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## The End of Core Competence: What the “Stars” Foretell — [Source link](#)

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## Notes

*present short pieces which are research-based, experience-based or idea-based.*

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# The End of Core Competence: What the "Stars" Foretell

P S Thomas

The core competence concept has proved to be an elusive one for management scholars and executives alike because of its ambivalence towards Japanese industrial history, selectivity towards corporate histories, and the amorphousness and porosity of its logical structure.

This note by P S Thomas tries to show how identification of core competences can be facilitated by complete reviews of the histories of two "star" corporations, viz., Matsushita Electric and Fujitsu Ltd. More such case studies may have to be undertaken and/or discussed to facilitate the use of the core competence perspective for global competition.

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Five years after it burst on the managerial scene, the concept of the core competence of the corporation continues to be elusive for a variety of reasons. The basic idea is simple: to characterize a diversified corporation in just a few words (the core competences) so as to not only capture its essence but also provide a clue to its future evolution in distinctive and, hopefully, pre-scient ways. However, semantic and conceptual difficulties abound in trying to apply this idea, primarily due to confusion in the identification of core competences in particular corporations. Since the gurus themselves seem confused in their observation of exemplars, the whole problem gets compounded.

It does not seem to be widely realized that the concept of core competence was originally introduced (by what can accurately be called the Prahalad School, or P-School for short) in a 1987 book. At that time, the US telecommunication operating company, GTE, was considered more "core competent," in effect, than the Japanese consumer appliance and industrial electronics company Matsushita Electric. But, in the best selling 1990 article by Prahalad and Hamel, GTE lost out in the celebrated comparison with NEC, another diversified electronics corporation. Within a year of that publication, the P-School's core competence theory was explicitly invoked by AT & T, a telecom manufacturing and services company, in acquiring the computer firm, NCR, for over \$7 billion. Since the expected benefits were apparently too slow in materializing, AT & T recently decided to divest the computer unit. This move immediately called into question the basis for claims on NEC's behalf about its core competence (See *Economist*). Not only were older conceptual schemes such as conglomerate diversification proving to be more meaningful than the core competence concept in characterizing NEC, but even a vital discrepancy regarding the functioning of coordination groups and committees in NEC surfaced in the *Economist* write-up.

Is the core competence concept of truly lasting value or is it just another management fad that is already on its way out? A closer look at a couple of "exemplars" or "stars" might help in arriving at some judgements on this question. We first return to Matsushita which (as we

noted) figured in our early discussions of the core competence concept. We then turn to the case of Fujitsu whose recent moves during the 1991-95 period provide a striking contrast to the hit and miss tactics of AT & T alluded to above vis a vis core competences. We conclude with some thoughts on core competence for further consideration based on our analysis of the two exemplars.

### **Matsushita Electric**

Matsushita Electric originated in 1918 literally as a cottage industry when Konosuke Matsushita, his young wife, and her 15 year old brother started making a special household plug at home. Today, nearly 80 years later, Matsushita's company is a global giant in consumer and professional electronics with 10,000 to 15,000 separate products made by over 250,000 employees in operations girdling the globe. Parenthetically, his brother-in-law, Toshio Iue, went on to start another company which is a global electronics giant in its own right, viz, Sanyo Electric. Konosuke Matsushita developed some truly original management ideas along the way. He introduced an effective management control system for decentralized operations at the same time that top American companies did. And, he also infused his diversified company with an explicit organizational philosophy to which its constituent units try to adhere to this day.

This kind of a corporate situation characterized simultaneously by autonomy as well as "kinship" seems ideal for testing a core competence perspective especially when not one but two electronics giants have emerged from the same "seed." But the P-School seems to have not only missed this opportunity but through their casual approach to Matsushita provided openings through which others have been able to enter and nibble away at their broad conceptual base.

In their initial assessment, the P-School faulted Matsushita for lack of (NEC-style?) competences underlying semiconductors. However, they noted that Matsushita "did pay close attention to establishing and managing distribution channels in Japan and overseas in ways that would maximize its joint competitive leverage across business divisions." This stance may have provided the opening for Boston Consulting Group (BCG) experts to link their idea of "core capabilities" with core competences of the P-School in 1992 using the examples of Wal-Mart and Honda.

The P-School's 1990 article had focused on competences rooted in product and process technologies, while implicitly dismissing Matsushita-style product line extension and geographical expansion as "bounded innovation." Thus, the P-School vaguely characterized

Matsushita's core competence recently as "high volume manufacturing" ignoring marketing and distribution, finance and accounting, and most importantly, human resources management. As a result, people wrongly conclude that Matsushita may only have short run capabilities rather than long run competences. And yet, the P-School also turns around and advocates the need to "exhaust all opportunities" and not to "close the door on whole streams of future opportunities" dependent on given competence sets. And their idea of "collective learning" even echoes Matsushita's idea of "collective wisdom." In fact, the long-time Matsushita slogan "Our company makes people. And besides we make electronic products" seems to neatly capture the essence of the core competence concept.

This kind of confusion is exemplified in discussing the case of Matsushita's twin dry battery units operating in India in a highly competitive, slow growth battery industry for 22 years. The way these units function actually enables us to appreciate a key P-School point. The latter argues that, in order to keep employees involved in increasing the functionality of the firm's products (or just quality in the LDC context), it is necessary to offset productivity improvements (for which the dry battery units are notable) with corporate growth thus minimizing employee alienation caused by redundancies. Such growth, according to the P-School, is best achieved by leveraging core competences, inimitably, into related lines of business. Interestingly, this argument simultaneously covers the three tests proposed by the P-School for identifying core competences, viz., functionalities, growth paths, and inimitability. And yet, the largely single product nature of the battery units seems to prevent people from seeing the potential applicability of the core competence concept over the long-term.

At the head office level, too, it is not widely appreciated that Matsushita has, for long, had an independent R & D capability. In the immediate post-war years, Matsushita made two key moves. One was to take a controlling stake in JVC, an erstwhile RCA unit in Japan with competence in television technology. Matsushita supplemented this move with a joint venture with Philips, the European leader in electronics. When video recording technologies were being developed by Sony and JVC, Matsushita was able to determine that the JVC approach was the more promising. Matsushita also correctly identified recording/playing time as the critical VCR functionality on which JVC was able to improve on Sony's pioneering Betamax. When Matsushita backed the JVC format and made VHS an "open standard" by licensing it widely, it spelled the end of Betamax's brief reign. In the 1980s, Matsushita came up with an automatic

home bread baking machine, and in the 1990s, it is gearing up to produce wall-hanging TVs using plasma-based flat panel displays in competition with Sony and Fujitsu. Hence, Matsushita does not seem to be in imminent danger of losing out to "fundamental technological change" as apprehended by the P-School. However, like AT & T, Matsushita was not able to assimilate the free-wheeling American entertainment software conglomerate MCA and, accordingly, reduced its 1990 position of 100 per cent ownership (for \$ 7 billion) to a minority stake late last year.

Given this historical perspective, how does one characterize Matsushita's core competence meaningfully even if three smaller time-spans are considered? As the P-School has rightly observed, Matsushita has numerous core products which enjoy "commanding" world market shares. Examples include compressors, motors, picture tubes, video-tape decks, industrial robots, and even semiconductors. According to the P-School, "if a company is winning the race to capture world manufacturing share in core products, it will probably outpace rivals in improving product features and the price performance ratio." Thus, they consider core products to be "the physical embodiment of core competencies." But, given its innumerable core products, precisely what Matsushita's core competences are, they do not seem to be able to say. Based on our overall picture, it seems that, in its first 25 or 30 years, Matsushita relied on a clutch of electro-based competences (e.g. electro-chemical, electro-thermal, electro-magnetic, etc.). In the subsequent period, it successively added TV and video competences, while over the past decade or so it has also been relying on IT hardware and software competences. Perhaps, a look at Fujitsu's history may provide some further pointers in this kind of a situation.

## Fujitsu

Fujitsu's origins can be traced to 1923 (five years after K Matsushita launched his business). In that year, the Furukawa Group entered into a wide ranging collaboration with Siemens of Germany to manufacture electrical products including telephone equipment in a new firm named Fuji Electric. Fujitsu's telephone equipment business took shape under Fuji Electric's roof over a period spanning a dozen years before it was spun-off as a legally independent firm in 1935. By the end of World War II, Fujitsu was a medium sized company with several thousand employees in multiple Japanese locations. It was duly listed on the Tokyo Stock Exchange in 1947.

In the early 1950s, Fujitsu leveraged its competence in communication and developed a primitive relay type

computer, the first such Japanese machine to be commercialized. Other Japanese companies soon formed collaborations with the leading American computer companies to enter this new business. NEC (an offshoot of AT & T's Western Electric) was the main supplier of NTT. Hence, it became a leader in computers and semiconductors because NTT was Japan's largest user of computers. NEC's computer collaboration was with Honeywell, a specialist in process control mainframes. However, Fujitsu developed into Japan's No. 1 computer maker in two decades with the help of MITI (which masterminded a concerted drive to counter IBM's stranglehold over the computer industry worldwide) and the combined help of MITI and NTT (which nurtured semiconductor competencies in Japanese electronics firms).

When Fujitsu sighted its future more clearly in computers in the early 1970s, it moved quickly to spin-off non-core businesses without reducing its commitment to underlying competences. Industrial automation and consumer electronics were the main spin-offs, though NEC held fast to both. Even minicomputers (and later PCs) were channelled into a joint venture with Matsushita as NEC was assigned the lead role in these segments by MITI in the 1970s. Thus, while Fujitsu and Hitachi developed IBM-compatible mainframes in the mid-70s, NEC developed a rudimentary PC and later articulated the now well-known "strategic architecture" which it called "C & C" (viz., communications and computers) based on the core competence involved in semiconductors.

Early on, Fujitsu had embarked on a global strategy in computers making a beginning with successful forays into Bulgaria and the Philippines. In the late 1960s, it decided on the risky strategy of competing head-on with IBM with "plug-compatible computers," a route originally pursued unsuccessfully by RCA which was Hitachi's collaborator. Once Fujitsu developed its IBM-compatible mainframes with Amdahl in the US, it quickly expanded across the segment and also internationally through new alliances with Siemens and ICL in Europe (Shortly after, the P-School got involved with ICL, initially as trainers and later in their "global strategy," "strategic alliance," and "core competence" research).

In the early 1980s, Fujitsu supported the nascent efforts of Sun Microsystems to develop an alternative to Intel's stranglehold in microprocessors for desk-top machines. It also allied with MCI to develop fibre optic long distance telecommunication transmission systems in fierce competition with AT & T. Like Matsushita (and Honda) in marketing and distribution, Fujitsu developed a core capability in making and managing strategic

alliances for both technology development as well as marketing. It successfully leveraged its modest technological resources of that time by tapping vast pools of psychic resources represented by the fierce "strategic intents" of Amdahl, ICL, Sun, MCI, and Siemens.

Although it launched Japan's first supercomputer in the early 1980s, it was soon clear (when an IBM-Fujitsu dispute reached a peak) that Fujitsu's IBM-compatible mainframe strategy had to be modified in favour of desk-top machines that were becoming increasingly powerful as well as interconnectible. In the early 90s, just after Fujitsu had reached the No. 2 position in computers behind IBM with the acquisition of ICL, (a) the bottom fell out of the world mainframe market, (b) the Japanese "bubble economy" burst, (suffering simultaneously from a rapidly depreciating dollar) and (c) technological developments in microprocessors and PC software led to the invasion of the Japanese PC market by American companies which broke through the "Kanji" barrier. Consequently, Fujitsu and NEC experienced their first losses in the entire post-war period.

Fujitsu's response was not only decisive and dynamic but apparently a text-book case of applying core competence principles to its global strategy. Take its actions in semiconductors. It shut down an old memory chip assembly plant in California, transferring the operations to South-East Asia. It entered into a strategic outsourcing agreement for memory chips with Hyundai involving technology transfer to this Korean mechanical engineering conglomerate. It rapidly expanded memory chip production at its own integrated plants in Oregon and the UK with the latter even pushing into logic chips. Simultaneously, its chip making competences at home were leveraged to launch a more advanced memory product (flash) in collaboration with Advanced Micro-Devices (AMD) of the US. With a symbolic cross-share holding agreement in place, the two companies invested 50:50 in a new facility for flash memory in Japan and expanded capacity rapidly to counter Intel's lead in this line of business. Meanwhile, a five year agreement was signed with Sun to develop the next big microprocessor in competition with development efforts at powerful combines such as IBM/Motorola and Intel/Hewlett Packard, not to mention the ongoing efforts at DEC and MIPS. Only two new chips, at the most, were expected to survive this fierce competition in product development. Last but not the least, Fujitsu leveraged its core competence underlying semiconductors to enter the home electronics market with wall-hanging TVs based on plasma display panels as mentioned earlier.

Fujitsu simultaneously made several moves in computers and telecommunications. It beefed up its position in PCs with the acquisition of Nokia Data of Finland. In a repeat of its Amdahl move of the early 1970s, it acquired an ex-IBM workstation designer's firm, Hal Computers in the US to develop a new machine in this rapidly growing segment. It launched an extremely powerful parallel processing super-computer using a hybrid of traditional vector processors powered by the latest chips but linked by electro-mechanical cross-bar telecommunication technology. It also launched PCTVs, which combined a PC and TV in a single unit. It developed the first Asynchronous Transfer Mode (ATM) telecommunications switch which was ideal for the multimedia era, centred on plans for exotic on-line services such as "video on demand" that would make trips to video libraries a thing of the past. Fujitsu was working with the Regional Bell Operating Companies (RBOCs or Baby Bells) to induct ATM equipment into their networks.

Fujitsu also launched a series of alliances in Japan with companies like Sharp, Sega, Nissho Iwai, NHK, Japan Travel Bureau, Nihon Keizei Shimbun, Tokyo City Cable TV, etc. to develop products and services for the Internet, the vaunted Information Superhighway. It also entered the Chinese telecom market and the Indian telecom and computer markets, upgrading its long time liaison offices into manufacturing investments in both countries. In India, telecom was viewed as the critical link between world class computer software and entertainment software capabilities at the national level. At this rate, by the year 2000, Fujitsu will practically reinvent itself by adding a layer of cyberspace exploration competences atop its existing competences in high speed digital processing, high density digital storage, and high capacity digital transmission. All this is indeed a long way from the presumably electro-based competences (like Matsushita's) at the time of Fujitsu's inception.

## Conclusion

This brief review of the histories of two global corporate giants has resulted in some listings of their core competences. These competences may not sound as glamorous as Sony's competence in miniaturization or NEC's "C&C" architecture. But they are improvements on vague statements like "high volume manufacturing" for Matsushita and (surprisingly) some sort of a total blind spot vis-a-vis Fujitsu's demonstrated competences on the part of the P-School.

It is clear that even statements like "miniaturization" are inadequate in characterizing Sony's core competences because a review of the kind we have undertaken

would reveal that it has to account for the company's growth into entertainment software and IT hardware as well. On the other hand, in semiconductors, Sony is an even smaller player than Matsushita though it was the Japanese pioneer in transistors. Core competences have to be identified on the basis of the corporation's complete history rather than selected parts of it.

Due to limitations of the core competence perspective in the foregoing areas, it is encountering competition from older strategy frameworks which are being upgraded to match its usefulness while poorly defended areas of the original concept are being staked out by competing authors. While the P-School claims that core competence is the ultimate in global competition, others are catching up fast with their strategic frameworks. The challenge now is to clearly show the link between strategy and operations in firms like Matsushita and Fujitsu where the organization itself is the ultimate "product."

If the core competence perspective is to make headway in future, the P-School must give up its ambivalence towards Japanese industrial history, and it must develop in-depth case materials for a meaningful discussion of the underlying ideas among students and executives. If it does not, it runs the risk of losing control over a crucial part of its intellectual future.

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