Chapter 1

(*) - The revolution is just begining

(**) Other is E-commerce

(*) Why E-Commerce important?

⇒ in order to be able to perceive & understand the opportunities & risks that lie ahead.

↳ You will be able to analyze an existing or new idea for an ecommerce busines, identify the most effective busines model to use, how to optimally & market & advertise the busines.

(*) What is E-Commerce?

⇒ involves the use of internet to transact busines.

(*) Diff b/w E-busines & E-Commerce?

E-busines: involves application of digital technologies to busines proceses within the firm. [do not directly generate revenue] (***)

E-Commerce: involves transaction that cross firm boundaries.

(*) Internet 1960's, worldwide network of computer ~~networks~~ built on common standards.

(*) Web (WWW) 1990's, an information system running on Internet infrastructure that provides access to billions of web pages.
Web will be discussed later in chapter 3.

(*) Google has identified 30 000 trillion unique URL, & this is just a portion of the known universe of web pages.

(*) The Web introduced far more powerful & commercially interesting capabilities of direct relevance to commerce.

In essence, the web added color, video to the internet, creating a communication infrastructure & information storage system that rivals television, radio & libraries.

(*) Web introduced free messaging with consumers, that rivals TV, radio & magazines.

(4) Will apps Make the WEB irrelevant?
Statistically Yes.
In January 2014, Americans used mobile apps more than desktop computers to access the internet.

(*) Eight Unique features of E-Commerce Tech.

(1) Ubiquity :- because it can be available just about anywhere, don't have structural barriers

(2) Global Reach: (permits commercial transaction to cross cultural, regional, national boundaries far more conveniently & cost-effectively) than is true in tradition commerce.

(3) Universal Standards: standards that are shared by all nations around the world. Everyone sees the same price & product description despite their geographical locations & cultural or national differences.

④ Richness: complexity & content of a message
Prior development of the web, ~~there~~ there was a trade off btw richness & reach: the larger the audience reached, the less rich the message.
But, with ecommerce, we can increase ~~rich~~ richness with our reach.

⑤ Interactivity:
chat is better than ~~AD~~ only AD

⑥ Information density: the total amount & quality of information available to all market participants. Prices & costs are more transparent. Merchants can access the consumer & information, that allows them to segment the market into groups.

⑦ Personalization: target their marketing messages to specific individuals by adjusting the message to a person's name, interests & past purchases.
Customization: change the delivered product or service based on a user's preference or

prion behavion.

⑧ Social technologies: Putting comments about product.

Types of ecommerce

① B2C ② B2B (Largest)

③ C2C (eBay, Uber, Airbnb)

④ Mobile ecommerce

⑤ Social ecommerce #conversational commerce

⑥ Local Ecommerce

B2C - Amazon
B2B - Go2 Paper
C2C - eBay
Mobile Ecommerce
Social Ecommerce = Facebook
Local Ecommerce = Any shop which has website.

* * *

In August 2016, Uber aggreed to sell Uber China, to Didi Chuxing Technology, its primary Chinese rival. Uber will have 18% interest in ... / DiDi will invest 1 billion

-2 billion ⇒ +7 billion profit
using which marketing in Indonesia & india.

Ecommerce A brief history

1970's Baxter Healthcare B2B using telephone based modem permitted hospitals to reorder supplies from Baxter. 1980s converted to PC based system.

① 1995-2000, ecommerce meant selling retail goods, usually quite simple goods on the internet.

DIS Intermediation: displacement of market middlemen who traditionally are intermediaries b/w producers & consumers by a new direct relationship b/w producers & consumers.

② 2001-2006, Consolidation

③ 2007 - Present, Reinvention.

VIT SPL (Pointer → (only get used in talking gang))

① used_memory ≥ ~~total_memory~~

② All letters in their name are capital letters.

③ Each program is represented by a structure.

④ prints how many programs are viruses & their names.

⑤ struct program

⑥

Chapter 2

① Twitter, we all know about twitter.

② Twitter has since expanded beyond simple text messages to article previews, photographs, videos, & even animated images & today has over 310 million active users worldwide as of June 2016. The (5000 tweets a day that it began with in 2006 has turned into a deluge of around 6000 tweets per second & 500 million per day world wide.)

③ Twitter has become a powerful alternative media platform for the

distribution of news, videos & pictures.

④ promoted tweets, trends, accounts

⑤ In 2014, building on the Amplify program, Twitter announced a beta test of promoted Video, which allows advertisers to distribute videos on the twitters platform & in 2015, it began allowing advertisers to use Promoted Video to link directly to app installations.

⑥ It is mobile that has proven to be the primary driver of Twitter's business. In 2015 twitter made its largest acquisition yet, spending $533 million to acquire digital ad platform TellApart. Twitter hopes that TellApart's technology will help improve its mobile ad

targeting. Currently, twitter derives over 80% of its advertising revenue from mobile.

(7) Twitter also continues to refine its data mining capability. In 2013, twitter purchased Big Data startup Lucky Sort & since then has acquired a number of companies such as Topsy Labs & Gnip that will help it improve its ability to provide information about its users behavior.

(8) However, its share price has declined significantly from its high over $74 in December 2013 down to around $18 per share as of October 2016.

(a) One study found that the top 15% of users account for 85% of all tweets.

(b) Twitter had only 40% retention rate. 60% of users failed to return the following month.

(9) Twitter's first move with Dorsey at the helm was to launch Moments, a feature that packages tweets into thematic groups that are easier to follow. The company also announced upcoming changes to relax the 140 character limit for certain types of content.

(10) In 2016, Twitter purchased the rights to stream thursday night NFL games. The ability to stream live events on Twitter is a substantive change in strategy that could help keep users on the site longer.

(11) In October 2016, Salesforce was rumored to interested in acquiring Twitter, but decided not to pursue a takeover. Shortly ~~there~~ thereafter twitter reported yet another loss for

the third quarter of the year & announced that it was cutting an additional 9% of its workforce & shutting down its Vine video app.

(12) Elon musks ~~says~~ said Twitter's still losing money, blaming "heavy debt" & lower advertising revenues. He's been trying to reinvent the platform after buying it for $44 billion last year.

(13) It is clear Twitter has not yet found a business model that works.

(14) The story of twitter illustrates the difficulties of turning a good business idea with a huge audience into a succesful business model that produces revenues & even profits.

Business Model

(1) Business Model describes how a company works & makes money, while a business strategy describes how, where & for what purpose & goal a business model will be used.

(2) A business plan ~~describes~~ is a document that describes a firm's business model & always takes into account the competitive environment.

(3) Eight key elements of a Business model.

(a) **Value proposition**: defines how a company's product or service fulfills the needs of customers. To develop & analyze a firm's value proposition, you need to understand why customers will choose to do business with the firm instead of another company & what the firm provides that other firms do &

(b) Revenue Model: describes how the firm will earn revenues, produce profits & produce a superior return on invested capital.

(i) Advertising Revenue Model: FB

(ii) Subscription Revenue Model: Netflix, Spotify

(iii)

(c) Freemium Strategy: the companies have been combining a subscription revenue model with a freemium strategy. The companies give away a certain level of product or services for free, but then charge a subscription fee for premium levels of the product or service.

(iv) Transaction fee Revenue model: eBay, Upwork

(v) Sales revenue model: derive revenue by selling goods, content or services to customers. Amazon

(vi) affiliate revenue model: middleman

(c) Market Opportunity: refers to the company's intended marketspace
- the area of actual or potential commercial value in which a company intends to operate

(d) Competitive Environment: refers to the other companies operating in the same marketspace selling similar products.

(e) Competitive Advantage: firms achieve a competitive advantage when they can produce a superior product &/or bring the product to market at a lower price than most on all of their competitors.

(i) Asymmetry exists whenever one participant in a market has more resources.

(ii) First-mover advantage a competitive market advantage for a firm that results from being the first into a market place with a serviceable product on service.

(iii) Complementary resources: doesn't need to actually produce the product, like marketing, reputation.

(iv) Unfair Competitive Advantage: when one firm develops an advantage that based on a factor other firms cannot purchase. like "BRAND NAME".

In perfect market ~~there~~ there is no competitive advantage.

(f) Market Strategy: is the plan you put together that details exactly how you intend to enter a new market & attract new customers.

(g) Organizational development: how we will organize the work, which needs to be accomplished. Typically work is divided into functional departments such as production, shipping, marketing, customer support.

(h) Management Team: employees of the company responsible for making the business model work.

Not A

Raising Capital

is one of the most important functions for a founder of a start up business & its management team.

(i) Seed Capital: an entrepreneur's personal funds derived from savings, credit card advances, home equity loans or from family & friends.

(ii) Once seed capital are exhausted, we need elevator pitch, a short two-three minute presentation aimed at convincing investors to invest.

(iii) Incubators, provide small amount of funding & also an array of services to start-up companies.

(iv) Angel investors, wealthy individual or group of individuals who invest their own money in exchange for an equity share

in the stock of business. Often are the first outside investors in a start-up.

(v) Venture Capital Investors: invest funds they manage for other investors, usually later-stage investors.

(vi) Crowdfunding: In past, USA has regulation where people ~~can~~ having less than ~~200~~, $1 million can not invest. But, in 2016, people earning less than $100,000 yearly ~~can~~, or having net worth $100,000 can invest due to JOBS (Jumpstart Our Business Startups)

Elevator Pitch

(i) Introduction: My name is X, I am founder of Y, we are the Uber/Amazon of Z.

(ii) origin of my idea & the problem I am trying to solve. [Background]

(iii) Brief facts about market size. [market size]

~~iii~~ (iv) what is my revenue model & how fast it is growing

(v) amount of funds you are seeking

~~(vi)~~ & what it will help you achieve

(vi) How your investors will achieve a return on their investment. [Exit strategy

B2C Business Models

→ ecommerce in which online business seek to reach individual consumers

(i) E-Tailer online retail stores, are subsidiaries or divisions of existing physical stores & carry the same products, like walmart example company with complementary online stores. Others, however operate only in the virtual world, without any ties to physical locations, Amazon.

This sector is extremely competitive, because barriers to entry into the e-tailer market are low. Becoming profitable & surviving is very difficult for e-tailers with

no prior brand name or experience. The e-tailers challenge is differentiating its business from existing competitors.

(*) e-tailing Success
- keep expenses low
- identify market & its need
- controlled inventory.

(ii) Community provider
Facebook, LinkedIn, Twitter
=> The basic value proposition of community providers is to create a fast, convenient, one stop site where users can focus on their most important concerns & interests, share the experience with friends & learn more about their own interests.
=> while many community providers have had a difficult time becoming profitable, many have succeeded over time, with advertising as their main source of revenue.

(iii) Content Providers
23 billion $ spent in 2016 for movies, music, videos.
Example: Shopzilla syndicate (a group of individuals or organisations combined to promote a

common interest). on collects information on the prices of thousands of goods online, analyses the information & presents users with tables showing the range of prices & links to the sites where the products can be purchased.
⇒ can make money via advertising, subscription fee & sales of digital goods.

(iv) Portals/search engines. Google, MSN, AOL
marketed as places where consumers will hopefully stay a long time to read news, find entertainment & meet other people.
Portals generate revenue primarily by (charging advertisers for ad placement) (collecting referral fees for steering customers to other sites) & (charging for premium services).

(*) Google sort of portal, focuses primarily on offering search & advertising services. They generate revenues primarily

from search engines advertising sales & also from affiliate referral fees.

(v) Transaction Brokers

Companies that process transactions for consumers normally handled in person, by phone or by mail are transaction Brokers. Travel services, Job placement services. Upwork, travel agency, value proposition ⇒ savings of money & time.

Transaction Brokers make money each time a transaction occurs.

(vi) Market Creators

build a digital environment in which buyers & sellers can meet, display & search for products & services & establish prices. (Ebay)

* Market creators make money by either charging a percentage of every transaction made or charging merchants for access to the market.

(*) This is different from transaction brokers who actually carry out the transaction for their customers, acting as agents in larger markets. (At ebay or market creators buyers & sellers are their own agents.)

(*) Uber Airbnb → (Market creators / service providers)

(*) ↓ → (On-demand / sharing economy)

raised 2.7 billion valued 30 billion

raised 12.5 billion & valued 68 billion

(vii) Service provider offers service online use a variety of revenue models. Some charge a fee, or monthly subscriptions while others generate revenue from other sources, such as through advertising & by collecting personal information that is useful in direct marketing

like GMAIL (free), Gmap (free), Google colabs (subscribed)

Often examples.
① data storage (Drop box), book keeping service (Wave)

* Travel brokers also provide vacation-planning services, not just transactions with airlines & hotels. Indeed mixing services with your products is a powerful business strategy.

* The basic value proposition of service providers is that they offer consumers valuable, convenient, time saving & low cost alternatives to traditional service providers or provides services that are truly unique.

Time starvation : so, people are getting more interested in online service providers.

* Building confidence & trust is critical for service providers just as it is for retail product merchants.

"Business to Business" Model

Though public attention has focused on B2C, it is estimated that revenues for all types of B2B ecommerce in the USA will total around 6.7 trillion. where B2C has total 600 billion worth.

(i) **E-distributors**

Companies that supply products & services directly to individual businesses are e-distributors.

(ii) **E-procurement**: create & sell accers to digital market.

Example: Ariba (piece of software)

The platform provides sellers with the ability to manage catalogs, bids, purchases & invoices. Provides buyers with the ability to search for suppliers, negotiate savings, procure services & track spending.

This is much more efficient than having every firm build its own supply

chain management system & it permits firms such as Ariba to specialize & offer their soft-ware to firm at a cost far less than the cost of developing it.

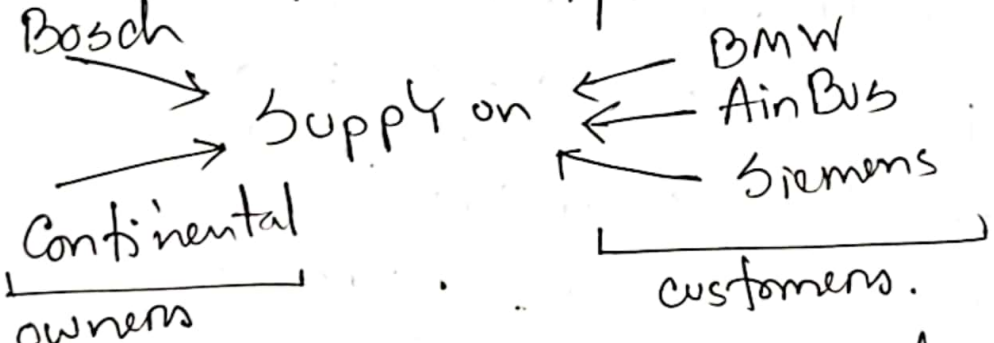
(iii) Exchanges:

Like, Pran buying all mangoes of Rajshahi to produce its new mango juice. Now, in Rajshahi there can be lots of suppliers. Now, putting all these suppliers together & make a deal with them, will cost Pran a fortune, with which it can produce another product. That's where online Exchange ecommerce platform comes, put all these suppliers in a single place & making the sales cost lower than usual.

(*) Diff b/w Vertical & Horizontal Marketspace?

Vertical	Horizontal
① supply smaller number of companies ~~of same industry with~~ with products & services of specific interest to their industry.	① supply companies in different industries with same product.

(iv) Industry Consortia are industry-owned vertical marketplaces.



(v) Private Industrial Network:

Walmart operates one of the largest private industrial networks in the world for its suppliers, who on a daily basis use Walmart's network to monitor the sales of their goods, the

status of shipments & the actual inventory level of their goods.

How Ecommerce changes Business strategy, structure & process.

(i) Industry structure (Upto this)

→ Threat of substitute products
streaming videos substituting DVDs

→ Rivalry among existing competitors
With more competition increases ~~price competition~~ rivalry

→ Bargaining power of suppliers
Online procurement systems typically decreases bargaining power of suppliers however suppliers can also benefit from the elimination of intermediaries.

→ Bargaining power of buyers
Availability of global price & product information shifts bargaining power to buyers.

↳ Barriers to Entry

May reduce ~~to~~ barriers to entry such as need for physical store, salesforce.

(ii) Industry Value Chains

Value Chain the set of activities performed in an industry or in a firm that transforms raw inputs into final product & services. Each of these activities adds economic value to the final product:

(*) suppliers, manufacturers, transporters, distributors, retailers & customers.

By reducing the cost of information, e-commerce offers each of the key players in an industry value chain new opportunities to maximize their positions by lowering cost & raising prices.

@deeplearning@

Ex: Distributors ≡ Highly efficient Inventory Management System

Retailers = Highly efficient customer relationship management system.

(iii) Firm Value Chain:

① Inbound logistics, ② operations, ③ out bound ④ logistics, ⑤ sales & Marketing, ⑥ sales service. (after)

* Inbound logistics: the way materials & other goods are brought into a company.

* Outbound logistics: process involves storing & moving goods to the customer or end user.

(iv) Firm Value Webs: is a collection of independent Firms that use information technology to coordinate value chains to produce a product or service for a market collectively.

Ex: Pran + Ruchi making a new ~~favored~~ flavored chips, & they are coordinating using google meet.

(v) Business Strategy:

(a) Differentiation: refers to all the ways producers can make their products or service unique & different to distinguish them from those of competitors.

(b) ~~Cost Competition~~:

E-commerce businesses can also differentiate products & services by making it possible to purchase the product from home, work or on the road, by making it possible to purchase anywhere in the world by creating unique interactive content, videos, stories about users & reviews by users & by storing & processing information for consumers of the product or service, such as warranty information on all products purchased through a site or income tax information online.

(b) Cost Competition: ecommerce offers ways to compete on cost by reducing the expenses such as rent, inventory, staff etc. Ecommerce also allows for 24/7 sales, easy show casing of best sellers & impulse buying.

(c) Scope Strategy: is a strategy to compete in all markets around the globe, rather than merely in local, regional or national markets. The internets global reach, universal standards & ubiquity can certainly be leveraged to assist businesses in becoming global competitors.

(*) Why didn't Kodak see the transition to digital photography? Why didn't Canon see the smartphone camera as a powerful competitor to digital cameras? Why don't firms disrupt their own business models?

=> Shareholders expect returns on investment.

not destruction of a firm's historic & cherished profitable products, & this prevent incumbent firms from meeting the challenges of busines model disruption.

Disruptive technologies: when new tech are at the core of a change in the way business is done. & if the involved tech is digital, then the term is called digital disruption.

Ex1: personal computers using off-the shelf inexpensive processors & tech disrupted the market for mainframe & mini-computers (Not so ecommerce)

Ex2: In 2016, Uber & Airbnb effecting taxi & lodging industries.

Chapter # 3

* Apple watch accounted for 34.1% of all smartwatch shipments in 2022 & 60% of the revenue for the entire market globally.

* As the device continues to mature, the watch is likely to have the functionality that its users demand. Will it be a fitness & health tool? The new frontier in mobile payments? An in-dispensable in-store shopping buddy? A must-have complement to the iPhone?

⇒ This chapter examines the internet, web & mobile platform of today & tomorrow, how they evolved, how they work & how their present & future infrastructure enable new business opportunities.

=> Looking forward a few years, the business strategies of the future will require a firm understanding of these technologies & new ones such as different types of wearable technology like the Apple watch profiled in the opening case, IoT, the smart/connected movement. (smart homes, smart TVs, connected cars), augmented & virtual reality & AI to deliver products & services to consumers.

Internet: an interconnected network of thousands of networks & millions of computers linking businesses, educational institutions, government agencies & individuals.

Web: one of the internet's most popular services, providing access to billions & perhaps trillions of web pages.

Evolution of Internet:

① Internet's original purpose was to link large mainframe computers on different college campuses.

② DoD contributed $1 million to further develop Internet into a robust military communication system, ARPANET

③ Then NSF assumed responsibility for the development of a civilian Internet called NSFNET & began a 10 year long $200 million expansion program.

④ At last from ~~20~~ 1995 to present, the US government encouraged private corps to take over & expand the internet backbone as well as local service beyond military installations & college ~~cap~~ campuses to the rest of the ~~popos~~ population around the world.

Although the internet has evolved & changed dramatically in the last 35 years, the below three concepts are at the core of the way the internet functions today.

① pkt switching: a method of slicing digital messages into pkts, sending the pkts along different communication paths as they become available, & then reassembling the pkts once they arrive at their destination.
Router routes pkts to their ultimate destination as they travel the internet.

② TCP/IP: (TCP) establishes the connections among sending & recieving computers & makes sure that pkts sent by one computer are recieved in the same sequence by the other, without any pkts missing. (IP) provides the internets addressing schema & is responsible for the actual delivery of

the pkts.

BGP enables the exchange of routing information among different autonomous systems on the internet.

IP Address For instance, when you sign onto the internet using a DSL, your computer is assigned a temporary address by your ISP. Most corporate & university computers attached to a local area network have a permanant IP address.

Domain Name, DNS & URL

* An IP address can be represented by a natural language convention called domain name.
* DNS allows expressions such as Cnet.com to stand for a numeric IP address
* URL is the address used by a web browser to identify the location of content on the Web.

For instance, the URL https://www.azimuth-interactive.com/flash-test, refers to the IP address ~~208.4~~ 208.148.84.1 with the domain name azimuth-interactive.com, & DNS allow this reference & the protocol being used to access the address, HTTP. A resource called flash-test is located on the servers directory path /flash-test, that's why the whole thing is the URL.

(3) Client/server Computing:

while pkt switching exploded the available communications capacity & TCP/IP provided the communications rules & regulations, client/server computing bring about today's internet & the web.

Server network computer dedicated to common functions that the client computers on the network need.

* Smartphones are a disruptive technology that radically alters the personal computing & ~~ecommerce~~ landscape.

* Few smartphones use Intel chips, which power 90% of the world's PCs, only Nokia Lumia used Windows Mobile which is now extinct.

* Mobile platform lighter, do not require a complex OS & rely on the internet cloud to provide processing & storage.

* The mobile platform has profound implications for ecommerce because it influences how, where & when consumers shop & buy.

* Cloud computing is a model of computing in which computer processing, storage, software & other services are provided as a shared pool of virtualized resources over the internet.

* In the cloud computing model, hardware & software services are provided on the internet by vendors operating very large server farms & data centers.

Google drive (H/W)
Google Colab (S/W)

Cloud Characteristics:

1. On-demand self-service.
2. Ubiquitious network access.
3. Location-independent resource pooling.
4. Rapid elasticity: If you buy premium you can get upto 1 TB space just after the purchase.

⑤ Measured Service: changes based on the amount of resources actually used.

Cloud Computing providing services,

① Infrastructure as a Service (virtual machine, storage)

② Software as a Service (runtime env, deployment & development tools)

③ Platform as a Service → itch.io

(access to end user)

public cloud: owned by CSP (cloud service provider), ideal for small & medium sized businesses who cannot afford to fully develop their own infrastructure.

private cloud: operate solely for the benefit of a single tenant. Companies that have stringent regulatory compliance or specialized licensing requirements that necessitate high security, such as financial or healthcare companies.

(#) large finms are most likely to adopt a hybrid cloud computing model, in which they use their own infrastructure for their most essential core activities & adopt public cloud computing for less-critical systems or for additional processing capacity during peak business periods.