The Theory of Disruptive Innovation

16 June 2012
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Theory of Disruption

Identify Opportunities where Disruptive Innovations Enable New Entrants to Beat Successful Incumbents
Three Variants of Disruptive Models

- **Sustaining Innovation**: Bring better products into established markets.
- **Low-End Disruption**: Target over-shot customers with lower-cost business model.
- **New Market Distribution**: Compete against non-competition.
But if this is true, why wouldn’t all investors seek to buy companies pursuing disruptive strategies? Often, disruptive companies initially have high P/E ratios and therefore seem expensive. An investor who can identify a true disruptive strategy in its infancy, will ultimately benefit from an average 37% CAGR in the decade following the disruptor’s IPO.
Decentralization Creates New Markets and Contexts of Use

- Imaging: MRI, CT, PET Scanners
- High-speed multi-channel testers
- Specialist physicians
- Personal physicians
- Nurse practitioners
- Pharmacists
- Clinics
- Offices
- Homes
- Surgical suites
Low End Disruption: Steel Minimills

- Sheet steel: 25–30% of tons (55%)
- Structural steel: 18% of tons (22%)
- Angle iron; bars & rods: 12% of tons (8%)
- Rebar: 7% of tons (4%)

Quality of minimill-produced steel
Outsourcing Often Sets in Motion Business Model Liquidation (I)

Dell
- Brand
- Product design
- Supply chain & logistics
- Computer assembly
- Mother boards

AsusTek
- Brand
- Product design
- Supply chain & logistics
- Computer assembly
- Mother boards
- Simple circuit boards
### Outsourcing Often Sets in Motion Business Model Liquidation (II)

<table>
<thead>
<tr>
<th><strong>Customer</strong></th>
<th><strong>Supplier</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Departments</td>
<td>TCS, Infosys, Wipro</td>
</tr>
<tr>
<td>Automobile OEMs</td>
<td>Tier One Suppliers</td>
</tr>
<tr>
<td>Integrated Circuit Cos</td>
<td>TSMC, UMC, Samsung</td>
</tr>
<tr>
<td>Commercial Banks</td>
<td>State Street, First Data</td>
</tr>
<tr>
<td>Wall Street Analysts</td>
<td>Bloomberg</td>
</tr>
<tr>
<td>Big Pharma, Biotech?</td>
<td>CROs, CMOs, Startups?</td>
</tr>
</tbody>
</table>
Three Variants of Disruptive Models

<table>
<thead>
<tr>
<th>New Markets</th>
<th>New Contexts</th>
<th>New Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Create new products or services to satisfy existing “jobs” of overshot customers</td>
<td>• Bring the consumption of existing goods or services to new contexts</td>
<td>• Allow a new entrant to find attractive existing markets that are unattractive to incumbents</td>
</tr>
<tr>
<td>• Creates net-new growth</td>
<td>• Creates net-new growth</td>
<td>• Is immediately cannibalistic – but generally nobody cares</td>
</tr>
<tr>
<td>• Personal computers</td>
<td>• Cell phones</td>
<td>• Steel mini-mills</td>
</tr>
<tr>
<td>• Medical Devices</td>
<td>• Mobile computing</td>
<td>• eCommerce</td>
</tr>
</tbody>
</table>

- Personal computers
- Medical Devices
- Cell phones
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- eCommerce
The Basis of Competition Determines Correct Product or Service Architecture

- Compete by improving speed, responsiveness and customization
- Compete by improving functionality & reliability
- Proprietary, interdependent architectures
- Modular open architectures

Performance
## Emergent Modularity: Computer Industry Example

<table>
<thead>
<tr>
<th></th>
<th>1960 - 1980</th>
<th>1990 – Present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipment</strong></td>
<td>IBM</td>
<td>Teradyne, Nikon, Canon, Applied Materials, Millipore, etc.</td>
</tr>
<tr>
<td><strong>Materials</strong></td>
<td></td>
<td>Monsanto, Sumitomo Metals, Komatsu, Shipley, etc.</td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td>Intel, Komag, etc.</td>
</tr>
<tr>
<td><strong>Product design &amp; assembly</strong></td>
<td>Control Data</td>
<td>Dell, HP, Quanta, Acer</td>
</tr>
<tr>
<td><strong>Operating system &amp; applications software</strong></td>
<td>Digital Equipment</td>
<td>Microsoft</td>
</tr>
<tr>
<td><strong>Sales &amp; distribution</strong></td>
<td></td>
<td>Best Buy</td>
</tr>
<tr>
<td><strong>Field service</strong></td>
<td></td>
<td>Geek Squad</td>
</tr>
</tbody>
</table>
The Law Of Conservation Of Attractive Profits

De-Commoditization: services & products that make use of the product more effective

Add features

Commoditization thru modularity, over-shooting

Copy features

De-Commoditization: sub-systems that drive the performance of the modular product