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# Market Week

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## TECHNOLOGY

# Apple and the race to vertical integration

What distinguishes today's "device economy" from yesterday's "PC economy" is the tight control brands have over their ecosystems.

Back in the day, long before Y2K, this question seemed settled. Apple Inc. failed as the sole-source supplier for the Macintosh because it could not scale production to meet demand. Microsoft Corp. won the market, despite being five years behind with its Windows software, because it gave its partners freedom.

Now Apple calls the tune, and everyone — even Microsoft — must dance to it.

The bigger story is what happens before the sale. Apple has created a race toward complete vertical integration. It controls the chips, it controls the assembly process, its stores do the selling and that "giant sucking sound" you hear is profit going into its coffers.

Intel Corp. has been hit hard by this trend. Device makers prefer the control they get from tweaking ARM Holdings PLC's designs to being dependent on Intel chips.

Amazon.com is taking this a step further with its reported move to buy Texas Instruments Inc.'s mobile chip division.

It's a good deal for Dallas-

based TI, which can grow faster in markets such as embedded chips for cars and power delivered over Ethernet networking systems than with bulk orders of mobile chips to Amazon. Since it's not selling its foundries, it will still be making money on what Amazon produces. Amazon simply gets control of the design and the design process.

All this is aimed at squeezing ever-thinner margins out of markets measured in the hundreds of millions of units every quarter. You need competitive features, you need to update the whole product line at least once a year, and you have to hit those price points — \$200 on the low end, \$500 on the high end — or forget it.

To do that, Apple's rivals have learned they need to control everything from the design of the chips to their assembly. Dancing to Apple's tune means controlling how that device is made and what goes into it.

Now that the pattern is established, the question becomes whether this will remain under American control. For 2013, watch what Asian powerhouses Samsung, Sony, Lenovo and Alibaba do for an answer.

This game has just begun, and it's going global.

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