

Who Profits from Innovation in Global Value Chains? Apple's iPod, iPhone & iPad



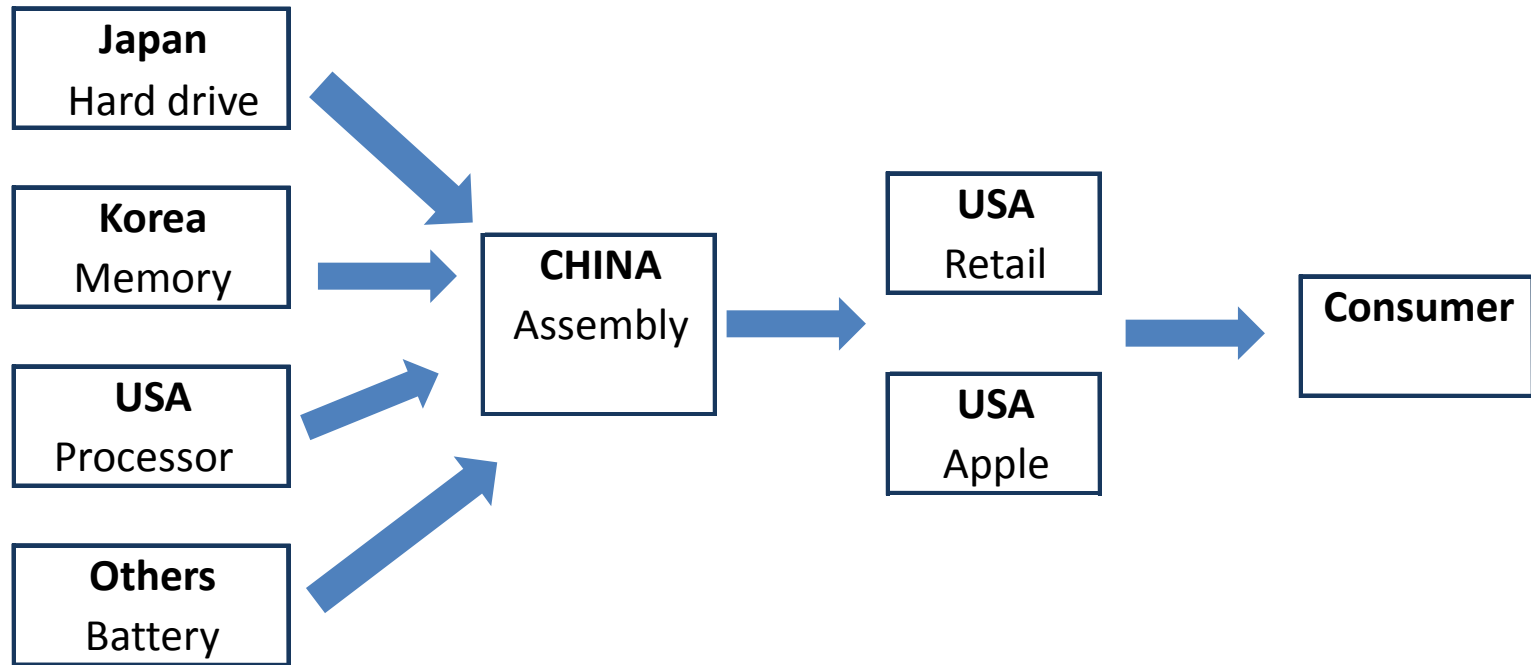
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Innovation in Global Value Chains

- Innovation is believed to be a key driver of economic growth and job creation
 - But what happens when innovation and production are distributed globally?
 - Who captures the value from innovation?
- Do trade data capture the full picture?

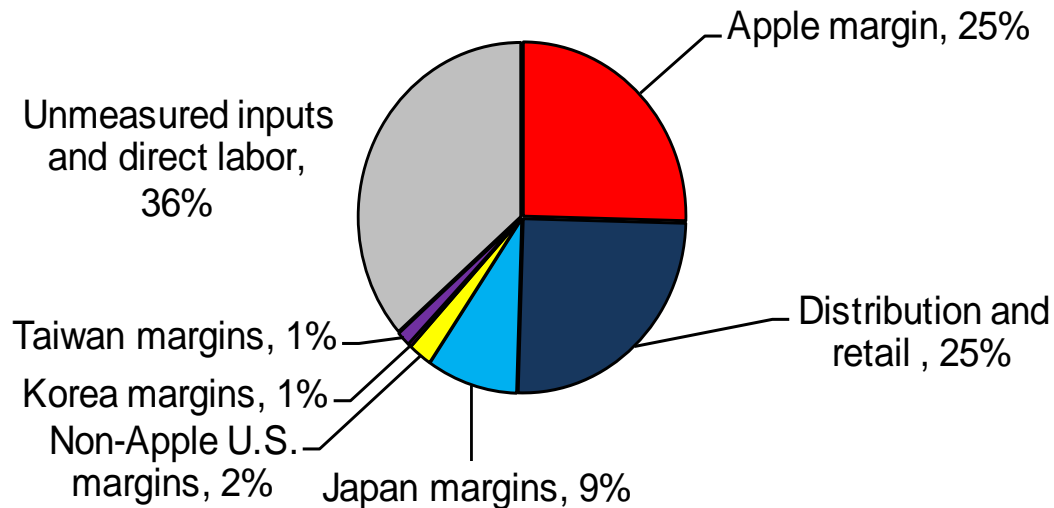
Global Value Chains: The iPod Case



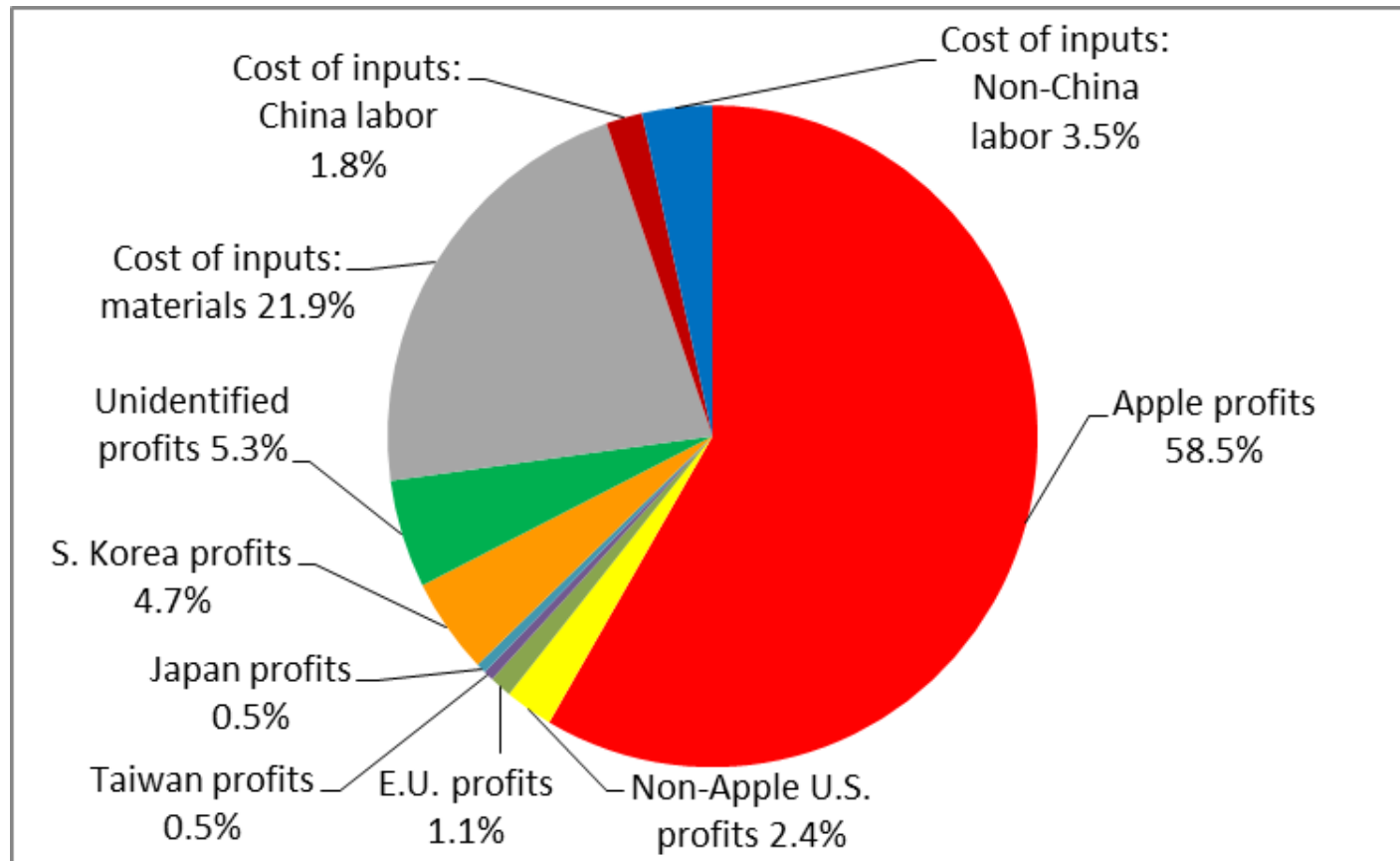
- **“Designed in California, assembled in China”**
- **Who captures the value from Apple’s success?**
- **Obama to Steve Jobs: “What would it take to move those manufacturing jobs back to the U.S.?”**

Share of value captured: profits

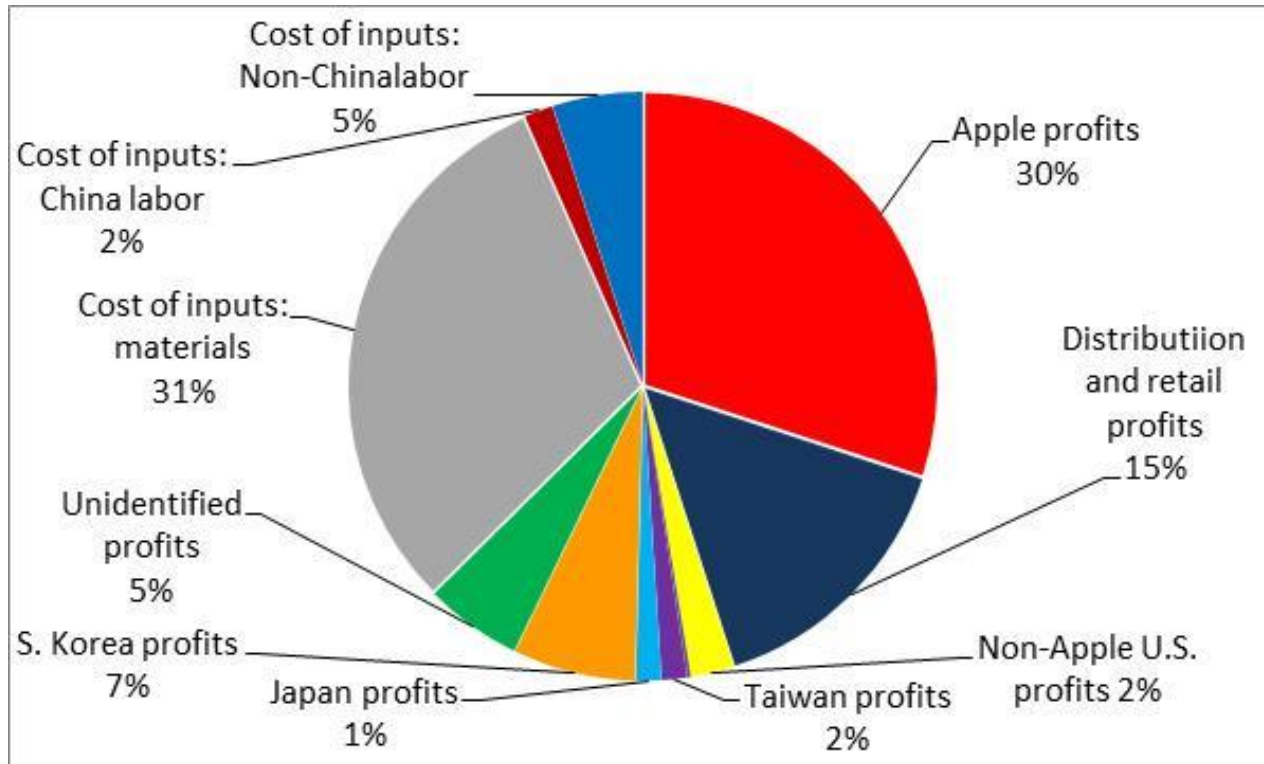
Share of value capture, \$299 iPod



iPhone value capture



iPad value capture



Value capture: Jobs

Worldwide iPod-related jobs, 2006

	Production	Retail/non-professional	Engineering/professional	Total
U.S.	30	7,789	6,101	13,920
Non-U.S.	19,160	4,825	3,265	27,250

- U.S. has 1/3 of total jobs
- U.S. has 2/3 of professional jobs

Wages

Worldwide iPod-related compensation, 2006

	Production	Retail/non-professional	Engineering/professional	Total
U.S.	\$1,429,200	\$220,183,310	\$562,191,318	\$753,287,510
Non-U.S.	\$90,236,050	\$96,500,000	\$131,750,000	\$318,486,050

- U.S. has more than twice the wages.
- Because U.S. has high-skilled engineering/professional jobs.
- Wages in general are much higher in the U.S.

Trade data

- Bilateral trade deficits can be misleading
 - \$299 iPod shows up as \$144 trade deficit with China, but China's input is only ~\$5 of labor.
 - Most of the value is created and captured elsewhere in the value chain.
- Need better measures of global value chains.
 - Current efforts by USITC, OECD, WTO.
 - Important to guide policy

Does America win in a global economy?

- U.S. profits when U.S. companies win.
 - Story would be much different if Sony or Samsung were the brand name.
- U.S. captures good jobs and wages when U.S. companies win.
 - R&D, engineering, management still cluster in home country of multinationals.
- There are losses—Apple used to manufacture computers in the U.S. Those jobs are gone.

Papers and contacts

Journal articles and working papers:

- iPod profits, *Communications of the ACM*,
<http://pcic.merage.uci.edu/papers/2008/WhoCapturesValue.pdf>
- iPod and notebook PCs, *Industrial and Corporate Change*,
<http://pcic.merage.uci.edu/papers/2008/WhoProfits.pdf>
- iPod jobs, *Journal of International Commerce and Economics*,
<http://pcic.merage.uci.edu/papers/2011/InnovationJobCreationiPod.pdf>
- Smart phone profits, *Telecommunications Policy*,
http://pcic.merage.uci.edu/papers/2010/CellPhoneProfitability_Oct2010.pdf
- iPhone and iPad profits,
http://pcic.merage.uci.edu/papers/2011/Value_iPad_iPhone.pdf

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