

Business decisions of intel company



**ASSIGN
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Intel's strategy in DRAMS was to focus on product design and to be the first to market with the newest devices and DRAM technology. This allowed them to be a leader and charge significant price premiums, and proved to be a successful strategy for the first four generations of DRAMS. However, over time this became less effective as product life cycles shrank, so the time for competitors to offer a competing product became faster and once the competition "caught up" then prices would fall dramatically. In this industry, patents were ineffective at blocking competition.

In addition to product design, Intel established itself as a leader in process technology. Because cutting edge product design ultimately meant more complex semiconductor technology, Intel needed to invest large amounts of capital to keep its manufacturing capabilities at a level that could support new innovations and complex production. It also took time for Intel to become comfortable with new production technologies, during which yields (a key driver to manufacturing costs) would fall as they worked out new problems and optimized the processes.

There are several factors that led to Intel's dramatic decline in DRAM market share between 1974 and 1984, the ultimate reason being that Japanese competitors were able to introduce new products more rapidly which reduced Intel's position as a leader in the market since competitive offerings would follow so quickly after introduction of a new Intel device. Because of the high capital investments needed to produce new DRAMS, it was necessary to be first to market to be able to take advantage of higher prices as a market leader before competitors introduced similar technologies.

One reason Japanese firms could introduce products more quickly is that they strategically invested heavily in manufacturing capabilities. By comparison, Japanese firms invested 40% of their sales revenue into plant and manufacturing equipment while U. S. Firms invested 22% of their sales revenue. Additionally, several of the Japanese firms created relationships and collaborated closely with equipment manufacturers, such as Nikon, to create and access superior production equipment before it was available in the united States.

As a result of getting superior equipment, Japanese competitors had much higher production yields for DRAMS than U. S. Companies (as high as 80% for Japanese companies compared to maximum 60% for U. S. Impasse). Finally, Japanese competitors were also more adept at both developing process technologies and ramping up production capacity for DRAMS - for instance, their production yields were as high as 70-80% vs.. 50-60% for US firms in the sass, and this was a factor in driving costs.

Intel leadership did not immediately recognize the potential opportunities for microprocessors and their use in personal computers, but once this was discovered, the Intel team set several strategies in place to become a market leader. Their biggest competitor, Motorola, had been selected as Apple's standard. Therefore when IBM entered the PC market, Intel and Motorola were huge competitors to become the innovation, but also invested heavily in sales and marketing efforts.

Intel's decision to launch the sales effort, " Project CRUSH", to gain design wins was instrumental in paving the way for Intel's future success in the

microprocessor market, particularly because this sales campaign led to Intel securing a contract with MOM. Intel's DRAM strategy seemed to be "If we build it, they will come", whereas the new microprocessor strategy was more "If we build it, let's make sure they come". Intel's strategic partnership with IBM was hugely instrumental in Intel's strategy to gain a competitive advantage in microprocessors.

IBM led the market in the personal computer market in the early sass and Vim's strategy to expand rapidly and gain market share provided the perfect environment for Intel to grow in tandem. Whereas Intel did not invest in defensive efforts and technology to maintain its competitive advantage in DRAMS, despite winning a major contract with IBM for microprocessors, Intel continued to invest in aggressive marketing against its competitors? particularly Motorola? to maintain its competitive advantage.

Another strategy that Intel employed to gain a competitive advantage in microprocessors was to create a network effect and develop a network of suppliers to help produce chips for Intel. Intel learned from its experience with DRAMS production that it was expensive to ramp up production capacity and made a decision for microprocessors to license with other companies to produce chips to meet demand. Although this strategy meant that Intel only received a fraction of the total revenues and profits, Intel was able to meet demand in the rapidly growing PC business and could continue to win contracts and grow overall market share.

Leadership also continued to invest in Intel's internal production capabilities so that Intel could produce a higher proportion of later models of

microprocessors in-house to gain more profits. This strategy bought Intel time to really establish itself and the top supplier of microprocessors and also work on its manufacturing capabilities so that by the time Intel produced the 386, it was ready to produce the 386 without licensing. This required major investments and attention to improving internal sources and operation coordination, but Intel was able to make business decisions, such as higher price setting, that covered this investment.