OUTSOURCED.

Geoffrey Cheung, Industrial Engineering

Mentor: Dr. Rosenkrantz Kellogg Honors College Capstone 2012

The Four Outsourcing Waves

- Wave 1 (1800s) focus on core business, outsource everything else
- Wave 2 (1950s) offshoring production of cheap goods
- Wave 3 (1970s) offshoring production of hi-tech/expensive products
- Wave 4 (2000s) offshoring of services

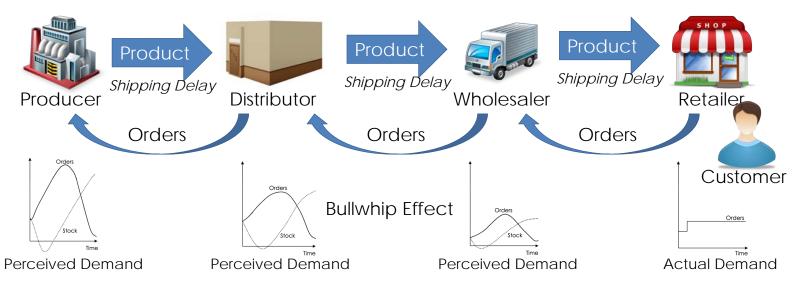
Benefits

- Cost savings
- Focus on core business (hedgehog)
- Scalability
- Liability

Drawbacks

- Job displacement/loss
- Intellectual property theft
- Reputation at risk
- Slow-reaction time

The Beer Game



Why Apple Can't Build iPhones in the U.S.

- Bullwhip effect. A small change at the front results in huge changes in the back.
- Production factories are closer to raw material suppliers in China.
 - "The entire supply chain is in China now...You need a thousand rubber gaskets? That's the factory next door. You need a million screws? That factory is a block away. You need that screw made a little bit different? It will take three hours." Apple Executive
- Scalability in terms of labor. Labor cost is minimal and not a factor.
- "They could hire 3,000 people overnight..." Jennifer Rigoni, Apple Supply Demand Manager Source: Duhigg, Charles, and Keith Bradsher. "How the U.S. Lost Out on IPhone Work." *The New York Times*. The New York Times Company, 21 Jan. 2012. Web. 21 Jan. 2012.

Automation as One Possible Solution

- Outsource to local companies, don't offshore
- More robust, reactive supply chain
- Reduce IP theft
- "Those jobs aren't coming back" Steve Jobs
- Automation to keep costs down and stay competitive

