

1.4: Can Information Systems Bring Competitive Advantage?

It has always been the assumption that the implementation of information systems will, in and of itself, bring a business competitive advantage, especially in the cost-saving or improve efficiency. The more investment in information systems, the more efficiencies are expected by management.

In 2003, Nicholas Carr wrote an article, “IT Doesn’t Matter,” in the Harvard Business Review (Carr, 2003) and raised the idea that information technology has become just a commodity. Instead of viewing technology as an investment that will make a company stand out, it should be seen as something like electricity: It should be managed to reduce costs, ensure that it is always running, and be as risk-free as possible.

This article was both hailed and scorned at the time. While it is true that IT should be managed to reduce cost, improve efficiencies, history has shown us that many companies have leveraged information systems to build wildly successful businesses, such as Amazon, Apple, Walmart. Recent companies such as Airbnb, Uber have made the use of IS, a central element of their business model.

Use Case: Walmart Uses Information Systems to Become the World’s Leading Retailer

Walmart is the world’s largest retailer, with total revenue of \$611.29B and a market of \$424.984B in the fiscal year that ended on January 31, 2023 (source: Yahoo finance on 8/27/2023). Walmart currently has approximately, 2.1M full time employees, 10,500 stores and e-commerce websites in 20 countries, serving nearly 240 million customers every week worldwide (Walmart, 2023).

How did Walmart Use Information System?



Figure 1.4.1: Registered Trademark of Walmart, Inc.

Walmart’s rise to prominence is due in no small part to its use of information systems.

- One of the keys to this success was the implementation of Retail Link, a supply-chain management system. This system, unique when initially implemented in the mid-1980s, allowed Walmart’s suppliers to directly access the inventory levels and sales information of their products at any of Walmart’s more than ten thousand stores. Suppliers can use Retail Link to analyze how well their products are selling at one or more Walmart stores, with a range of reporting options. Further, Walmart requires the suppliers to use Retail Link to manage their own inventory levels. If a supplier feels that their products are selling out too quickly, they can use Retail Link to petition Walmart to raise their inventory levels. This has essentially allowed Walmart to “hire” thousands of product managers, all of whom have a vested interest in managing products. This revolutionary approach to managing inventory has allowed Walmart to continue driving prices down and responding to market forces quickly.
- Walmart’s continuous replenishment system uses predictive analytics to forecast demand and automate purchase orders based on real-time sales and inventory data. This ensures that the products customers want are in stock.
- Using its massive data warehouses, Walmart analyzes transaction data to derive insights on customer preferences and shopping patterns. This informs everything from shelf layouts to new store locations.
- By using advanced technologies such as RFID tags, Walmart is able to keep a close eye on its inventory in real-time across its distribution network. This helps to prevent theft and minimize stockouts.
- Walmart relies on its information systems to implement its EDLP (Every Day Low Prices) strategy. These systems provide data-driven efficiencies that allow Walmart to offer prices that its competitors find difficult to match.

However, Amazon’s fast rise as the leader in eCommerce has given Walmart a new formidable competitor. Walmart continues to innovate with information technology combined with their physical stores to compete with Amazon, locking the two in a

fierce battle to retain the largest retailer's title. Using its tremendous market presence, any technology that Walmart requires its suppliers to implement immediately becomes a business standard.

1.4.1: References

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