financial services. Some of its universities are internationally ranked and exporting education e.g., NUS aims to become a world leading knowledge enterprise, located in Asia, to meet the challenges of the 21st century. The emphasis on global competitiveness similarly influences the government's approach to research and development and its support of Research Centres of Excellence. Despite the emphasis on science and technology, MOE budget does support the Institute for South East Asian Studies and the National Education Institute (see Annex E).

5. Civil Service Capacity

In 1971, Singapore established the Staff Training Institute which later evolved into the CSC. The CSC became a Statutory Board under the Public Service Division (PSD) of the Prime Minister's Office (PMO) in 2001 (Annex D). The CSC is a relatively lean machine with 200 staff borrowed from existing and retired ranks and no full time faculty serving some 60,000 civil servants. Many CSC courses are compulsory, but since decentralisation of training budgets in the 1990s, agencies have the freedom to choose other providers and solicit specialised training courses.

CSC trains managers and leaders. Notably, Singapore has an 'elite' corps streamed and groomed to become senior administrators i.e., Permanent Secretaries and CEOs of statutory boards. It uses internationally designed and recognised models for teaching public service management, but had also moved to developing teaching materials based on Singaporean case studies.

PSD noted that while the CSC is meant to be self financing, it remains partially PSD subsidised. But, this budgetary support is considered a good investment in services whose value cannot be fully measured in terms of financial cost. Shifting to decentralised training budgets encouraged CSC to respond to shifting demands, which occurred via various mechanisms i.e., the Dean and CEO of CSC meets annually with Permanent Secretaries, bilateral relations with ministries and agencies, output measures and feedback on particular courses. For example, the administration is focused on attaining a 21st century bureaucracy that can manage in a more complex environment. CSC delivers training to support the Strategic Planning Centre of the PSD which was created to facilitate high level coordination of government responses to external shocks e.g., events like SARS epidemic or global economic crisis.

CSC had expanded into international training. It conducts courses for civil servants from Cambodia, Laos, Vietnam, Indonesia, Brunei and Malaysia. Some may be funded by their governments, while others receive scholarships from Singapore's development cooperation program or donors like the ADB.

6. Looking Outwards for Knowledge

The LKYSPP was founded on the Public Policy Programme which was established in 1992 in conjunction with the John F Kennedy School of Government at Harvard University. Government agencies all pointed to international study tours as a common method for informing the development of economic policies and providing for staff development. CSC uses US based public sector management tools, but is increasingly supplementing these with local case studies. Research centres like CAG and LKYSPP

not only draw substantially on foreign trained academics, but partner with institutions like the MacArthur and Rockefeller Foundations. By keeping abreast of international trends, Singapore's institutions avoid insularity and have reached the stage where they can begin to export some knowledge too. For example, Singapore's MFA funds LKYSPP degrees as a way of building foreign relations with other ASEAN nations. Multilateral and bilateral donors use Singapore's capacities e.g., the ADBs use of CSCs courses and AusAIDs funding of ISEAS capacity building for ASEAN.

Researchers in MND and CPF noted that they interact with external research sources. For example, CPF agrees to provide highly aggregated data to university based researchers conducting actuarial or investment based studies, since the CPF stands to benefit from the results of such research. Both agencies commission research from Singapore's academic institutions or international firms. Small value studies may be commissioned by direct appointment, whereas large value studies like the Marina Bay development would have to be approved and publicly tendered. Otherwise, economists and social scientists were expected to keep abreast of external studies to be aware of the domestic and international trends. All government officials pointed to study tours being used to gain access to international experience.

7. Resources and Incentives

Interlocutors in MND, CPF and MOE pointed to a number of factors which made for a strikingly positive attitude to their working environment including in policy research, economic and statistically based functions.

Singapore's civil service salaries are competitive, because they are benchmarked against similar jobs in the private sector, although without the bonuses of private sector employment. But, salary is not the only factor motivating staff. CPF and MND pointed to researchers getting an opportunity to work in an area of interest, present analyses to the Minister and the satisfaction of making concrete contributions to national policy e.g., CPF contributions to the Economic Strategies Committee or MND to the Concept Plan Review for 2030.

Senior managers were perceived as respecting data. Agency heads or senior managers had even encouraged staff to conduct over the horizon thinking. The climate supported researchers to form work plans and put cases forward to look into issues which might require more resources e.g., joint studies with other agencies.

Human resources were adequate. For example, CPF has 15 staff responsible for research and statistics. They hire staff from a variety of backgrounds including economics, social sciences and mathematics. They aimed for graduates with honours degrees. The government also funds internships and scholarships. These units seemed to face little difficulty with recruiting staff through interagency recruitment and secondments.

Data collection is resourced. For example, CPF has privileged access to statistics on the national savings scheme used internally, but in aggregated form that statistical data is shared with whole of government and with external researchers. CPF officers said they were more productive due to the electronic knowledge base of past policy

papers. The MOE pointed to a statistical database dating back 30 years which forms a powerful tool for creating time series data and forward planning.

Networks for sharing knowledge and expertise appear to be an established practice in Singapore. For example, public sector economists have informal networks where they meet to exchange experiences with current issues that might have wider interest within the field of government policy. These operate in addition to civil servants attending lectures and seminars that might be held by the CSC. These networks sometimes help agencies to identify candidates for filling vacancies.

8. Implications for Indonesia

For over 40 years, Singapore's leadership has pursued a vision of fostering domestic institutions and capacity that is globally competitive. Its knowledge sector represents an ecosystem that orients higher education, research and government to the interests of national economic and, increasingly, social development. In particular,

Singapore links education policy to human capacity and labour force planning.

- *It is not clear where Indonesia's higher education institutions fit into its knowledge sector. The role of Indonesia's universities as providers of education and grounds for independent research centres needs to be studied.*

Singapore's bureaucracy has dedicated research, data collection and statistical units.

- *The question is whether Indonesia has adequate analytical capabilities in its bureaucracy. BPS, BI, Bappenas, MoF inter alia are acquiring such capabilities, but the frequency with which donors contribute to basic data collation, field studies or macro-statistical studies suggests inadequate resourcing of a basic function of government.*

Civil service training has helped eradicate corruption and raised public service capacity to analyse policy options. The CSC has played a key role in instilling a public service ethos of sharing knowledge, expertise and labour and valuing evidence based policy making.

- *It is not clear Indonesia invests enough in civil service leadership, management training and post-graduate education. These skills exist, but may be spread thinly.*

- *The attractiveness of a civil service career sucks potential talent from academia into government. Rewards need to address this imbalance.*

- *Indonesians face disincentives to sharing individual expertise e.g., the practice of paying an honorarium for Indonesian staff to attend work meetings is a sign of these as are distorted remunerations to research work (see Annex F).*

Singapore has a number of reputable think tanks created through early state intervention. Some still mostly cater to the government, but others cater to many clients including the business sector, civil society and international organisations.

- *Singapore's government agencies have sustained external institutions through directing demand to them while permitting autonomy of administration so as not to undermine research independence e.g., CAG, LKYSPP, NUS. Indonesia should consider long term consistent government to thinktank relationships involving funding, policy interaction or ongoing work.*

Singapore's institutions adapt foreign intellectual capital to build local know-how.

- *Singaporean interlocutors suggested Indonesian government institutions were not as keen to take training opportunities compared to other countries in the region offered through its technical cooperation programs.*

- *For instance, given decentralisation it might be feasible to consider addressing the complex of issues: raising civil service competency; encouraging research in higher education institutions and thinktanks; contributing to human capacity; and networking all these elements within a discrete geographic region of Indonesia.*

Annex A: Glossary

Acronym	Full Title
CAG	Centre for Asia and Globalisation
CPF	Central Provident Fund (Board)
CSC	Civil Service College
IDRC	International Development Research Centre
IPS	Institute of Policy Studies
ISEAS	Institute for South East Asian Studies
LKYSPP	Lee Kuan Yew School of Public Policy
MND	Ministry of National Development
MoE	Ministry of Education
MoM	Ministry of Manpower
NUS	National University of Singapore
PMO	Prime Minister's Office
PSD	Public Service Division
SIIA	Singapore Institute for International Affairs

Annex B: Economic, Political and Institutional Development in Singapore

Singapore's experiences will resonate with Indonesia. It has reached a highly developed stage that Indonesia aspires to achieve. It has highly regarded government, higher education, research and civil service training institutions that have advanced its development. It is easily accessible to Indonesians and its institutions are open to stronger bilateral partnerships and technical cooperation. However, its distinctive features are worth noting when comparing its experiences to Indonesia.

Singapore formally gained sovereignty in 1965. It inherited bureaucratic structures and western educated elite from British colonial rule which provided the foundations for building good governance. While its achievement of developed country status was based on such foundations, its achievement of rapid economic and social development is due to high levels of stability and consistency of political leadership. Politically, it has been a one-party state and political pluralism is not institutionalised.

The lack of political pluralism has not prevented progress. On the contrary, Singapore has been called a 'developmental state' due to the strong role of government in economic development combined with effective ties with private enterprise. Singapore's leadership and elite are seen as capable and honest. Criticisms of the government are rare, leading critics to point to muffling of debate. On the other hand, politicians and senior officials informally discuss ideas with sectors of the community to gauge public sentiment and even western observers have noted this facilitates the 'social compact' where political authority rests on responsible exercise of power.

National development is inextricably linked to the needs of an outward looking, international trading economy. The national identity is built on concepts of success through commerce, hard work and merit. But, Singapore's policy makers are considering the possibility that the emphasis on rote learning and rankings in its

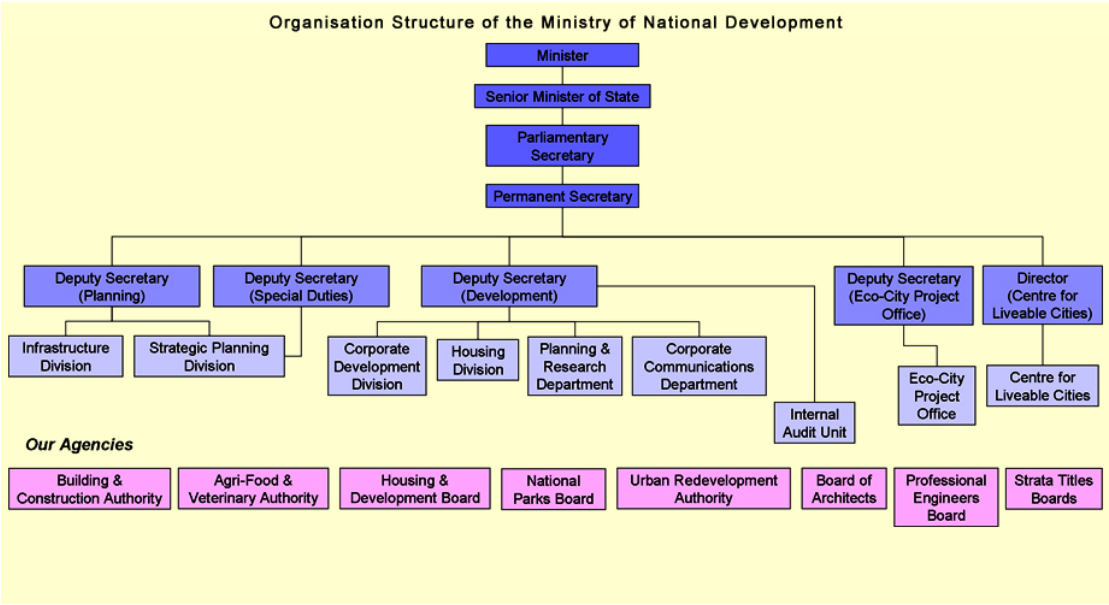
education systems may hamper the growth of creativity, critical thinking and innovation.

Singapore's national language is Malay. Its official languages are English, Malay, Mandarin and Tamil. Its education system has enabled widespread English fluency, which has been important to Singapore's economic success as a regional locus of international capital, business and trade. Maintaining social and ethnic harmony among Singapore's ethnic groups are underlying concerns for policy makers. Singapore's leaders manage public policy to create and reinforce a sense of national identity. Indirectly, the pursuit of full employment, equity of opportunity to earn a living, access to basic rights such as food, shelter and education have helped Singapore to downplay such tensions.

Singapore's civil society is considered less developed than other countries in the region. Its philanthropic sector is supported by tax incentives encouraging donations and laws governing the transparency of this sector. But, while Singapore's institutions are predisposed to fund charities, linking donations to advocacy and provocation of public debate is considered a 'hard sell' that constrains independent think tanks.

Annex C: Ministry of National Development & Central Provident Fund

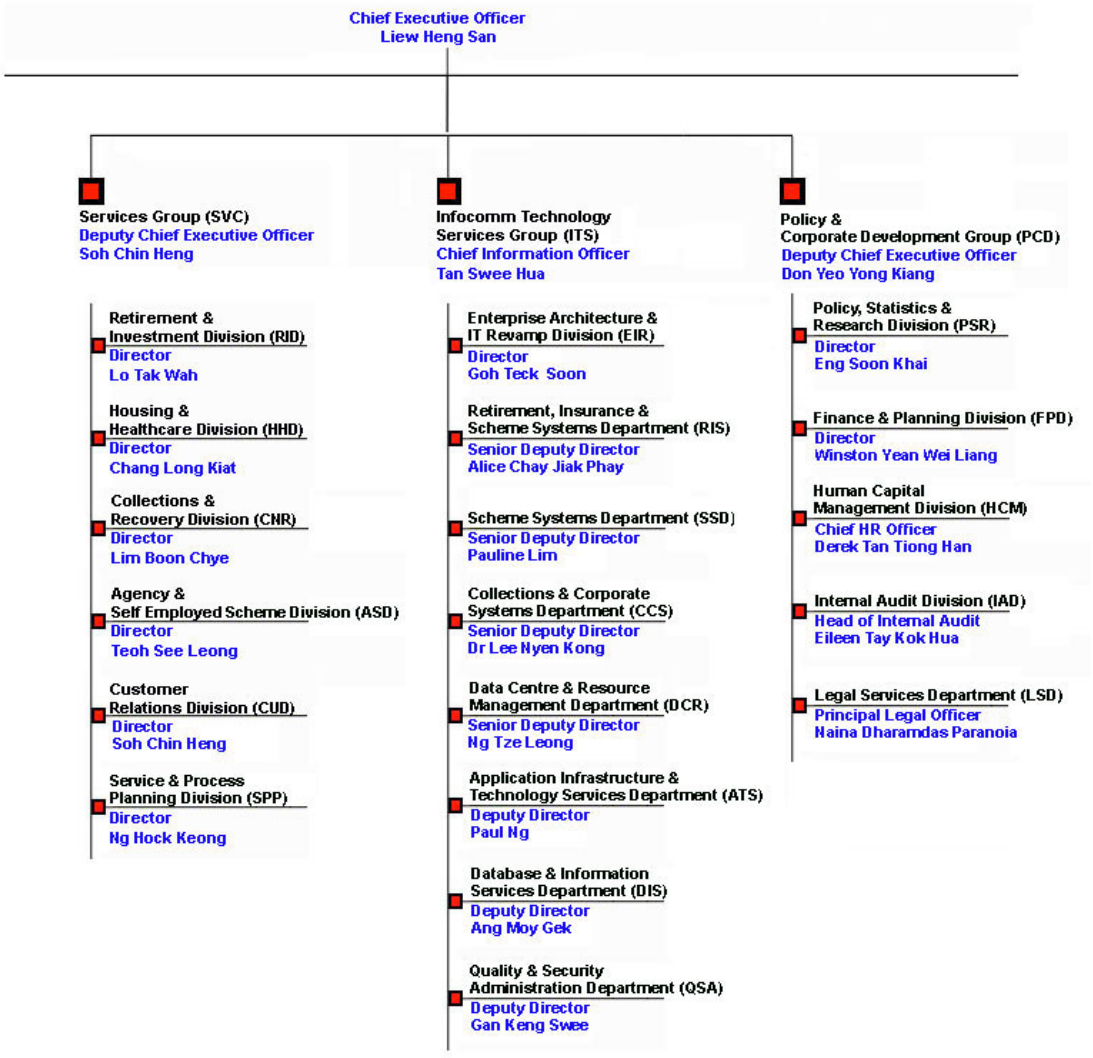
MND's vision emphasises both physical infrastructure and creating emotional attachment among Singaporeans, the global talents and corporations who are attracted to Singapore. It seeks to develop Singapore's unique distinguishing characteristics as a global city of knowledge, culture and excellence. Its mission is to fulfil on its primary responsibility of providing quality physical infrastructure for the nation by working with our partners in the public and private sectors. At the same time it aims for a 'vibrant, lively and exciting city which is developmentally (environmentally and socially) sustainable. MND has a specific Planning and Research Department.



Central Provident Fund Board

The Central Provident Fund (CPF) was originally introduced in 1955. It collects a fixed percentage of Singaporean salaries to provide for retirement, healthcare, home ownership, family protection and asset enhancement for future retirees. Originally, employees could only draw from the fund upon retirement, but in 1968 the Singapore PAP government allowed citizens to use part of their CPF savings to purchase flats built by the Housing and Development Board. In the year 1984, the Medisave scheme introduced to the general public to allow individuals to pay for their own or immediate family members hospitalisation expenses. The MediShield medical insurance scheme was introduced in the year 1990 in order to help all of the members to sustain and pay for long term medical expenses which arise from serious illness. Aside from health care, members of the Central Provident Fund of Singapore are also given an option to buy Singapore Telecom shares at a discounted rate in order to encourage passive investment within the members. A CPF investment scheme was introduced in 1997.

The CPF is an internationally recognised model for effective and financially sustainable social security payments. The CPF Policy and Corporate Development Group includes a Policy, Statistics and Research Division.



Annex D: Singapore Civil Service College

The Civil Service College (CSC) plays a unique role in developing strategic and leadership capacity for the Singapore Public Service. It is a Statutory Board under the Public Service Division (PSD), Prime Minister's Office. CSC partners the Public Service Division and other government agencies to deliver practitioner-focused programmes which build core public sector competencies. Its vision reinforces PMOs identity as a key central agency and speaks of its role to serve as a catalyst for thought leadership in the business of government.

CSC aims to build leadership and skills, nurture shared ethos and perspectives that are in sync with the emerging developments and trends. We seek to enhance the capacity of Public Service officers by exploring new opportunities for development. CSC continues to forge a tightly-knit partnership with Ministries and other agencies as part of a networked government.

The Public Service Division (PSD) sets policy directions for shaping the Public Service through public sector leadership development and implementing progressive and effective Human Resource and Development policies. It awards and administer scholarships to attract and groom leaders, and provide training for an all rounded development of public officers. Through the Public Service for the 21st Century (PS21) initiatives, it promotes quality service, productivity and innovation among public officers so as to achieve greater efficiency and effectiveness. It aims to build a first class public service for a successful and vibrant Singapore.

Annex E: Singapore & Indonesia's Research Centres & Thinktanks

Description	**Singapore**	**Indonesia**
No. of Think Tanks	6	20
Thinktanks listed among leading thinktanks of the world	SIIA	CSIS
Ranking among Top 50 non-US Thinktanks Worldwide	-	31 - CSIS
Ranking among Top 40 Thinktanks in Asia	3 - RSIS	4 - CSIS
	7 - LKYSPP	
	15 - SIIA	
	29 - ISEAS	

Information taken from the Global Go-To Think Tank Index 2009

Annex F:

Indonesian Researcher Compares Conditions Between Singapore and Indonesia

A researcher who has worked in Indonesia and Singapore gives views on different conditions in each country. Anecdotally, there are many signs in Indonesia that remuneration for research is distorted and not supporting think tanks, researchers or research sustainably.

In particular, Singaporean research institutions pay a decent fixed salary which frees the researcher to focus on his main area of expertise. Books are cheaper, and libraries and on-line journals have traditionally been more readily available in SingaporeIn Indonesia, low-base salaries force researchers to look for a range of activities i.e., writing press articles, presenting seminars and lectures, consultancy work and becoming contributors to research projects. The effect of this hunt for income is to distract researchers from focusing on their specialisations e.g., speaking at seminars in Indonesia is more lucrative than doing research. Moreover, while funding has a legitimate role in signalling demand, in Indonesia the balance is too much in favour of research topics being determined by the source of funding. This can interfere with an institution's ability to form long-term research programs.

Another manifestation of low base salaries is the effect it has on allocation of project budgets. For example, donors may hire an institution to undertake a research project with a field study component. The permanent researchers are expected to have a base salary and *assumed* not to require additional payments to analyse the data collected by the field workers and to write the report. Donors will only pay honoraria to cover the salaries and costs of researchers in the field, not acknowledging this leads to field workers receiving internationally competitive rates while the permanent researchers' salary is based on domestic rates. Consequently, permanent researchers are not willing to analyse the data without demanding additional incentives. Hence, the institution may feel the need to redirect budgets allocated to field work to the permanent researchers and to charge institutional fees.

Such distortions in remuneration might be addressed by raising base salaries to more competitive levels. The financial sustainability of the institutions would be assisted by having fee paying services accrue to the institution, not to the individual researchers. At the same time, the institutions could use better systems for budgeting and accounting transparency and evaluations of the researcher's performance against multi-year contracts.

Base salaries may have improved in recent years and could be promoting greater publication by Indonesian researchers of journal articles and book chapters.

Annex G: Estimated Budgets on Research & Thinktanks (where available).

Institution/Activity	Item	Budget	Notes on Source
Institute for South East Asian Studies	federal budget	11,435,500	Ministry of Education
Institute for Policy Studies	Total income	4,767,644	Annual Report 2007
LKYSPP, NUS	Endowment Fund	26,238,603.68	Total financial position $104,371,818.16 as of EOFY 2006.
LKYSPP, NUS	Centre for Asia & Globalisation	43,905.50	Total financial position $104,371,818.16 as of EOFY 2006.
LKYSPP, NUS	Scholarships	3,685,144.24	Total financial position $104,371,818.16 as of EOFY 2006.
SIIA	Total Revenue	1,200,000	2008, SIIA's 46th Annual General Meeting
National Education Institute	federal budget	131,024,100	Ministry of Education, federal budget
National Research Foundation	federal budget	5,321,400	Prime Minister's Office. The National Research Foundation (NRF) was set up to provide secretariat support to the Research, Innovation and Enterprise Council (RIEC). It will coordinate the research of different agencies within the larger national framework to provide a coherent strategic overview and direction. It will develop policies and plans to implement the five strategic thrusts for the national R&D agenda and to implement national research, innovation and enterprise strategies approved by the RIEC. The NRF has been allocated a budget of $5.22 million 2.1% of the total operating expenditure.
Ministry of Foreign Affairs	thinktanks	n.a.	Singapore Budget 2008 for MFA Expenditure Overview includes support to the work of thinktanks ISEAS, RSIS, ISAS and the Middle East Institute. Budget to this item unspecified, but portion of entire allocation to the objective 'Advancement of Singapore's national interests through friendly relation and close cooperation with the regional and international community' totalling $232.5 million
Research & Statistics Programme	Ministry of Manpower	11,855,200	This programme comes under the Manpower Research and Statistics Department. The functions carried out under this programme include the compilation, analysis and dissemination of statistical information on the labour market and the conduct of research studies on employment, unemployment and other manpower related topics.

Source: www.mof.gov.sg/budget_2008; www.siiaonline.org; IPS Annual Report 2007; www.singaporebudget.gov.sg

Outline of Literature Based Reviews Agreed with SEG in Relation to Nielsen TOR

How does country [X] support a 'knowledge sector' that informs and influences its policy makers on national development objectives?

- Background on Countries Selected

- Institutional Landscape

    - which are the main institutions supported by, or influential on, government development policy?
    - is there an overt government policy supporting these institutions?
    - In addition to government, what other kinds of institutions predominate?

- What are the main sources of institutional financing?

    - Estimated amounts going to sector
    - Public and private sources
    - Mechanisms for financing
    - Trends

- Research Priorities

    - are research priorities aligned to development policy, and how?
    - is this prioritisation reflected in financing to institutions?
    - main mediums of communication and fora for interaction with policy makers;

- Performance

    - what kinds of research and policy advice is produced by the sector?
    - measures of effectiveness by which research/advice influences policy?
    - main findings of any historical reviews;

- Conclusions

- Strengths and weaknesses
- Particular features worth further investigation by Indonesians.

Any tabled data up to 5 pages.
Selected text boxes

Revitalising Indonesia's Knowledge Sector for Development Policy: Terms of Reference for Visits to Singapore and Malaysia

Background

The concept note on 'Revitalising Indonesia's Knowledge Sector for Development Policy' envisaged comparative studies of a range of middle income countries' experiences with building domestic capacity to undertake research and analysis for development policy. Literature based studies of Brazil, Mexico and the Philippines have been conducted, synthesised and shared with the team in Jakarta. Literature based reviews indicate how general capacity for domestic social science analytical capacity and specific institutions have come into being, but shed little light on some issues of critical interest to Indonesia in shaping this initiative.

Visits to Singapore and Malaysia have been proposed to add concrete examples of how these countries have supported such capacity. There are various reasons why Malaysia and Singapore's experiences may resonate with Indonesia. These countries have reached a highly developed status that Indonesia aspires to achieve and applied national development planning to this end. They have highly regarded government, higher education, research and civil service training institutions. Cultural affinities and geographic proximity make them accessible to future Indonesian missions.

Purpose

The report on Singapore and Malaysia will contribute *concrete examples* illustrating how select government agencies and research institutions have created conditions for domestic research and analytical capacity and linked that capacity to development policy making processes. These examples will be placed within an historical perspective of key policies or institutions that support development planning. The report will attempt to highlight strengths and weaknesses that Singapore and Malaysia identify from their experiences, where possible.

Singapore and Malaysia's cases will add to the aforementioned synthesis of comparative experience. As a whole, the comparative papers/synthesis aim to generate Indonesian discussion of *options* for designing the infrastructure for this initiative. Examples from Singapore and Malaysia are meant to facilitate consideration. The report will not recommend what route Indonesia should take, which decision the Indonesian working groups or steering committee will make following rounded consideration of all diagnostics.

Meetings in Singapore

The following agencies and organisations will be visited. More details on Singapore's general conditions and the agencies and institutions in Attachment A.

1. Public Service Division, Prime Minister's Department (CSC supervision)
2. Planning & Research Department, Ministry of National Development
3. Central Provident Fund Board
4. Ministry of Education, Higher Education Division.

5. Lee Kuan Yew School of Public Policy (LKYSPP), and Institute of Policy Studies (IPS), at the National University of Singapore;
6. The Centre for Asia and Globalisation, LKYSPP, NUS
7. Singapore Institute of International Affairs (SIIA)
8. Institute of South East Asian Studies (ISEAS)
9. Singapore Civil Service College (CSC).
10. International Development Research Centre (IDRC).

Meetings in Malaysia

Provisionally, the following agencies and organisations will be visited. More details on Malaysia's general conditions and the agencies and institutions in Attachment B.

6. Economic Planning Unit, Prime Minister's Department (EPU) (*Malaysian Development Institute and Corporate & International Division*).
7. National Institute of Public Administration (INTAN)
8. Malaysian Institute of Economic Research (MIER)
9. Institute of Strategic and International Studies Malaysia (ISIS)
10. Institute for Development Studies, Sabah (IDS)
11. Ministry of Higher Education
12. University of Malaya, Faculty of Economics & Administration Department of Development Studies

Questions

Interviews have been requested with select government agencies in these countries involved in priority areas of development planning or implementation, higher education policy, research and civil service training institutions. Questions will be tailored to the different perspectives e.g., demand vs supply side issues (Attachment C). In broad terms, the questions aim to cover the following issues:

- how governments have historically supported domestic capacity in development planning through policies creating/sustaining domestic research institutions;

- how governments link the analytical capacity to formulating national development policy;

- main programs, organisational structures and budgets used to support the development of a domestic capacity, both human and institutional;

- how policy makers access knowledge services through external procurement;

Duration & Resources

One AusAID official to visit Singapore and Malaysia for 8-10 working days.

Outcomes

Two reports. Supporting materials, questions, contacts to form attachments.

PROGRAM IN MALAYSIA

Day/Date	Time	Meeting	Address
Sunday 21 February			
	15:40-20:50	MH0122	Le Meridien Kuala Lumpur Jalan Stesen Sentral 5 (tel: 603 2263 7222)
Monday 22 February			
	10:00-11:00	Dr Shankaran Nambiar, Senior Research Fellow, Policy Studies Division Malaysian Institute for Economic Research (MIER)	Daya Bumi near Pasar Seni
Tuesday 23 February			
	09:30-11:00	Norani Ibrahim, Director, Corporate Services and International Section (EPU), amongst others, Prime Minister's Department inc. Malaysian Development Institute, Policy and Planning, Economic Research.	Corporate Services & International Section 2nd Fl, Block B5, EPU, PMD, Putrajaya tel: 8872 3342 (Mr Siva)
	14:30-16:00	Zuraini binti Harun, surayamh, Sheikh Muhammed Sallehuddin Patail, Institute Tadbiran Awam Negara - INTAN (National Institute of Public Administration Malaysia)	Administration Building, close to the Director's Office, Kampus Utama Bukit Kiara, Jalan Bukit Kiara, 50480 Kuala Lumpur, Malaysia
Wednesday 24 February			
	16.00-17.00	Mr Steven Wong, Assistant Director General, Institute for Strategic and International Studies (ISIS)	ISIS
Thursday 25 February			
	07.30-10.05	MH2604	Kuala Lumpur - Kota Kinabalu

	11.00-12.00	Daruk Seri Panglima Clarence Malakaun, Chairman; Richard Koh, Senior Research Associate; Anthony Kiob, Senior Associate Director; Janiah Zaini, Senior Research Association inter alia, Institute for Development Studies (IDS) Sabah	Lot 2-5 Wisma SEDIA off Jalan Pintas, Penampang, 88994 Kota Kinabalu, Sabah
	19.15-21.40	MH 2631	Kota Kinabalu - Kuala Lumpur
Friday 26 February	22.40-09.35 (27 Feb)	MH0123	Fly KL back to Australia.

Time	Person	Location
Sunday 7 February: Travel to Singapore		
13.10-14.00	Cba-Sydney	QF1478 (Terminal 1 International)
16.35-21.35	Syd-Singapore	QF0319
Monday 8 February		
09.00-10.00	Professor Darryl Jarvis, Deputy Director, **Centre for Asia & Globalization** (researchers) LKYSPP, NUS.	Centre on Asia and Globalisation Lee Kuan Yew School of Public Policy National University of Singapore 2F, Oei Tiong Ham Building 469C Bukit Timah Road Singapore 259772 Centre for Asia and Globalization Meeting Room, Level 2.
12.30-14.00 (lunch)	LIM May-Ann, Acting Manager, Policy Research (and intern) **Singapore Institute of International Affairs.**	SIIA 2 Nassim Road Singapore 258370 (directly opposite Orchard Parade Hotel ask to be dropped there).
15.00-16.00	Arun Mahizhnan, Deputy Director and Li Lin Chan, Associate Director **Institute of Policy Studies**, LKYSPP, NUS.	Institute of Policy Studies, LKYSPP, NUS 1C Cluny Road House 5
Tuesday 9 February		
14.00-15.30	Soo Pei KHO, Deputy Director Planning & Research, International Relations Department and Kok Juan HAN **Ministry of National Development.**	5 Maxwell Road #21-00 & #22-00 Tower Block, MND Complex Singapore 069110
16.30-17.30	Ambassador Kesavapany, Director I**nstitute for South East Asian Studies**; Dr Chin Kin Wah Deputy Director; Ambassador Rod Severino Research Fellow and Head ASEAN Studies Centre, Dr Aris Ananta Senior Research Fellow and Terence Chong, Fellow & Coordinator Regional Social and Cultural Studies	Director's Meeting Room, Institute of Southeast Asian Studies, 30 Heng Mui Keng Terrace, off Pasir Panjang Road (11km), Singapore 119614.
Wednesday 10 February		
10.30-11.30	Caroline Loh Wern Ching, Senior Assistant Director Policy & Research, Libby Sang and Christine Seow (Michelle Teo Meiyan Senior Manager Corporate Relations & Planning introduced but not at meeting) **Central Provident Fund Board.**	Central Provident Fund Board CPF Building 79 Robinson Road Singapore 068897 x3041
15.00-17.00	Iva Aminuddin, Manager ASEAN and South Asia Desk and Tang Kin Ho, Senior Executive South Asia, **Civil Service College**	31 North Buona Vista Road, Singapore 275983 tel: 65-6874-7552

17.00-18.00	Ping Yee Deputy **CEO, Director of the Centre for Governance and Leadership** & **Senior Director of the Strategic Policy Office** of Civil Service College, Public Service Division of the Prime Minister's Office.	31 North Buona Vista Road, Singapore 275983 tel: 65-6874-7552
18.30-20.00	Mr Jeffrey Siow, Deputy Director and Mr Mingda Ho, Senior Head Policy, **Higher Education Division, Ministry of Education**	1 North Buona Vista Drive, Singapore 138675
Thursday 11 February		
14.00-15.00	Regional Director, Richard Fuchs, and Dr Ellie Osir Senior Program Specialist Innovation, Policy and Science Program **International Development Research Centre**	(IDRC) Regional Office for Southeast and East Asia 22 Cross Street #02-55, South Bridge Court Singapore 048421 tel: Dian - 6594-3701
Thursday 11 February: Depart Singapore		
20.40-07.35 (12 Feb)	Sing-Syd	SQ0221
09.40-10.30	Syd-Cba	QF1471

Interview Questions: Master List Nb. questions were disaggregated for different institutions and some may have been adjusted or dropped according to need.

Demand Conditions General	**Follow-Up Questions**
Does the Government integrate policy research into its national development policy and, if so, how would you describe the effects of this policy on your agency's role and functions?	Specifically, how do you see the role of research in contributing to the policy making process relating to your portfolio's main interests?
Who are the main users of your research or advice within the organisation?	If externally oriented, which are the other clients inside/outside government that most use your research?
What's the main coordinating mechanism used for linking policy advice and research to the policy objectives of your agency?	How does the research arm of the agency determine its priorities?
	Do these influence the structure, organisation and forward strategies for the research unit?
How would you describe the analytical resources you have to fulfil your research and advisory functions?	
Does your agency outsource research and advice?	If so, what kind of services are these external institutions providing that your agency most uses?
	Can you describe the processes and mechanisms used to procure external advice?
Does your agency seek international advice?	Have you noted any major long term trends, if so what has influenced these?
	Are certain types of international expertise considered more relevant than others?
Higher Education & Research (Supplementary Education & IDRC Only)	

Does the Government have a policy linking the higher education sector to research and development in the country?	If so, how would you describe the linkages between the two?
	Are there particular priority areas for research and development and what are they?
Are outcomes of the higher education sector research linked into national development policy and goals?	If so, how?
Does the Government support research within the higher education sector?	If so, how long has this policy been in place?
	What kind of mechanisms or institutions has the Government supported?
	Does it make any difference if the tertiary institution is private or public?
	How would you describe the effectiveness of these institutions and mechanisms?
	What have been the most important factors in this outcome?
Financial & Regulatory Environment	
What are the main external conditions affecting your organisation's operations?	Are there particular government policies, regulations or budgetary issues which affect the research role in particular?
Supply of Research and Researchers	
Do you set clear guidelines on content, form, structure and timing of advice?	How are these linked to policy priorities?
	Would you describe these guidelines relating to quantity or quality issues?
	Can you described the ways your agency ensures its analytical requirements are met?
Human Resources	

Do you have a recruitment strategy specific to the policy and analytical role?	If so, how would you describe the process of determining the right kind of personnel?
	What is the composition of researcher workforce in the institution?
Has your institution faced any challenges with recruiting and retaining staff?	If so, what do you think are the key factors?
	If not, what kind of strategies or policies do you think are helping you in this regard?
	Do you have systems for encouraging researchers to maintain skills or be more productive?
Civil Service Training (Supplementary CSC, PMO & INTAN only)	
Your institution provides specialist civil service training. What are the main links between this policy and national development objectives?	Have you noted any major changes in government demand for such graduates over time and, if so, what have been the major shifts?
	What areas do these graduates go into in government and are they limited to government?
	Are there any particular experiences which you would share with other countries considering taking this route on what to encourage or avoid?
Other	
Does the organisation have active links with Indonesia?	If so, why? What main forms do these links take?
	How does your organisation pursue these links?
Are there specific policies or practices relating to integrating women into policy making roles in government?	Can you describe what policies and practices are used in this regard?

Are there any experiences of policy, regulations or practices or other issues in your institution's history that you think Indonesia could examine further or avoid?	

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