Green Indulgence – Paradox of Doing Green Shopping Mall

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SETTING THE SCENE

The Industry
The Consumption
Indulgence vs green
Demand side Management
550 malls in the country serving 30.3 million population (approximately 136.4 million ft²-NLA (Net Lettable Area) of shopping mall space, or national average of 4.5 ft²-NLA/person.

218/550 malls in the country are in Kuala Lumpur, Selangor and Putrajaya where 7.7 million population shares 62.2 million ft²-NLA or 8 ft²-NLA per capita, same as Penang where 1.7 million population enjoys 14 million ft² of NLA equivalent to 41 malls.

16.8 million ft²-NLA is serving 3.5 million population in Johor giving 4.8 ft²-NLA/capita, a current benchmark of southern region.
STATISTICS

- Average annual growth rate of Malaysia shopping malls over the past 10 years is 8.6%.
- Ironically KL/Selangor/Putrajaya, Penang (both 8.0 ft2-NLA per capita) and Johor (4.8 ft2-NLA per capita) are few of the lowest between 4.9%-8.6% p.a. only,
- while the rests of the states are all experiencing double digit growth rate between 12% (Melaka) to 21.3% (Kelantan).

STATISTICS

- If we look at Terengganu & Sabah, these two states are still having 1.3 and 1.6 ft2-NLA per capita only respectively, far below than national average of 4.5 ft2-NLA per capita, and incidentally both states are registering 18.8% and 14.3% mall space growth,
- Melaka the other tourism state too is registering 12% shopping mall space growth having 21 malls serving population of 0.9 million (5.4 ft2-NLA per capita), comparing with 8.2 ft2-NLA per capita of 41 malls in Penang serving 1.7 million population.
Monthly Electricity costs of Malaysia Shopping malls by ft²-NLA is RM1.01/ft². From our sampling data, middle/middle upper and CP malls are having average electricity costs between RM 0.96-1.11/ft²-NLA. Particularly Super Regional and Luxury malls registers higher electricity costs up to RM1.28-1.32/ft² typically 18% higher than the rests.

Average Service & Promotional charge for these malls are RM2.25/ft²-NLA, taking average of the larger sampling group, middle upper positioning malls and CP malls are averagely having RM2.57/ft² & RM2.68/ft² while neighbourhood and non-central region malls are ranged between 1.25/ft² to 1.94/ft². Superregional and luxury malls having average service & promotional charges up to RM4.55 & RM4.99/ft². That is an indication of the correlation between service & promotional costs and mall region, positioning & size.
Commercial Buildings in Klang Valley

NLA
- Office – approx. 83M ft²
- Retail – approx. 62M ft²

Energy consumption –
- Office – RM498,000,000 / yr
- Retail – RM744,000,000 / yr

TOTAL = RM 1,242,000,000 / yr

Key Energy Components (Bld+Mall) (Big Ticket Items)

<table>
<thead>
<tr>
<th>Key Components</th>
<th>Est Energy Costs</th>
<th>If 15% savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-40% Air Conditioning</td>
<td>RM496,000,000</td>
<td>RM74,000,000</td>
</tr>
<tr>
<td>15-20% Lighting</td>
<td>RM248,000,000</td>
<td>RM37,200,000</td>
</tr>
<tr>
<td>5-10% Lift / Escalators</td>
<td>RM124,000,000</td>
<td>RM18,600,000</td>
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<tr>
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<td>RM868,000,000</td>
<td>RM129,800,000</td>
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</tbody>
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In Klang Valley Only
Energy Management Initiatives

- Office BEI: 200 to 300 kWh/m²·yr
- Mall BEI: 280 to 316 kWh/m²·yr

(ref: Malaysia Shopping Mall Association PPK)

- Success Stories:
  - LEED klia2
  - GBI Platinum Sentral
  - GBI Setia City Mall
DEMAND SIDE MANAGEMENT
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