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**The Southeast Asia (ASEAN) KLEMS Project**

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# Overview

- ASEAN and the World Economy
- ASEAN KLEMS
  - ✓ Potential contributions to policy analysis
  - ✓ Some practical applications
  - ✓ Starting points
- A tentative Plan of Implementation
- Conclusion

# Southeast Asia (10 Nations)



Country	Land area (sq. km)	Population (Millions)
Brunei Darussalam	5,270	0.4
Cambodia	176,520	14.8
Indonesia	1,811,570	243.0
Lao PDR	230,800	7.0
Malaysia	328,550	26.2
Myanmar	653,520	53.4
Philippines	298,170	99.9
Singapore	697	4.7
Thailand	510,890	66.4
Vietnam	310,070	89.6
<b>ASEAN-10</b>	<b>4,326,057</b>	<b>605.3</b>
<b>China</b>	<b>9,327,489</b>	<b>1,330.1</b>
<b>India</b>	<b>2,973,190</b>	<b>1,173.1</b>

## Southeast Asia vs. China and India (2009)

Country	Land area (sq. km)	Population (Millions)	GDP (Billions)		GDP Per capita	
			US\$	PPP\$	US\$	PPP\$
Brunei Darussalam	5,270	0.4	14.87	19.43	37,643	49,187
Cambodia	176,520	14.8	11.03	28.09	748	1,904
Indonesia	1,811,570	243.0	521	969.2	2,144	3,989
Lao PDR	230,800	7.0	5.788	15.07	828	2,155
Malaysia	328,550	26.2	209.8	381.1	8,020	14,568
Myanmar	653,520	53.4	26.83	56.92	502	1,066
Philippines	298,170	99.9	160.6	324.8	1,608	3,251
Singapore	697	4.7	165	235.7	35,098	50,138
Thailand	510,890	66.4	269.6	538.6	4,060	8,111
Vietnam	310,070	89.6	92.84	258.1	1,036	2,882
<b>ASEAN-10</b>	<b>4,326,057</b>	<b>605.3</b>	<b>1,477</b>	<b>2,827</b>	<b>2,441</b>	<b>4,671</b>
<b>China</b>	<b>9,327,489</b>	<b>1,330.1</b>	<b>4.814</b>	<b>8.789</b>	<b>3,619</b>	<b>6,608</b>
<b>India</b>	<b>2,973,190</b>	<b>1,173.1</b>	<b>1.095</b>	<b>3.56</b>	<b>933</b>	<b>3,035</b>

Sources: WDI, IMF

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# The Association of Southeast Asian Nations (ASEAN)



# The Association of Southeast Asian Nations (ASEAN)

- Area: 4.46 million km<sup>2</sup>
- Population: approx. 580 million people;  
8.7% of the world population.
- GDP (2009): PPP\$2.7 trillion;  
USD \$1.5 trillion.
- **ASEAN as a single economy** ranks as:
  - ✓ **the 6th largest economy in the PPP\$** term (after the US, China, Japan, India, and Germany).
  - ✓ **the 9th largest economy in US\$** term.

Country	GDP (PPP), 2009 \$M	World Rank
United States	14,256,275	1
People's Republic of China	8,765,240	2
Japan	4,159,432	3
India	3,526,124	4
Germany	2,806,266	5
United Kingdom	2,139,400	6
Russia	2,109,551	7
France	2,108,228	8
Brazil	2,013,186	9
Italy	1,740,123	10
Mexico	1,465,726	11
South Korea	1,364,148	12
Spain	1,360,605	13
Canada	1,281,064	14
Indonesia	962,471	15

Source: IMF

## Developing Asia and the World Economy, Share in Size and Growth, 1989-2008

Group	Period 1989-1995			Period 1995-2000			Period 2000-2004			Period 2004-2008		
	GDP Growth	Average Share		GDP Growth	Average Share		GDP Growth	Average Share		GDP Growth	Average Share	
		GDP	Growth		GDP	Growth		GDP	Growth		GDP	Growth
World (122 Economies)	2.3	100.0	100.0	3.6	100.0	100.0	3.2	100.0	100.0	4.4	100.0	100.0
G7 Economies	2.1	52.3	48.0	3.1	50.8	43.8	1.7	48.4	26.0	1.8	44.4	18.4
Developing Asia	7.5	15.2	48.9	5.7	18.5	29.1	6.6	20.7	41.9	8.2	24.0	44.6
Non-G7	2.1	9.6	8.7	3.7	9.6	9.7	2.3	9.7	6.9	2.7	9.1	5.5
Latin America	2.9	8.8	10.8	2.9	8.8	7.1	2.2	8.4	5.7	5.3	8.7	10.3
Eastern Europe	-6.7	8.4	-24.4	2.2	6.3	3.9	5.5	6.6	11.2	6.6	7.2	10.7
Sub-Sahara Africa	1.8	2.1	1.6	3.5	2.1	2.0	4.2	2.1	2.7	5.7	2.2	2.8
N. Africa and Middle-East	4.0	3.7	6.3	4.0	4.0	4.4	4.4	4.1	5.6	7.9	4.4	7.8

Source: Jorgenson and Vu (2010)

## Developing Asia and the World Economy, Share in Size and Growth, 1989-2008

Economy	GDP Growth	GDP Share		Growth Share		GDP Growth	GDP Share		Growth Share		GDP Growth	GDP Share		Growth Share		GDP Growth	GDP Share		Growth Share	
		Asia	World	Asia	World		Asia	World	Asia	World		Asia	World	Asia	World		Asia	World	Asia	World
Cambodia	7.5	0.1	0.0	0.1	0.1	7.1	0.1	0.0	0.2	0.1	7.9	0.2	0.0	0.2	0.1	10.1	0.2	0.0	0.2	0.1
Indonesia	7.7	8.2	1.2	8.5	4.1	0.7	7.1	1.3	0.9	0.3	4.4	6.0	1.2	4.0	1.7	5.7	5.4	1.3	3.8	1.7
Malaysia	9.0	2.8	0.4	3.3	1.6	4.7	2.8	0.5	2.3	0.7	4.1	2.5	0.5	1.6	0.7	6.7	2.3	0.6	1.9	0.8
Philippines	2.3	2.8	0.4	0.9	0.4	3.9	2.4	0.4	1.6	0.5	4.3	2.1	0.4	1.4	0.6	5.2	1.9	0.5	1.2	0.5
Singapore	8.5	1.6	0.2	1.8	0.9	6.1	1.7	0.3	1.8	0.5	3.6	1.5	0.3	0.8	0.3	5.9	1.5	0.4	1.1	0.5
Thailand	8.7	4.8	0.7	5.5	2.7	0.4	4.1	0.8	0.3	0.1	5.1	3.6	0.7	2.8	1.2	4.3	3.2	0.8	1.7	0.7
Vietnam	7.4	1.3	0.2	1.3	0.6	6.7	1.4	0.3	1.6	0.5	7.0	1.4	0.3	1.5	0.6	7.5	1.4	0.3	1.3	0.6
<b>ASEAN-7</b>	<b>7.4</b>	<b>21.8</b>	<b>3.3</b>	<b>21.5</b>	<b>10.5</b>	<b>2.5</b>	<b>19.6</b>	<b>3.6</b>	<b>8.7</b>	<b>2.5</b>	<b>4.7</b>	<b>17.4</b>	<b>3.6</b>	<b>12.3</b>	<b>5.2</b>	<b>5.7</b>	<b>15.9</b>	<b>3.8</b>	<b>11.1</b>	<b>4.9</b>
Bangladesh	4.5	1.6	0.2	1.0	0.5	5.1	1.4	0.3	1.3	0.4	5.2	1.4	0.3	1.1	0.5	6.1	1.3	0.3	0.9	0.4
<b>China</b>	<b>10.3</b>	<b>30.7</b>	<b>4.7</b>	<b>41.7</b>	<b>20.5</b>	<b>8.3</b>	<b>36.3</b>	<b>6.7</b>	<b>52.9</b>	<b>15.4</b>	<b>9.0</b>	<b>40.6</b>	<b>8.4</b>	<b>55.3</b>	<b>23.2</b>	<b>10.4</b>	<b>44.4</b>	<b>10.7</b>	<b>56.3</b>	<b>25.1</b>
Hong Kong	4.8	2.9	0.4	1.8	0.9	3.4	2.4	0.4	1.4	0.4	3.4	2.0	0.4	1.0	0.4	5.5	1.9	0.5	1.3	0.6
<b>India</b>	<b>5.0</b>	<b>20.9</b>	<b>3.2</b>	<b>14.0</b>	<b>6.8</b>	<b>5.7</b>	<b>19.8</b>	<b>3.7</b>	<b>19.8</b>	<b>5.8</b>	<b>6.2</b>	<b>19.5</b>	<b>4.0</b>	<b>18.4</b>	<b>7.7</b>	<b>8.4</b>	<b>19.7</b>	<b>4.7</b>	<b>20.2</b>	<b>9.0</b>
Nepal	5.0	0.3	0.0	0.2	0.1	4.7	0.3	0.0	0.2	0.1	3.5	0.2	0.0	0.1	0.1	3.6	0.2	0.0	0.1	0.0
Pakistan	4.5	3.8	0.6	2.2	1.1	3.2	3.1	0.6	1.8	0.5	4.2	2.8	0.6	1.8	0.8	6.3	2.6	0.6	2.0	0.9
South Korea	7.7	10.8	1.6	11.1	5.4	4.3	10.1	1.9	7.6	2.2	4.5	9.9	2.0	6.8	2.9	5.0	8.4	2.0	5.1	2.3
Sri Lanka	5.4	0.7	0.1	0.5	0.3	4.9	0.7	0.1	0.6	0.2	3.4	0.6	0.1	0.3	0.1	6.4	0.5	0.1	0.4	0.2
Taiwan	6.9	6.6	1.0	6.1	3.0	5.1	6.3	1.2	5.7	1.7	3.3	5.7	1.2	2.8	1.2	4.1	5.0	1.2	2.5	1.1
<b>All Developing Asia</b>	<b>7.5</b>	<b>100.0</b>	<b>15.2</b>	<b>100.0</b>	<b>48.9</b>	<b>5.7</b>	<b>100.0</b>	<b>18.5</b>	<b>100.0</b>	<b>29.1</b>	<b>6.6</b>	<b>100.0</b>	<b>20.7</b>	<b>100.0</b>	<b>41.9</b>	<b>8.2</b>	<b>100.0</b>	<b>24.0</b>	<b>100.0</b>	<b>44.6</b>

Source: Jorgenson and Vu (2010)

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## Developing Asia and the World Economy, Share in Size and Growth, 1989-2008

### ASEAN-7

Economy	Period 1989-1995							Period 1995-2000						
	GDP Growth	GDP Share			Growth Share			GDP Growth	GDP Share			Growth Share		
		Group	Asia	World	Group	Asia	World		Group	Asia	World	Group	Asia	World
Cambodia	7.5	0.7	0.1	0.0	0.7	0.1	0.1	7.1	0.7	0.1	0.0	2.0	0.2	0.1
Indonesia	7.7	37.9	8.2	1.2	39.5	8.5	4.1	0.7	36.4	7.1	1.3	10.0	0.9	0.3
Malaysia	9.0	12.7	2.8	0.4	15.4	3.3	1.6	4.7	14.1	2.8	0.5	26.2	2.3	0.7
Philippines	2.3	13.0	2.8	0.4	4.0	0.9	0.4	3.9	12.0	2.4	0.4	18.4	1.6	0.5
Singapore	8.5	7.5	1.6	0.2	8.6	1.8	0.9	6.1	8.6	1.7	0.3	20.8	1.8	0.5
Thailand	8.7	22.1	4.8	0.7	25.8	5.5	2.7	0.4	21.0	4.1	0.8	3.7	0.3	0.1
Vietnam	7.4	6.1	1.3	0.2	6.1	1.3	0.6	6.7	7.1	1.4	0.3	18.9	1.6	0.5
<b>All Group</b>	<b>7.4</b>	<b>100.0</b>	<b>21.8</b>	<b>3.3</b>	<b>100.0</b>	<b>21.5</b>	<b>10.5</b>	<b>2.5</b>	<b>100.0</b>	<b>19.6</b>	<b>3.6</b>	<b>100.0</b>	<b>8.7</b>	<b>2.5</b>

Economy	Period 2000-2004							Period 2004-2008						
	GDP Growth	GDP Share			Growth Share			GDP Growth	GDP Share			Growth Share		
		Group	Asia	World	Group	Asia	World		Group	Asia	World	Group	Asia	World
Cambodia	7.9	0.9	0.2	0.0	1.5	0.2	0.1	10.1	1.0	0.2	0.0	1.8	0.2	0.1
Indonesia	4.4	34.7	6.0	1.2	32.7	4.0	1.7	5.7	34.1	5.4	1.3	34.1	3.8	1.7
Malaysia	4.1	14.6	2.5	0.5	12.9	1.6	0.7	6.7	14.6	2.3	0.6	17.0	1.9	0.8
Philippines	4.3	12.3	2.1	0.4	11.3	1.4	0.6	5.2	12.1	1.9	0.5	10.9	1.2	0.5
Singapore	3.6	8.8	1.5	0.3	6.7	0.8	0.3	5.9	9.2	1.5	0.4	9.5	1.1	0.5
Thailand	5.1	20.6	3.6	0.7	22.5	2.8	1.2	4.3	20.2	3.2	0.8	15.0	1.7	0.7
Vietnam	7.0	8.2	1.4	0.3	12.4	1.5	0.6	7.5	8.9	1.4	0.3	11.7	1.3	0.6
<b>All Group</b>	<b>4.7</b>	<b>100.0</b>	<b>17.4</b>	<b>3.6</b>	<b>100.0</b>	<b>12.3</b>	<b>5.2</b>	<b>5.7</b>	<b>100.0</b>	<b>15.9</b>	<b>3.8</b>	<b>100.0</b>	<b>11.1</b>	<b>4.9</b>

Source: Jorgenson and Vu (2010)

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## Developing Asia and the World Economy, Sources of Growth, 1989-2008

Economy	Period 1989-1995							
	GDP Growth	Sources of Growth (% ppa)						TFP
		Capital Input			Labor Input			
		All	ICT	Non-ICT	All	Quality	Hours	
Cambodia	7.47	2.27	0.20	2.07	4.33	0.61	3.72	0.87
Indonesia	7.75	2.91	0.16	2.75	1.43	0.47	0.96	3.41
Malaysia	8.98	4.06	0.44	3.62	2.34	0.42	1.92	2.57
Philippines	2.28	1.13	0.09	1.03	2.15	0.39	1.75	-0.99
Singapore	8.53	3.61	0.47	3.13	2.07	0.07	2.00	2.86
Thailand	8.66	3.95	0.15	3.80	0.44	0.37	0.07	4.27
Vietnam	7.40	1.44	0.15	1.28	2.05	0.58	1.47	3.91
<b>ASEAN-7</b>	<b>7.43</b>	<b>3.01</b>	<b>0.21</b>	<b>2.80</b>	<b>1.52</b>	<b>0.41</b>	<b>1.12</b>	<b>2.89</b>
Bangladesh	4.54	1.92	0.08	1.83	2.02	0.59	1.43	0.61
China	10.26	3.20	0.14	3.05	1.32	0.50	0.82	5.75
Hong Kong	4.83	2.00	0.29	1.71	0.88	0.23	0.65	1.95
India	5.03	1.94	0.08	1.85	1.86	0.48	1.39	1.23
Nepal	4.99	1.63	0.16	1.47	1.97	0.55	1.43	1.39
Pakistan	4.50	1.75	0.22	1.53	1.59	0.56	1.03	1.16
South Korea	7.73	3.88	0.42	3.47	1.65	0.34	1.31	2.20
Sri Lanka	5.41	1.54	0.16	1.37	1.23	0.38	0.85	2.65
Taiwan	6.92	3.06	0.28	2.78	0.98	0.28	0.70	2.88
<b>All Group</b>	<b>7.54</b>	<b>2.83</b>	<b>0.19</b>	<b>2.64</b>	<b>1.50</b>	<b>0.44</b>	<b>1.06</b>	<b>3.21</b>

Source: Jorgenson and Vu (2010)

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## Developing Asia and the World Economy, Sources of Growth, 1989-2008

Economy	Period 1995-2000							
	GDP Growth	Sources of Growth (% ppa)						TFP
		Capital Input			Labor Input			
		All	ICT	Non-ICT	All	Quality	Hours	
Cambodia	7.06	3.33	0.38	2.96	1.38	0.51	0.86	2.35
Indonesia	0.70	2.08	0.13	1.95	1.95	0.44	1.50	-3.33
Malaysia	4.68	3.06	0.61	2.45	2.73	0.28	2.45	-1.11
Philippines	3.86	1.54	0.23	1.30	1.22	0.35	0.87	1.10
Singapore	6.13	3.99	0.82	3.18	2.71	0.11	2.61	-0.57
Thailand	0.45	1.42	0.15	1.27	0.54	0.34	0.20	-1.52
Vietnam	6.72	3.58	0.43	3.15	2.29	0.59	1.69	0.85
<b>ASEAN-7</b>	<b>2.52</b>	<b>2.29</b>	<b>0.30</b>	<b>2.00</b>	<b>1.76</b>	<b>0.37</b>	<b>1.39</b>	<b>-1.53</b>
Bangladesh	5.08	2.60	0.15	2.46	2.15	0.53	1.62	0.32
China	8.27	3.87	0.37	3.50	1.18	0.43	0.75	3.22
Hong Kong	3.42	2.49	0.49	2.00	1.46	0.19	1.26	-0.52
India	5.67	2.27	0.18	2.08	1.52	0.45	1.06	1.89
Nepal	4.71	1.97	0.29	1.68	2.12	0.48	1.64	0.61
Pakistan	3.21	1.25	0.31	0.94	2.34	0.49	1.85	-0.38
South Korea	4.28	2.76	0.53	2.23	0.06	0.27	-0.21	1.46
Sri Lanka	4.91	2.06	0.24	1.82	2.50	0.37	2.13	0.35
Taiwan	5.11	2.83	0.43	2.40	0.59	0.27	0.33	1.68
<b>All Group</b>	<b>5.68</b>	<b>2.91</b>	<b>0.33</b>	<b>2.58</b>	<b>1.28</b>	<b>0.39</b>	<b>0.88</b>	<b>1.48</b>

Source: Jorgenson and Vu (2010)

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## Developing Asia and the World Economy, Sources of Growth, 1989-2008

Economy	Period 2000-2004							
	GDP Growth	Sources of Growth (% ppa)						TFP
		Capital Input			Labor Input			
		All	ICT	Non-ICT	All	Quality	Hours	
Cambodia	7.95	3.97	0.29	3.68	6.27	0.58	5.69	-2.29
Indonesia	4.39	1.08	0.17	0.91	0.77	0.08	0.69	2.54
Malaysia	4.12	1.42	0.50	0.92	1.28	0.12	1.16	1.42
Philippines	4.27	1.09	0.29	0.80	2.38	0.09	2.28	0.80
Singapore	3.55	1.63	0.65	0.98	1.61	0.59	1.02	0.32
Thailand	5.08	0.33	0.21	0.12	1.84	0.13	1.70	2.91
Vietnam	7.02	3.79	0.79	3.00	1.83	0.21	1.62	1.41
<b>ASEAN-7</b>	<b>4.65</b>	<b>1.27</b>	<b>0.34</b>	<b>0.94</b>	<b>1.47</b>	<b>0.16</b>	<b>1.31</b>	<b>1.91</b>
Bangladesh	5.17	2.71	0.17	2.53	1.92	0.10	1.83	0.54
China	8.96	3.91	0.55	3.37	1.18	0.50	0.68	3.86
Hong Kong	3.35	1.44	0.47	0.97	0.34	0.04	0.31	1.57
India	6.20	2.37	0.32	2.05	1.80	0.20	1.60	2.03
Nepal	3.51	1.42	0.14	1.28	2.13	0.25	1.88	-0.05
Pakistan	4.24	0.95	0.34	0.62	2.12	0.08	2.05	1.17
South Korea	4.54	1.99	0.50	1.50	0.33	0.06	0.27	2.22
Sri Lanka	3.37	1.72	0.29	1.43	2.80	0.23	2.57	-1.15
Taiwan	3.27	1.48	0.43	1.06	0.64	0.71	-0.07	1.15
<b>All Group</b>	<b>6.57</b>	<b>2.66</b>	<b>0.44</b>	<b>2.22</b>	<b>1.27</b>	<b>0.32</b>	<b>0.95</b>	<b>2.64</b>

Source: Jorgenson and Vu (2010)

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## Developing Asia and the World Economy, Sources of Growth, 1989-2008

Economy	Period 2004-2008							
	GDP Growth	Sources of Growth (% ppa)						TFP
		Capital Input			Labor Input			
		All	ICT	Non-ICT	All	Quality	Hours	
Cambodia	10.10	4.35	0.23	4.13	1.94	0.59	1.35	3.81
Indonesia	5.72	1.78	0.29	1.49	1.55	0.08	1.47	2.39
Malaysia	6.68	1.75	0.53	1.22	1.16	0.12	1.04	3.77
Philippines	5.16	0.95	0.41	0.55	1.52	0.09	1.42	2.69
Singapore	5.92	2.19	0.66	1.53	5.00	1.21	3.79	-1.27
Thailand	4.25	1.21	0.35	0.86	1.17	0.13	1.04	1.88
Vietnam	7.53	4.05	0.66	3.39	1.42	0.21	1.21	2.06
<b>ASEAN-7</b>	<b>5.72</b>	<b>1.83</b>	<b>0.42</b>	<b>1.41</b>	<b>1.72</b>	<b>0.22</b>	<b>1.50</b>	<b>2.17</b>
Bangladesh	6.11	2.80	0.15	2.65	1.49	0.10	1.39	1.82
China	10.43	4.38	0.58	3.80	0.99	0.50	0.50	5.06
Hong Kong	5.54	1.29	0.44	0.85	1.18	0.04	1.14	3.07
India	8.42	3.75	0.47	3.28	1.79	0.20	1.59	2.89
Nepal	3.61	1.47	0.32	1.15	2.15	0.25	1.90	-0.02
Pakistan	6.25	1.71	0.51	1.20	2.55	0.08	2.47	1.99
South Korea	5.04	1.80	0.47	1.33	-0.24	0.06	-0.30	3.48
Sri Lanka	6.43	2.53	0.37	2.16	-0.26	0.23	-0.49	4.16
Taiwan	4.11	1.43	0.38	1.05	1.35	0.71	0.64	1.33
<b>All Group</b>	<b>8.22</b>	<b>3.32</b>	<b>0.50</b>	<b>2.82</b>	<b>1.23</b>	<b>0.34</b>	<b>0.89</b>	<b>3.68</b>

Source: Jorgenson and Vu (2010)

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# ASEAN and Developing Asia A Projection (2009-2019)

## Developing Asia (16 Economies)

Economy	Productivity Growth					GDP Growth				
	Actual		Projections, 2009-2019			Actual		Projections, 2009-2019		
	1998-2008	1989-2008	Pessimistic	Base-case	Optimistic	1998-2008	1989-2008	Pessimistic	Base-case	Optimistic
Cambodia	3.7	3.6	3.6	4.7	5.8	8.8	8.0	5.4	6.5	7.6
Indonesia	2.9	3.0	1.7	2.7	3.7	4.5	4.8	3.0	4.0	5.0
Malaysia	3.4	3.6	2.6	3.8	4.9	5.6	6.3	4.4	5.5	6.6
Philippines	2.0	1.3	0.8	1.9	2.9	4.6	3.7	2.7	3.8	4.8
Singapore	2.3	2.6	1.5	2.0	2.5	5.2	6.3	1.7	2.2	2.7
Thailand	2.5	3.8	1.5	2.4	3.2	4.5	4.8	1.8	2.7	3.5
Vietnam	4.3	4.9	3.9	4.7	5.6	6.7	7.2	5.0	5.8	6.7
Bangladesh	3.0	2.8	2.8	3.2	3.5	5.4	5.1	4.7	5.0	5.3
China	7.9	8.4	6.6	7.3	8.1	8.9	9.5	6.7	7.5	8.2
Hong Kong	3.5	3.0	2.5	3.7	4.9	4.7	4.3	2.1	3.3	4.5
India	4.4	4.0	4.3	4.7	5.0	6.7	6.2	6.0	6.4	6.8
Nepal	1.0	1.7	0.5	1.0	1.5	3.8	4.3	2.9	3.4	3.9
Pakistan	1.9	1.7	0.9	1.8	2.6	4.8	4.5	3.5	4.3	5.1
South Korea	4.7	5.0	4.1	4.8	5.5	5.4	5.6	4.1	4.8	5.5
Sri Lanka	3.1	3.1	3.1	4.0	4.8	4.8	5.1	3.7	4.6	5.5
Taiwan	3.4	4.4	2.6	3.1	3.5	4.0	5.1	2.7	3.1	3.5
<b>All Group</b>	<b>5.7</b>	<b>5.9</b>	<b>4.7</b>	<b>5.4</b>	<b>6.1</b>	<b>7.1</b>	<b>7.4</b>	<b>5.4</b>	<b>6.1</b>	<b>6.8</b>

Source: Jorgenson and Vu (2010)

KLEMS-2010-KV

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# The ASEAN KLEMS Project

## Potential Contributions

- Provide insights into both strategic and operational policy issues on economic growth and industrial development in each individual country.
  - ✓ Enhance efficiency and competitiveness
- Foster regional collaboration and integration
- Promote integration of ASEAN into the world economy

# The ASEAN KLEMS Project

## Practical Applications

- Analysis of sources of growth at the national and industry levels
- Analysis of structural changes
- Analysis of competitiveness at the industry and country levels in comparative perspectives
- Better measurement and understanding of the contribution to growth of:
  - ✓ Capital quality
  - ✓ Labor quality
- Projection of productivity and GDP growth



# The ASEAN KLEMS Project

## Starting Points

- Capacity and resources:
- Data availability:
- A Tentative Implementation Plan

# The ASEAN KLEMS Project

## Starting Points

- **Capacity and resources:**
  - ✓ The ASEAN KLEMS project will be carried out by the Lee Kuan Yew School of Public Policy (National University of Singapore).
    - Concepts
    - Commitment
    - Capacity

# The ASEAN KLEMS Project

## Starting Points

- **Data availability and collaboration:**
  - ✓ Input-Output Tables and Reference Years
    - Singapore (8): 1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005.
    - Vietnam (5): 1989, 1995, 2000, 2005, 2007
    - Philippines (4): 1985, 1990, 1994, 2000
    - Malaysia (6): 1978, 1983, 1987, 1991, 2000, 2005
    - Indonesia (7): 1971, 1975, 1980, 1985, 1990, 1995, 2000

# The ASEAN KLEMS Project

## Starting Points

- **Collaboration:**
  - ✓ Statistical agencies
  - ✓ Governments
  - ✓ Universities and research institutes in ASEAN countries
  - ✓ Groningen growth and development centre
  
- **Coordination with the ASEAN secretariat**

# The ASEAN KLEMS Project

## A Tentative Implementation Plan

- Work with Groningen growth and development centre to establish a consistent methodology for carrying out the ASEAN KLEMS project through the case of Indonesia (9/2010-3/2011).
- Launch ASEAN KLEMS, focusing on ASEAN-6 (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam)
  - ✓ 2011: Singapore, Vietnam, and Indonesia
  - ✓ 2011 – 2012: Malaysia, Thailand, and the Philippines
  - ✓ 2012 and later: Other ASEAN nations
    - this extension depends on the availability of data and the interest/collaboration of respective governments
- Publish a volume on comparative perspectives of economic growth in Southeast Asia in 2012-2013

# Back-up Slide

## Seven Major Developing and Transition Economies (7 Economies)

Economy	Period 1989-1995					Period 1995-2000				
	GDP Growth	GDP Share		Growth Share		GDP Growth	GDP Share		Growth Share	
		Group	World	Group	World		Group	World	Group	World
Brazil	1.7	15.7	3.2	8.9	2.3	2.0	14.4	3.1	5.7	1.7
China	10.3	23.2	4.7	78.9	20.5	8.3	31.3	6.7	52.0	15.4
India	5.0	15.7	3.2	26.1	6.8	5.7	17.1	3.7	19.4	5.8
Indonesia	7.7	6.2	1.2	15.9	4.1	0.7	6.1	1.3	0.9	0.3
Mexico	2.1	10.6	2.1	7.3	1.9	5.3	9.9	2.1	10.5	3.1
Russia	-8.4	20.7	4.2	-57.9	-15.0	1.6	12.5	2.7	4.0	1.2
South Korea	7.7	8.1	1.6	20.8	5.4	4.3	8.7	1.9	7.5	2.2
<b>All group</b>	<b>3.0</b>	<b>100.0</b>	<b>20.2</b>	<b>100.0</b>	<b>26.0</b>	<b>5.0</b>	<b>100.0</b>	<b>21.5</b>	<b>100.0</b>	<b>29.7</b>

Economy	Period 2000-2004					Period 2004-2008				
	GDP Growth	GDP Share		Growth Share		GDP Growth	GDP Share		Growth Share	
		Group	World	Group	World		Group	World	Group	World
Brazil	2.7	12.3	2.9	5.5	2.4	4.4	10.6	2.9	5.9	2.8
China	9.0	35.4	8.4	52.5	23.2	10.4	39.3	10.7	52.7	25.1
India	6.2	16.9	4.0	17.4	7.7	8.4	17.4	4.7	18.9	9.0
Indonesia	4.4	5.2	1.2	3.8	1.7	5.7	4.8	1.3	3.5	1.7
Mexico	1.5	9.4	2.2	2.4	1.0	3.2	8.6	2.3	3.5	1.7
Russia	5.9	12.2	2.9	11.9	5.3	7.0	11.9	3.2	10.7	5.1
South Korea	4.5	8.6	2.0	6.5	2.9	5.0	7.4	2.0	4.8	2.3
<b>All group</b>	<b>6.0</b>	<b>100.0</b>	<b>23.8</b>	<b>100.0</b>	<b>44.2</b>	<b>7.8</b>	<b>100.0</b>	<b>27.1</b>	<b>100.0</b>	<b>47.7</b>

Source: Jorgenson and Vu (2010)