

E-Commerce - 2

Network Externalities

The more people, the more valuable the network

Examples

Telephone late 19th century

Credit card 1980s

Fax 1985-8

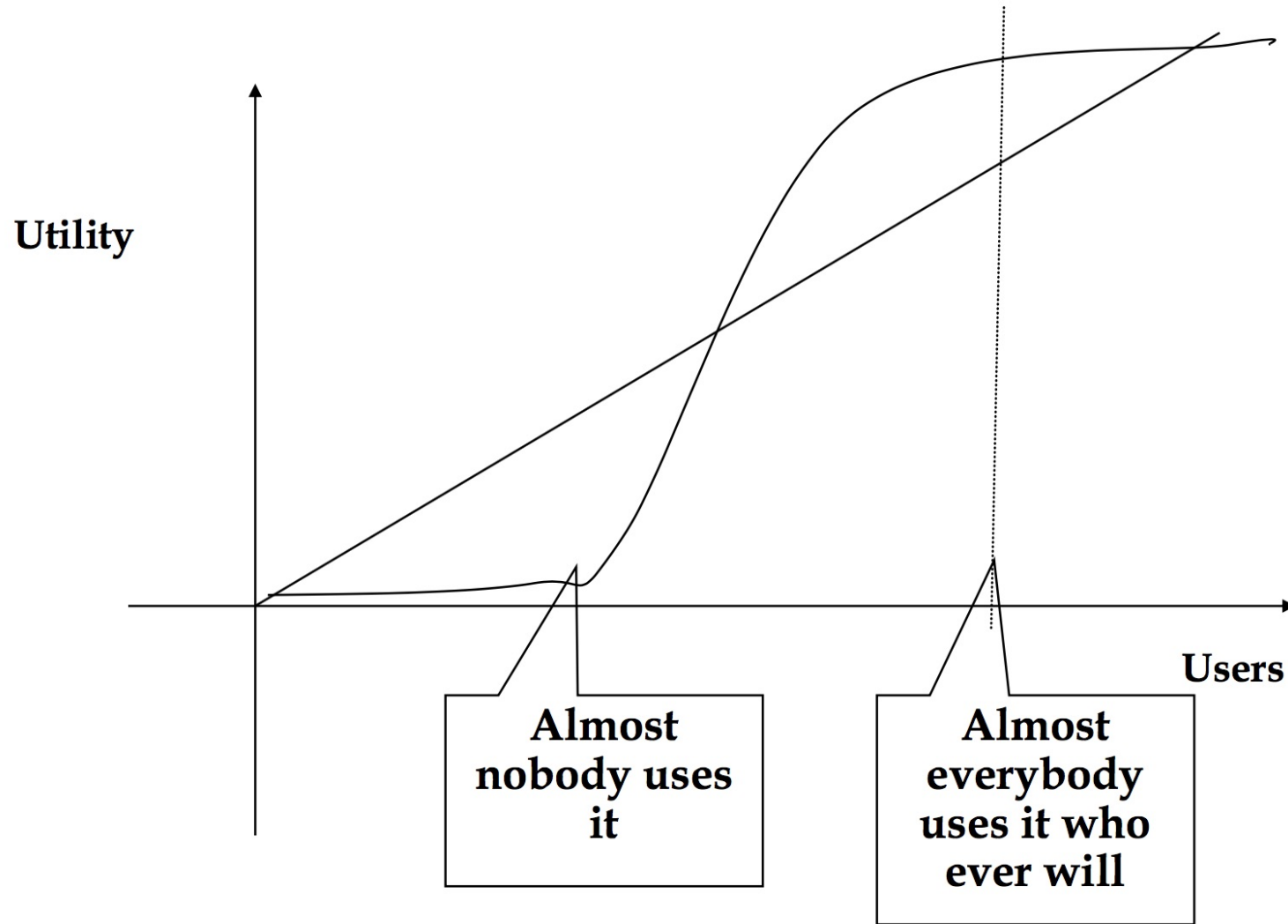
Email 1995-9

Metcalfe's law

The value of a network is proportional to the square of the number of users

Not completely accurate, as the value to each user is non-linear

Network Externalities



Virtual Networks

Example: iPhones and Apps

Virtuous circle

People buy iPhones because lots of apps are available

Developers write apps because there are lots of customers

Many other examples

Credit cards and merchants

VCR / DVD standards and media content

Winner takes all

Dominant Firm Model

Development of effective monopoly / oligopoly

Not always: e.g. lots of FAX machine makers

Networks

The increase in value of a network is an example of what economists call an “externality”

an external factor other than price

Network means that my purchase benefits all other users as well as myself

Once a network passes a critical size it grows rapidly

Success disaster

Network allows opportunity to extract value even when marginal costs are near zero

price controls

lock-in: value is switching costs

Combination of high fixed / low marginal costs, high switching costs and network externalities lead to a dominant firm model

One sentence summary of information economics

Network Effects

Dominant firm markets -> huge amount to play for (crazy valuations)

Control of key de-facto standards

Hugh first-mover advantages

Can be displaced by larger entity

MS: "Embrace and Extend" - spreadsheets and wordprocessors

Need to create bandwagon effect with makers of complimentary products

need to court developers rather than users (e.g. MS)

Price to value

but still need to make a profit

Liquidity

Liquidity is the ease with which an asset can be traded without creating a substantial change in price or value

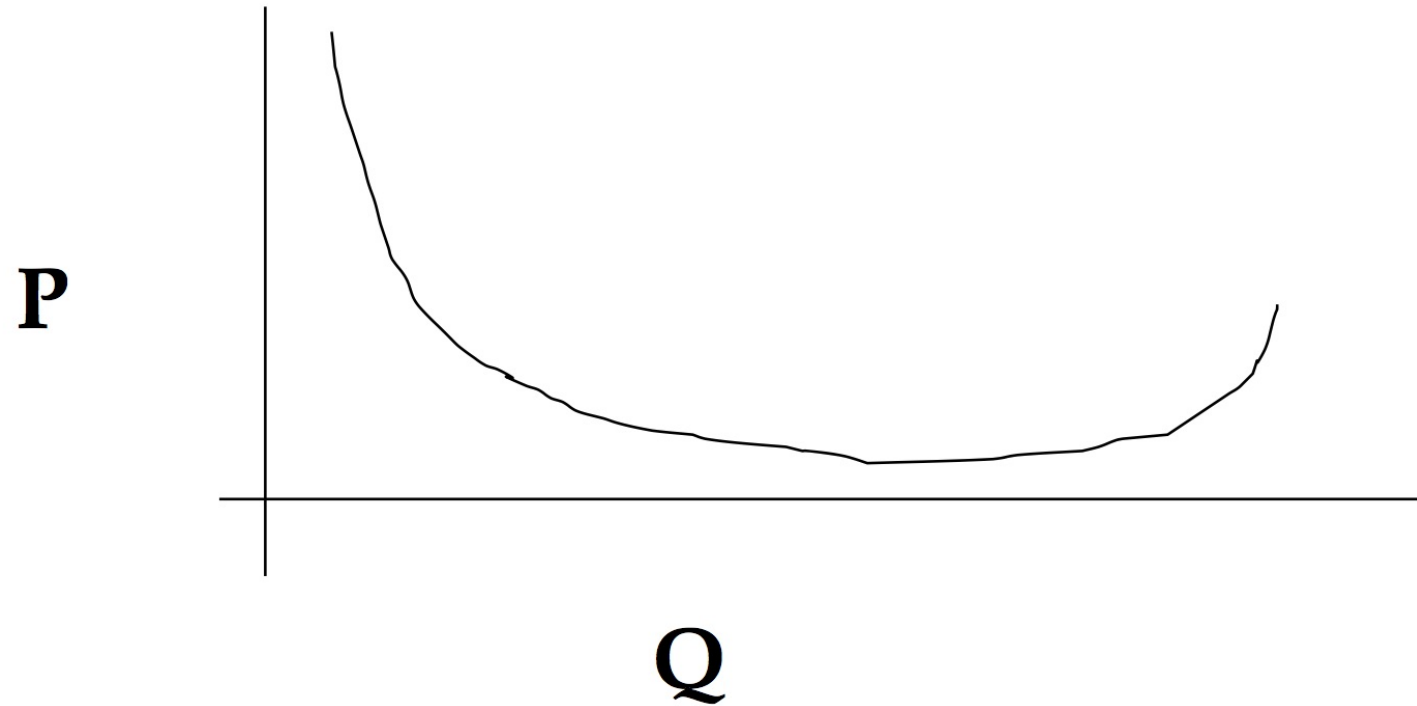
Liquidity is a Network Externality

a single marketplace tends to dominate for any single class of goods
reputation

Examples

Ebay vs Yahoo Auctions
Stock exchanges

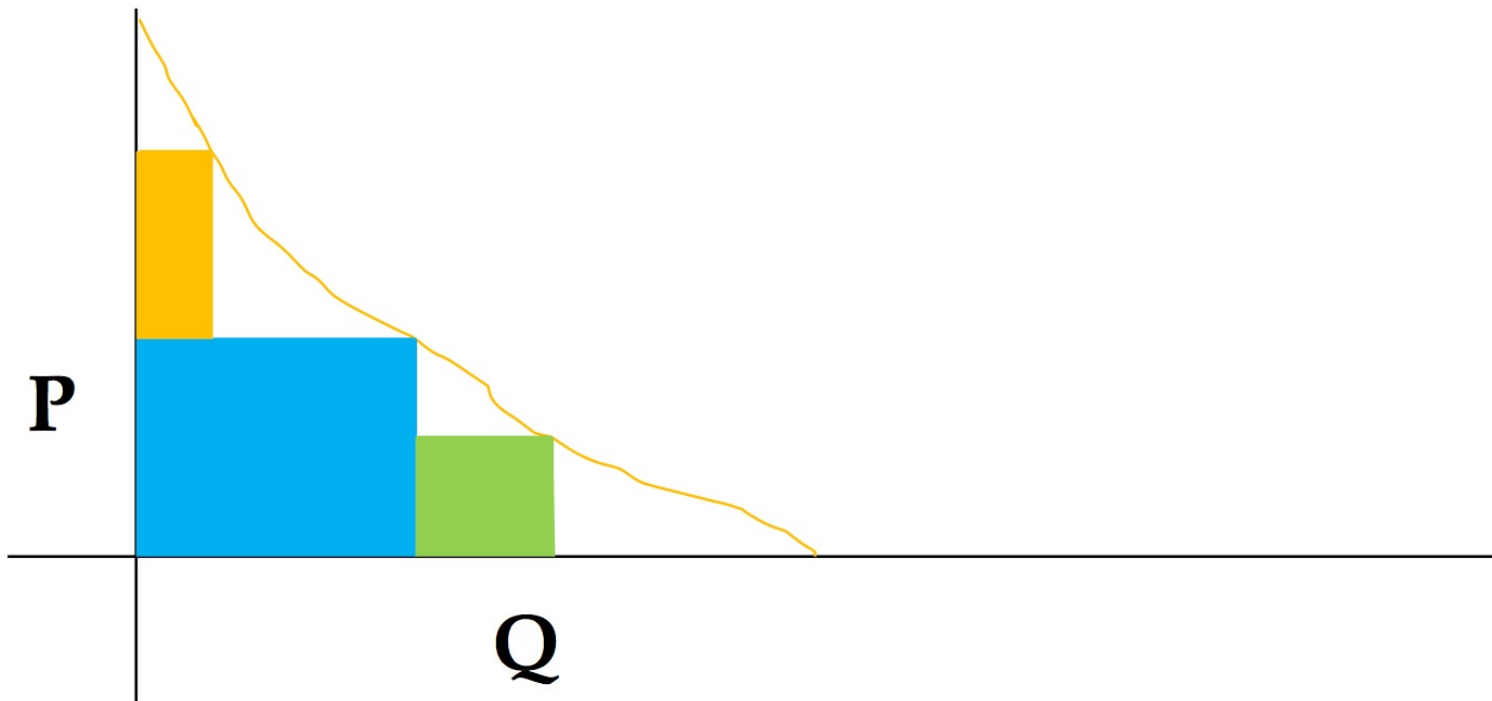
Manufacturing Cost



Supply and demand curves



Discriminating monopoly



Regulations

The Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013

Electronic Commerce (EC Directive) Regulations 2002

Privacy and Electronic Communications Regulations (EC Directive) 2003
update 2012/13

EU Consumer Rights Directive 2011

Consumer Rights Act 2015 - included "Digital content"

JINAL! SINAL! WANL!!

Consumer Contracts - 1

Your identity including sufficient detail for the consumer to be able to identify the business they are dealing with. **This means real name**

A description of the main characteristics of the goods or services you are offering

The price of the goods or services you are offering, including all taxes

Details of any delivery costs

Details of how payments can be made

If payment is required in advance, you must supply your full **geographic address**

Consumer Contracts - 2

The arrangements for delivery or performance of the service, for example when consumers can expect delivery of the goods or the service to start. The contract should be performed within 30 days unless the parties agree to a different period. **Not this affects pre-orders.**

Information about your consumers' right to cancel, where applicable.

If consumers have to use a premium-rate phone number, you must specify the cost of the call (including taxes) before any charges are incurred for the phone call.

For how long the price of the offer remains valid.

The minimum duration of the contract where good or services are to be provided permanently or recurrently and that you will pay the cost of your consumers returning any product that you supply as substitutes because the goods or services originally ordered are not available

Consumer Contracts - 3

After buying information that must be supplied in a durable form (**meaning paper or email**)

The information above

When and how to exercise their rights to cancel including
for goods - whether you require goods to be returned by the consumer and if so who will pay for their return

for services - the consequence of agreeing to a service starting before the end of the usual seven working day cancellation period

Details of any guarantees or after-sales services (**but see warranties**)

The geographic address of the business to which the consumer may direct any complaints. This excludes PO Box addresses

If a contract lasts more than a year or is open ended, the contractual conditions for terminating it.

ECR

Electronic Commerce (EC Directive) Regulations 2002

The full name of your business

The geographic address at which your business is established

Your contact details, including e-mail address

Details of any publicly accessible trade or similar register with which you are registered

If your service is subject of an authorisation scheme or if you are a member of a professional body, details of the relevant supervisory authority or body

Your VAT registration number

ECR 2

where you refer to prices, a clear and unambiguous indication of those prices and whether the price include taxes and delivery costs (but Consumer Contracts also require you to quote prices inclusive of all taxes if the sale is covered by those regulations).

Anti-spam provisions

commercial communications must be clearly identified as such,
provide your identify as the person making the communication,
clearly identify any promotional offer or promotional competition or game and ensure that the terms and conditions for participation are presented clearly

Requirements relating to the storing of the contract and for access to this by the consumer

Provision to enable the consumer to correct input errors prior to placing an order

Consumers should receive acknowledgement of the receipt of the order electronically without delay.

Warranties

EU law does not mandate a 2 year warranty

But does mandate a 2 year period for return of goods delivered faulty

Cancellations by consumer

14 working days after delivery of goods or required information

30 days plus seven working days if no information is delivered

VAT etc

UK customers

EU customers UNLESS they are registered for VAT and you have their VAT number

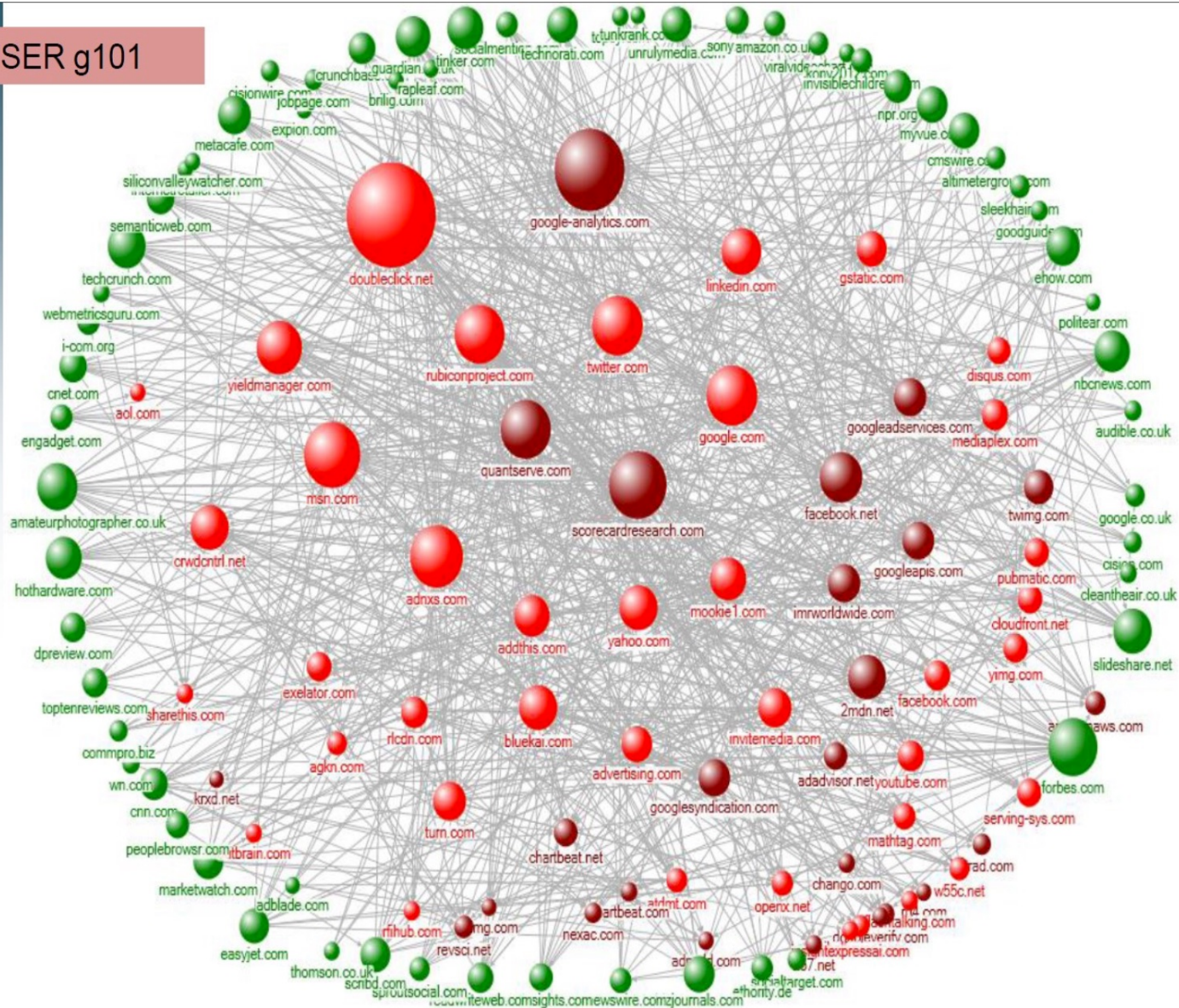
Special cases

Local sales taxes

Revenue duty on import converse of above

Excise duties complex e.g. TV components

USER g101



Created with NodeXL (<http://nodexl.codeplex.com>)

Cookies

Must declare use

Must obtain explicit assent for third party cookies each time

BREXIT

It hasn't happened yet.

Trade arrangements are still be negotiated.

Access to single market is a key question.

The arbitration process and court of appeal for trade disputes will change.

Capturing / Extracting Value

Business models (Where's the money?)

Landgrab

Merchant

PPV, Subscription, Freemium, Shareware, etc

Market

Advertising hoarding

Lotteries and scams

Land grab

Maximise market share now; worry about profitability later

Since there are not yet profits, stock market values the company (for a while) on number of customers

Typical of new “Bubble” companies: cable TV, airlines, radio, Railways in 19th C, colonial exploration in 18th C

Now discredited: later never comes
At least, not until the next bubble

Merchant

Sells goods or services for more than they cost

Basic to most businesses

Internet technologies add maybe 20% efficiency

- Disintermediation

- Lower cost market comms

- Lower cost order taking

- Lower cost distributino, especially for informational goods

- 'Just in Time' gives lower cost for stock and inventory

- Better modelling and control

 - Mexican cement plant example

BUT still must be a sound business!! !

Established players may be asleep, but are not dead

PPV or Subscription

Pay per View (use)

e.g. phone rates

Subscriptions

Actuarial calculations

All you can eat models

Administration issues - charging model never stays simple!

Matrix of services and products

Freebies, promotions, etc

Copying issues

Provide service

Street Performer Protocol

Market

Commission on other people's trades

- No stock cost

- Low barriers to entry

Place for buyers and sellers to meet

- eBay, B2B auctions, lastminute.com, bookfinder.com

Liquidity, liquidity, liquidity

- Network effects

Settlement issue

- Paypal, CrestCo, Bolero, Amazon pay, Apple pay, Google wallet

Novel pricing models (e.g. auctioning demand / surge pricing)

- Agent technology

Death of the portal (and maybe rebirth)

Better ways to trade - Platforms

Network effects

- Single marketplace for each class of goods

- Markets illiquid for large trades, inefficient for small trades

- What is a 'fair market'?

Clearance and settlement

- Issues for very large and very small trades

- Warranties provided by CC & banks

 - Dispute resolution

- Bearer certificates?

- Tax and jurisdiction?

- Privacy vs money laundering

Advertising

Typical rate £10 pct (thousand impressions)

More for personalisation and target adverts

Advertising industry, and advertisers are very conservative

Monitoring

High traffic sites

ISP home pages

Need to drive traffic to the site

Need to refresh site often / build community to keep users returning

Agency sales

Google, Facebook

Market saturating

Rates dropping

Different formats

Flash inserts; streaming media

Email, digital TV, etc

Lotteries and Scams

Lotteries: tax on the ignorant

Poor estimate of low probability events

Premium rate telephone scams

TV quiz shows and auctions

Phone this number to win...

Straight frauds

Ponzi schemes (Pyramid sells)

Credit card and other personal details

Telecom scams

Boiler room operations

Lightweight startups

Virtual office and presence

Cloud based resources (e.g. Amazon S3)

Low hanging fruit

Crowd source - Kickstarter

Establish market

Pre-sell product

Test assumptions not just product miracles