Fundamental of E- commerce and E -business Models

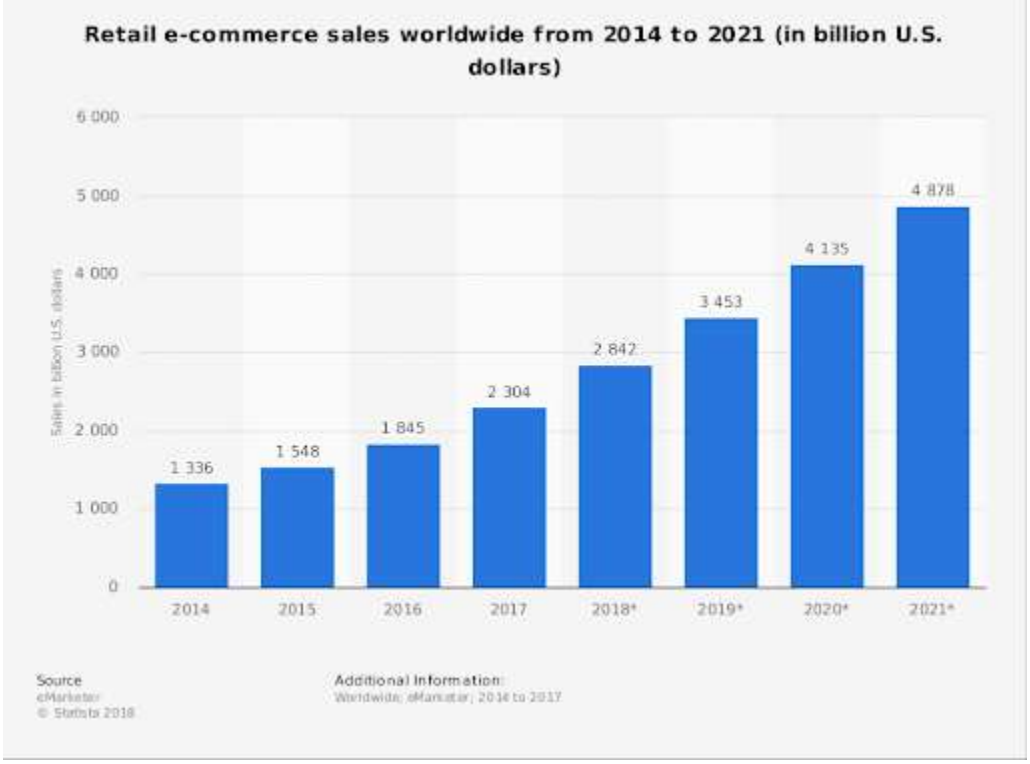
contents

What is E commerce?

Electronic commerce or e-commerce refers to a wide range of online business activities for products and services.It also pertains to “any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact.”

E-commerce is usually associated with buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network. Though popular, this definition is not comprehensive enough to capture recent developments in this new and revolutionary business phenomenon. A more complete definition is: E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals.

In 2019, retail e-commerce sales worldwide amounted to 3.53 trillion US dollars and e-retail revenues are projected to grow to 6.54 trillion US dollars in 2022. Online shopping is one of the most popular online activities worldwide.



Is e-commerce the same as e-business?

While some use e-commerce and e-business interchangeably, they are distinct concepts. In e-commerce, information and communications technology (ICT) is used in inter-business or inter-organizational transactions (transactions between and among firms/organizations) and in business-to-consumer transactions (transactions between firms/organizations and individuals).

In e-business, on the other hand, ICT is used to enhance one's business. It includes any process that a business organization (either a for-profit, governmental or non-profit entity) conducts over a computer-mediated network. A more comprehensive definition of e-business is:

"The transformation of an organization's processes to deliver additional customer value through the application of technologies, philosophies and computing paradigm of the new economy."

Three primary processes are enhanced in e-business:

1. Production processes, which include procurement, ordering and replenishment of stocks; processing of payments; electronic links with suppliers; and production control processes, among others;

2. Customer-focused processes, which include promotional and marketing efforts, selling over the Internet, processing of customers' purchase orders and payments, and customer support, among others; and

3. Internal management processes, which include employee services, training, internal information-sharing, video-conferencing, and recruiting. Electronic applications enhance information flow between production and sales forces to improve sales force productivity. Workgroup communications and electronic publishing of internal business information are likewise made more efficient.

Is the Internet economy synonymous with e-commerce and e-business?

The Internet economy is a broader concept than e-commerce and e-business. It includes e-commerce and e-business.

The CREC (Center for Research in Electronic Commerce) at the University of Texas has developed a conceptual framework for how the Internet economy works. The framework shows four layers of the Internet economy-the three mentioned above and a fourth called intermediaries (see Table 1).

Internet Economy Layer	*Layer 1 - Internet Infrastructure:* Companies that provide the enabling hardware, software, and networking equipment for Internet and for the World Wide Web	*Layer 2 - Internet Applications Infrastructure:* Companies that make software products that facilitate Web transactions; companies that provide Web development design and consulting services	*Layer 3 - Internet Intermediaries:* Companies that link e-commerce buyers and sellers; companies that provide Web content; companies that provide marketplaces in which e-commerce transactions can occur	*Layer 4 - Internet Commerce:* Companies that sell products or services directly to consumers or businesses.
Types of Companies	Networking Hardware/Software Companies Line Acceleration Hardware Manufacturers PC and Server Manufacturers Internet Backbone Providers Internet Service Providers (ISPs) Security Vendors Fiber Optics Makers	Internet Commerce Applications Web Development Software Internet Consultants Online Training Search Engine Software Web-Enabled Databases Multimedia Applications	Market Makers in Vertical Industries Online Travel Agents Online Brokerages Content Aggregators Online Advertisers Internet Ad Brokers Portals/Content Providers	E-Tailers Online Entertainment and Professional Services Manufacturers Selling Online Airlines Selling Online Tickets Fee/Subscription-Based Companies
Examples	Cisco AOL AT&T Qwest	Adobe *Microsoft *IBM Oracle	e-STEEL Travelocity e-Trade Yahoo! ZDNet	Amazon.com Dell

Table 1. Internet Economy Conceptual Frame

What are the different types of e-commerce?

The major different kinds of e-commerce are: business-to-business (B2B); business-to-consumer (B2C); business-to-government (B2G); consumer-to-consumer (C2C); and mobile commerce (m-commerce).

What is B2B e-commerce?

B2B e-commerce is simply defined as e-commerce between companies. This is the type of e-commerce that deals with relationships between and among businesses. About 80% of e-commerce is of this type, and most experts predict that B2B e-commerce will continue to grow faster than the B2C segment. The B2B market has two

primary components: e-frastructure and e-markets**. E-frastructure** is the architecture of B2B, primarily consisting of the following:

- logistics - transportation, warehousing and distribution (e.g., Procter and Gamble);
- application service providers - deployment, hosting and management of packaged software from a central facility (e.g., Oracle and Linkshare);
- outsourcing of functions in the process of e-commerce, such as Web-hosting, security and customer care solutions (e.g., outsourcing providers such as eShare, NetSales, iXL Enterprises and Universal Access);
- auction solutions software for the operation and maintenance of real-time auctions in the Internet (e.g., Moai Technologies and OpenSite Technologies);
- content management software for the facilitation of Web site content management and delivery (e.g., Interwoven and ProcureNet); and
- Web-based commerce enablers (e.g., Commerce One, a browser-based, XML-enabled purchasing automation software).

E-markets are simply defined as Web sites where buyers and sellers interact with each other and conduct transactions.10

The more common B2B examples and best practice models are IBM, Hewlett Packard (HP), Cisco and Dell. Cisco, for instance, receives over 90% of its product orders over the Internet.

Most B2B applications are in the areas of supplier management (especially purchase order processing), inventory management (i.e., managing order-ship-bill cycles), distribution management (especially in the transmission of shipping documents), channel management (i.e., information dissemination on changes in operational conditions), and payment management (e.g., electronic payment systems or EPS).

The impact of B2B markets on the economy of developing countries is evident in the following:

- Transaction costs. There are three cost areas that are significantly reduced through the conduct of B2B e-commerce. First is the reduction of search costs, as buyers need not go through multiple intermediaries to search for information about suppliers, products and prices as in a traditional supply chain. In terms of effort, time and money spent, the Internet is a more efficient information channel than its traditional counterpart. In B2B markets, buyers and sellers are gathered together into a single online trading community, reducing search costs even further. Second is the reduction in the costs of processing transactions (e.g. invoices, purchase orders and payment schemes), as B2B allows for the automation of transaction processes and therefore, the quick implementation of the same compared to other channels (such as the telephone and fax). Efficiency in trading processes and

transactions is also enhanced through the B2B e-market's ability to process sales through online auctions. Third, online processing improves inventory management and logistics.

- Disintermediation. Through B2B e-markets, suppliers are able to interact and transact directly with buyers, thereby eliminating intermediaries and distributors. However, new forms of intermediaries are emerging. For instance, e-markets themselves can be considered as intermediaries because they come between suppliers and customers in the supply chain.

- Transparency in pricing.Among the more evident benefits of e-markets is the increase in price transparency. The gathering of a large number of buyers and sellers in a single e-market reveals market price information and transaction processing to participants. The Internet allows for the publication of information on a single purchase or transaction, making the information readily accessible and available to all members of the e-market. Increased price transparency has the effect of pulling down price differentials in the market. In this context, buyers are provided much more time to compare prices and make better buying decisions. Moreover, B2B e-markets expand borders for dynamic and negotiated pricing wherein multiple buyers and sellers collectively participate in price-setting and two-way auctions. In such environments, prices can be set through automatic matching of bids and offers. In the e-marketplace, the requirements of both buyers and sellers are thus aggregated to reach competitive prices, which are lower than those resulting from individual actions.

- Economies of scale and network effects. The rapid growth of B2B e-markets creates traditional supply-side cost-based economies of scale. Furthermore, the bringing together of a significant number of buyers and sellers provides the demand-side economies of scale or network effects. Each additional incremental participant in the e-market creates value for all participants in the demand side. More participants form a critical mass, which is key in attracting more users to an e-market.

What is B2C e-commerce?

Business-to-consumer e-commerce, or commerce between companies and consumers, involves customers gathering information; purchasing physical goods (i.e., tangibles such as books or consumer products) or information goods (or goods of electronic material or digitized content, such as software, or e-books); and, for information goods, receiving products over an electronic network.12

It is the second largest and the earliest form of e-commerce. Its origins can be traced to online retailing (or e-tailing).13 Thus, the more common B2C business models are the online retailing companies such as Amazon.com, Drugstore.com, Beyond.com, Barnes and Noble

and ToysRus. Other B2C examples involving information goods are E-Trade and Travelocity.

The more common applications of this type of e-commerce are in the areas of purchasing products and information, and personal finance management, which pertains to the management of personal investments and finances with the use of online banking tools (e.g., Quicken)

B2C e-commerce reduces transactions costs (particularly search costs) by increasing consumer access to information and allowing consumers to find the most competitive price for a product or service. B2C e-commerce also reduces market entry barriers since the cost of putting up and maintaining a Web site is much cheaper than installing a “brick-and-mortar” structure for a firm. In the case of information goods, B2C e-commerce is even more attractive because it saves firms from factoring in the additional cost of a physical distribution network. Moreover, for countries with a growing and robust Internet population, delivering information goods becomes increasingly feasible.

What is B2G e-commerce?

Business-to-government e-commerce or B2G is generally defined as commerce between companies and the public sector. It refers to the use of the Internet for public procurement, licensing procedures, and other government-related operations. This kind of e-commerce has two features: first, the public sector assumes a pilot/leading role in establishing e-commerce; and second, it is assumed that the public sector has the greatest need for making its procurement system more effective.15

Web-based purchasing policies increase the transparency of the procurement process (and reduces the risk of irregularities). To date, however, the size of the B2G e-commerce market as a component of total e-commerce is insignificant, as government e-procurement systems remain undeveloped.

What is C2C e-commerce?

Consumer-to-consumer e-commerce or C2C is simply commerce between private individuals or consumers.

This type of e-commerce is characterized by the growth of electronic marketplaces and online auctions, particularly in vertical industries where firms/businesses can bid for what they want from among multiple suppliers.16 It perhaps has the greatest potential for developing new markets.

This type of e-commerce comes in at least three forms:

- auctions facilitated at a portal, such as eBay, which allows online real-time bidding on items being sold in the Web;
- peer-to-peer systems, such as the Napster model (a protocol for sharing files between users used by chat forums similar to IRC) and other file exchange and later money exchange models; and
- classified ads at portal sites such as Excite Classifieds and eWanted, Pakwheels.com (an interactive, online marketplace where buyers and sellers can negotiate and which features “Buyer Leads & Want Ads”).

Consumer-to-business (C2B) transactions involve reverse auctions, which empower the consumer to drive transactions. A concrete example of this when competing airlines gives a traveler best travel and ticket offers in response to the traveler's post that she wants to fly from New York to San Francisco.

There is little information on the relative size of global C2C e-commerce. However, C2C figures of popular C2C sites such as eBay and Napster indicate that this market is quite large. These sites produce millions of dollars in sales every day.

Advantages of C2C sites

Consumer to consumer e-commerce has many benefits. The primary benefit to consumers is reduction in cost. Buying ad space on other e-commerce sites is expensive. Sellers can post their items for free or with minimal charge depending on the C2C website. C2C websites form a perfect platform for buyers and sellers who wish to buy and sell related products. The ability to find related products leads to an increase in the visitor to customer conversion ratio. Business owners can cheaply maintain C2C websites and increase profits without the additional costs of distribution locations. A good example of a C2C e-commerce website is Esty, a site that allows consumers to buy and sell handmade or vintage items and supplies including art, photography, clothing, jewelry, food, bath and beauty products, quilts, knick-knacks, and toys.

Disadvantages of C2C sites

There are a couple of disadvantages to these type of sites as well.Doing transaction on these type of websites requires co-operation between the buyer and seller.It has been noted many times that these two do not co-operate with each other after a transaction has been made.They do not share the transaction information which may be via credit or debit card or internet banking.This can result in online fraud since the buyer and seller are not very well versed with each other.This can lead to lawsuit being imposed on either ends or also on the site if it has not mentioned the disclaimer in its terms and conditions.This may also hamper the c2c website's reputation.Companies which handle consumer to consumer ecommerce websites seem to have becoming very cautious to prevent online scams.

What is m-commerce?

M-commerce (mobile commerce) is the buying and selling of goods and services through wireless technology-i.e., handheld devices such as cellular telephones and personal digital assistants (PDAs). Japan is seen as a global leader in m-commerce.

As content delivery over wireless devices becomes faster, more secure, and scalable, some believe that m-commerce will surpass wireline e-commerce as the method of choice for digital commerce transactions. This may well be true for the Asia-Pacific where there are more mobile phone users than there are Internet users.

Industries affected by m-commerce include:

- **Financial services**, including mobile banking (when customers use their handheld devices to access their accounts and pay their bills), as well as brokerage services (in which stock quotes can be displayed and trading conducted from the same handheld device);

- **Telecommunications**, in which service changes, bill payment and account reviews can all be conducted from the same handheld device;
- **Service/retail**, as consumers are given the ability to place and pay for orders on-the-fly; and

Information services, which include the delivery of entertainment, financial news, sports figures and traffic updates to a single mobile device.

What forces are fueling e-commerce? There are at least three major forces fueling e-commerce: economic forces, marketing and customer interaction forces, and technology, particularly multimedia convergence.18

Economic forces.One of the most evident benefits of e-commerce is economic efficiency resulting from the reduction in communications costs, low-cost technological infrastructure, speedier and more economic electronic transactions with suppliers, lower global information sharing and advertising costs, and cheaper customer service alternatives.

Economic integration is either external or internal. External integration refers to the electronic networking of corporations, suppliers, customers/clients, and independent contractors into one community communicating in a virtual environment (with the Internet as medium). Internal integration, on the other hand, is the networking of the various departments within a corporation, and of business operations and processes. This allows critical business information to be stored in a digital form that can be retrieved instantly and transmitted electronically. Internal integration is best exemplified by corporate intranets. Among the companies with efficient corporate intranets are Procter and Gamble, IBM, Nestle and Intel.

SESAMi.NET is Asia's largest B2B e-hub, a virtual exchange integrating and connecting businesses (small, medium or large) to trading partners, e-marketplaces and internal enterprise systems for the purpose of sourcing out supplies, buying and selling goods and services online in real time. The e-hub serves as the center for management of content and the processing of business transactions with support services such as financial clearance and information services.

It is strategically and dynamically linked to the Global Trading Web (GTW), the world's largest network of trading communities on the Internet. Because of this very important link, SESAMi reaches an extensive network of regional, vertical and industry-specific interoperable B2B e-markets across the globe.

Market forces. Corporations are encouraged to use e-commerce in marketing and promotion to capture international markets, both big and small. The Internet is likewise used as a medium for enhanced customer service and support. It is a lot easier for companies to provide their target consumers with more detailed product and service information using the Internet.

Brazil's Submarino is a classic example of successful use of the Internet for improved customer service and support. From being a local Sao Paulo B2C e-commerce

company selling books, CDs, video cassettes, DVDs, toys, electronic and computer products in Brazil, it expanded to become the largest company of its kind in Argentina, Mexico, Spain and Portugal. Close to a third of the 1.4 million Internet users in Brazil have made purchases through this site. To enhance customer service, Submarino has diversified into offering logistical and technological infrastructure to other retailers, which includes experience and expertise in credit analysis, tracking orders and product comparison systems.

Technology forces. The development of ICT is a key factor in the growth of e-commerce. For instance, technological advances in digitizing content, compression and the promotion of open systems technology have paved the way for the convergence of communication services into one single platform. This in turn has made communication more efficient, faster, easier, and more economical as the need to set up separate networks for telephone services, television broadcast, cable television, and Internet access is eliminated. From the standpoint of firms/businesses and consumers, having only one information provider means lower communications costs.20

Moreover, the principle of universal access can be made more achievable with convergence. At present the high costs of installing landlines in sparsely populated rural areas is a disincentive to telecommunications companies to install telephones in these areas. Installing landlines in rural areas can become more attractive to the private sector if revenues from these landlines are not limited to local and long distance telephone charges, but also include cable TV and Internet charges. This development will ensure affordable access to information even by those in rural areas and will spare the government the trouble and cost of installing expensive landlines.

What are the components of a typical successful e-commerce transaction loop?

E-commerce does not refer merely to a firm putting up a Web site for the purpose of selling goods to buyers over the Internet. For e-commerce to be a competitive alternative to traditional commercial transactions and for a firm to maximize the benefits of e-commerce, a number of technical as well as enabling issues have to be considered. A typical e-commerce transaction loop involves the following major players and corresponding requisites:

The *Seller* should have the following components:

- A corporate Web site with e-commerce capabilities (e.g., a secure transaction server);
- A corporate intranet so that orders are processed in an efficient manner; and
- IT-literate employees to manage the information flows and maintain the e-commerce system.

Transaction partners include:

- Banking institutions that offer transaction clearing services (e.g., processing credit card payments and electronic fund transfers);
- National and international freight companies to enable the movement of physical goods within, around and out of the country. For business-to-consumer transactions, the

system must offer a means for cost-efficient transport of small packages (such that purchasing books over the Internet, for example, is not prohibitively more expensive than buying from a local store); and

- Authentication authority that serves as a trusted third party to ensure the integrity and security of transactions.

Consumers (in a business-to-consumer transaction) who:

- Form a critical mass of the population with access to the Internet and disposable income enabling widespread use of credit cards; and
- Possess a mindset for purchasing goods over the Internet rather than by physically inspecting items.

Firms/Businesses (in a business-to-business transaction) that together form a critical mass of companies (especially within supply chains) with Internet access and the capability to place and take orders over the Internet.

Government, to establish:

- A legal framework governing e-commerce transactions (including electronic documents, signatures, and the like); and
- Legal institutions that would enforce the legal framework (i.e., laws and regulations) and protect consumers and businesses from fraud, among others.

And finally, *the Internet*, the successful use of which depends on the following:

- A robust and reliable Internet infrastructure; and
- A pricing structure that doesn't penalize consumers for spending time on and buying goods over the Internet (e.g., a flat monthly charge for both ISP access and local phone calls).

For e-commerce to grow, the above requisites and factors have to be in place. The least developed factor is an impediment to the increased uptake of e-commerce as a whole. For instance, a country with an excellent Internet infrastructure will not have high e-commerce figures if banks do not offer support and fulfillment services to e-commerce transactions. In countries that have significant e-commerce figures, a positive feedback loop reinforces each of these factors.

How is the Internet relevant to e-commerce?

The Internet allows people from all over the world to get connected inexpensively and reliably. As a technical infrastructure, it is a global collection of networks, connected to share information using a common set of protocols. Also, as a vast network of people and information, the Internet is an enabler for e-commerce as it allows businesses to showcase and sell their products and services online and gives potential customers, prospects, and business partners access to information about these businesses and their products and services that would lead to purchase.

Before the Internet was utilized for commercial purposes, companies used private networks-such as the EDI or Electronic Data Interchange-to transact business with

each other. That was the early form of e-commerce. However, installing and maintaining private networks was very expensive. With the Internet, e-commerce spread rapidly because of the lower costs involved and because the Internet is based on open standards.

How important is an intranet for a business engaging in e-commerce?

An intranet aids in the management of internal corporate information that may be interconnected with a company's e-commerce transactions (or transactions conducted outside the intranet). Inasmuch as the intranet allows for the instantaneous flow of internal information, vital information is simultaneously processed and matched with data flowing from external e-commerce transactions, allowing for the efficient and effective integration of the corporation's organizational processes. In this context, corporate functions, decisions and processes involving e-commerce activities are more coherent and organized.

The proliferation of intranets has caused a shift from a hierarchical command-and-control organization to an information-based organization. This shift has implications for managerial responsibilities, communication and information flows, and workgroup structures.

Aside from reducing the cost of doing business, what are the advantages of e-commerce for businesses?

E-commerce serves as an "equalizer". It enables start-up and small- and medium-sized enterprises to reach the global market.

Leveling the Playing Field through E-commerce: The Case of Amazon.com

Amazon.com is a virtual bookstore. It does not have a single square foot of bricks and mortar retail floor space. Nonetheless, Amazon.com is posting an annual sales rate of approximately $1.2 billion, equal to about 235 Barnes & Noble (B&N) superstores. Due to the efficiencies of selling over the Web, Amazon has spent only $56 million on fixed assets, while B&N has spent about $118 million for 235 superstores. (To be fair, Amazon has yet to turn a profit, but this does not obviate the point that in many industries doing business through e-commerce is cheaper than conducting business in a traditional brick-and-mortar company.)

However, this does not discount the point that without a good e-business strategy, e-commerce may in some cases discriminate against SMEs because it reveals proprietary pricing information. A sound e-business plan does not totally disregard old economy values. The dot-com bust is proof of this.

Lessons from the Dot Com Frenzy

According to Webmergers.com statistics, about 862 dot-com companies have failed since the height of the dot-com bust in January 2000. Majority of these were e-commerce and content companies. The shutdown of these companies was followed by the folding up of Internet-content providers, infrastructure companies, Internet service providers, and other providers of dial-up and broadband Internet-access services.26

From the perspective of the investment banks, the dot-com frenzy can be likened to a gamble where the big money players were the venture capitalists and those laying their bets on the table were the small investors. The bust was primarily caused by the players' unfamiliarity with the sector, coupled with failure to cope with the speed of the Internet revolution and the amount of capital in circulation.27

Internet entrepreneurs set the prices of their goods and services at very low levels to gain market share and attract venture capitalists to infuse funding. The crash began when investors started demanding hard earnings for sky-high valuations. The Internet companies also spent too much on overhead before even gaining a market share.28

E-commerce makes "mass customization" possible. E-commerce applications in this area include easy-to-use ordering systems that allow customers to choose and order products according to their personal and unique specifications. For instance, a car manufacturing company with an e-commerce strategy allowing for online orders can have new cars built within a few days (instead of the several weeks it currently takes to build a new vehicle) based on customer's specifications. This can work more effectively if a company's manufacturing process is advanced and integrated into the ordering system.

E-commerce allows "network production." This refers to the parceling out of the production process to contractors who are geographically dispersed but who are connected to each other via computer networks. The benefits of network production include: reduction in costs, more strategic target marketing, and the facilitation of selling add-on products, services, and new systems when they are needed. With network production, a company can assign tasks within its non-core competencies to factories all over the world that specialize in such tasks (e.g., the assembly of specific components).

How is e-commerce helpful to the consumer?

In C2B transactions, customers/consumers are given more influence over what and how products are made and how services are delivered, thereby broadening consumer choices. E-commerce allows for a faster and more open process, with customers having greater control.

E-commerce makes information on products and the market as a whole readily available and accessible, and increases price transparency, which enable customers to make more appropriate purchasing decisions.

How are business relationships transformed through e-commerce?

E-commerce transforms old economy relationships (vertical/linear relationships) to new economy relationships characterized by end-to-end relationship management solutions (integrated or extended relationships).

How does e-commerce link customers, workers, suppliers, distributors and competitors?

E-commerce facilitates organization networks, wherein small firms depend on “partner” firms for supplies and product distribution to address customer demands more effectively.

To manage the chain of networks linking customers, workers, suppliers, distributors, and even competitors, an integrated or extended supply chain management solution is needed. *Supply chain management* (SCM) is defined as the supervision of materials, information, and finances as they move from supplier to manufacturer to wholesaler to retailer to consumer. It involves the coordination and integration of these flows both within and among companies. The goal of any effective supply chain management system is timely provision of goods or services to the next link in the chain (and ultimately, the reduction of inventory within each link).29

There are three main flows in SCM, namely:

- The product flow, which includes the movement of goods from a supplier to a customer, as well as any customer returns or service needs;
- The information flow, which involves the transmission of orders and the update of the status of delivery; and
- The finances flow, which consists of credit terms, payment schedules, and consignment and title ownership arrangements.

Some SCM applications are based on open data models that support the sharing of data both inside and outside the enterprise, called the extended enterprise, and includes key suppliers, manufacturers, and end customers of a specific company. Shared data resides in diverse database systems, or data warehouses, at several different sites and companies. Sharing this data “upstream” (with a company’s suppliers) and “downstream” (with a company’s clients) allows SCM applications to improve the time-to-market of products and reduce costs. It also allows all parties in the supply chain to better manage current resources and plan for future needs.

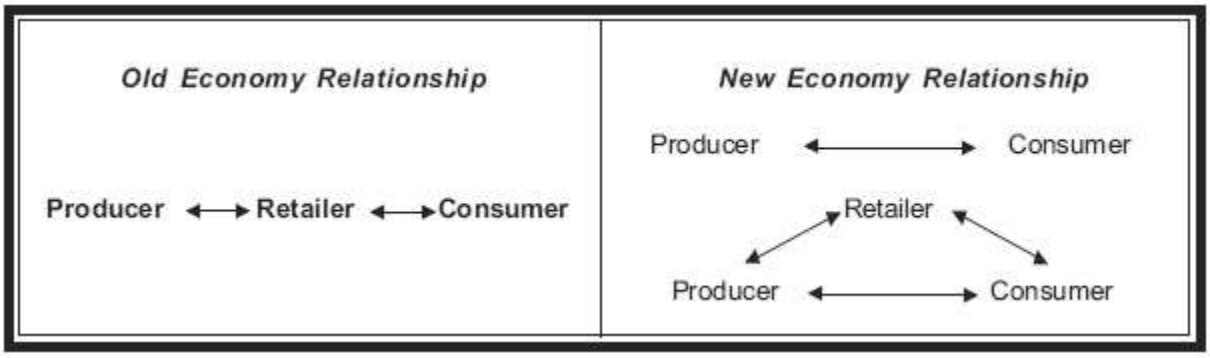


Figure 6. Old Economy Relationships vs. New Economy Relationships

What is Google AdSense and how does it work for e-commerce?

Google AdSense is a service offered by Google that allows website publishers to advertise on Google. It is Google's number 1 source of revenue. AdSense is used to advertise when users type in key words in Google's search engine. Ads are placed on the right hand side of the screen. The ads are text based and allow for links to the website on the advertisement as well.

The AdWords program determines the pricing for key words. AdWords is based on a Vickrey auction system. It is a sealed-bid auction, users submit bids not knowing what other users bid. The highest bidder wins but the second place person's bid is paid. There are pros and cons to this type of auction. The winners the vast majority of the time are the ones who bid the highest. A downside to this type of system is that there is no price discovery, which is a market failure known as imperfect information.

AdSense users generate revenue by having users click on their links and by having them buy what is offered on their website. AdSense has been a huge success for Google and the users of the system.