1. Overview

Inventions such as railroad and telephone revolutionised the world in the 19th and 20th centuries. Similarly, the Internet revolution in late 20th and early 21st century has also influenced our lives in a big way. This revolution will probably follow the same patterns as the railroad and telephone revolutions, with just one significant difference.

What is this difference?

The reality of the Internet revolution is based on the collection, generation, copying and distribution of information. These qualities of information make the Internet revolution different from prior innovations. We learned about the strategic options available to an entrepreneur. In this topic, we will explore the qualities of information and describe how entrepreneurs can successfully exploit these qualities to make their eBusinesses successful.

We will begin the topic by exploring the concept and advantages of information from the eBusiness point of view. Next, we will learn about the key strategic options available to eEntrepreneurs, and the drivers in eBusinesses. We will conclude the topic by analysing how a successful eBusiness venture, Realtor.com, applied information rules.

Objectives: Information Rules

Upon completion of this topic, you should be able to
- explain the concept and advantages of information from the eBusiness point of view
- describe the key strategic options available to an eEntrepreneur
- identify the drivers and value creators within eBusinesses

2. The Many Facets of Information
With the advent and popularity of electronic commerce, many pundits claimed that the old ways of doing business had ended and the laws of economics should be re-written. However, two economists from the University of California at Berkeley did not see it that way. Carl Shapiro and Hal Varian believed that the same principles of economics that applied to the real world of business would also apply to the virtual world of business. To establish their point, they wrote a book called *Information Rules: A Strategic Guide to the Network Economy*.

This topic draws heavily on their ideas. You can see for yourself what their emphasis and focus is by going to the [Information Rules](#) website. On this website, you will be able to see that these authors practice what they preach when it comes to offering a digital information product.

Before we begin to explore this concept, attempt a short exercise.

What is your view about information? To analyse this, think about the following. Read the following descriptions of information and think whether you agree or disagree with a statement.

1. Information is anything that can be put into a digital format.
2. Information has different uses for different people.
3. Information is intellectual property.
4. Information is an experience good, and an intangible commodity.

Can you now reflect on your understanding about the concept of information? Since information is a commonly used term, all of us may have our own understanding of this concept. However, the purpose of this topic is to understand information from an eBusiness point of view. As we proceed with this topic, you will soon find out that all the descriptions of information that you reviewed are true from an eBusiness point of view.

The electronic entrepreneur deals with information. Information is anything that can be put into a digital format. For example, photographs, text, catalogues, data, movies, stock quotes and online MBA subjects are all varied forms of information. Information can be very expensive to generate, but it is almost costless to reproduce. Therefore, selling information provides great margins, unless others reproduce and re-sell it.

Information has different uses for different people. This implies that an entrepreneur can offer different versions of information to different segments of customers. Thus, it enables an entrepreneur to extract maximum value - the most profit from their property. eBusinesses have many value drivers or ways of creating value through their operations and strategies. Maximum value means extracting value from all of these drivers. Information is also intellectual property and can be protected using copyrights, trademarks or business method patents.

Finally, information is an experience good requiring people to have a peek or preview before they purchase. The strategies adopted by eEntrepreneurs embody all these facts about information.

### 3. eEntrepreneur: Key Strategic Options

eEntrepreneurs need to consider a number of key strategic options as they form their businesses and marshal resources and capabilities for their firm. Let us review these options briefly and look at a few examples in the presentation below.
Key Strategic Options
Let us learn more about the types of strategies and examples of their application.

1. **Value pricing:** An example is Site Licenses for software products.

   Let us explore this strategy in detail.

   Value pricing strategy is based on the fact that different people value information to different degrees. Therefore, entrepreneurs need to decide the pricing strategy they plan to adopt.

   If entrepreneurs are able to differentiate a product, then they can attempt to sell their information to each customer for a different price, depending on what the customer can bear. If they cannot differentiate and the information has become a commodity, they can be aggressive but not greedy, since the customer can get the same information elsewhere at a better price. They must remember that the information is almost costless to duplicate, and there are large economies of scale here. Therefore, they should consider group sales because it probably costs about the same to sell a set of data or information to a group as it does to a single individual. This strategy is the basis for site licenses for software products.

2. **Versioning:** An example is a student version of the Windows Office Suite.

   Let us explore this strategy in detail.

   Versioning strategy means producing information in many options for the customer. For example, some possibilities are,

   - **Delay,** Sell some of the information to customers who need it in a hurry and want fresh and up to the minute reports, such as stock quotes. Sell another version in another format, such as a digest of monthly stock movements. Charge the most for the latest data.
   - **Convenience,** This strategy is related to delay. Entrepreneurs can make the use of data easier for some customers, and charge them for this privilege.
   - **Speed of operation,** This is also related to delay. Entrepreneurs can make some of the information accessible quickly and charge for this service. On the other hand, some customers can wait for their versions and get a discount for doing so. Image resolution, Some data can be displayed with a lot of visual appeal through enhanced graphics. Entrepreneurs can charge extra for this and offer a version with only text and no graphics at a discount.
   - **Features and functions,** Make some versions of the product available with search capability, cross referencing and a full line of features and functions. Make other versions with certain functions disabled and charge less for these versions. Many users will trade up for full functionality. Note that it costs the same to produce the two versions; the entrepreneur just offers less to the price conscious consumer. For example, many of you may purchase student versions of software, such as Windows Office Suite or Bizplan. The student versions are actually the same as the full feature versions, but with some functionality turned off.

3. **Intellectual property:** An example of this is Sample Cases and Syllabi given by Harvard Business Publishing.

   Let us explore this strategy in detail.
Intellectual property strategy aims at maximising the value of the intellectual property. Since digital technology lowers production and distribution costs, the eEntrepreneur must be willing to pass these savings on to the consumer. Therefore, the information rule for the eEntrepreneur is to maximise the value of the intellectual property by,

- giving away free samples
- giving away indexes, tables of content, some graphic images
- giving away low quality product and information
- willing to license use and do group sales

For example, Harvard Business Publishing gives sample cases and syllabi to students and Do Not Copy, single use articles, cases and teaching notes to faculty.

There will always be customers who will want the highest quality, the timeliest data, the product with full functionality and the greatest ease of use. These are where the values are, and these are the core of successful intellectual property management.

Let us gain some more perspective on intellectual property. Does this strategy Maximise Value or Maximise Protection? Many entrepreneurs think the intellectual property strategy is the same as maximising the protection for the property. However, this is not true. Indeed, carried to its extreme, the maximum protection for the property is not to sell it at all. As we can see with the controversial stance taken by the music industry, the entrepreneur can offend customers with too much protection. However, customers sense that information should be free and shared. Therefore, eEntrepreneurs need a strategy that maximises value, not protection. Because digital technology lowers production and distribution costs, they must be willing to pass these savings on to the consumer. This is exactly what the music industry is refusing to do.

4. **Lock in:** An example of this is HP. HP printers can use only HP cartridges.

   Let us explore this strategy in detail.

   Lock in strategy keeps the customer loyal to the venture. A lock in strategy raises switching costs for the customer. The entrepreneur who can design a lock in strategy and engender brand loyalty has the ability to maintain a relatively high price for the product. In addition, it reduces the cost of keeping current customers.

   Hewlett Packard or HP is one of the high tech manufacturers of computer peripherals, instrumentation equipment and printers. HP has a strategy that requires its printers to use HP cartridges. If you buy an HP printer, you are locked in to using their supplies. They price their printer products accordingly so that they can maximise the value of the revenue stream of the combined products, not each product separately. This is an example of a successful lock in strategy.

5. **Network:** An example is Instant Messaging.

   Let us explore this strategy in detail.
One telephone is useless, but a million are very useful. The first fax machine was just a toy, but if there were two, then you could have communication. The network strategy works on this economy. If there are more users, the more valuable it becomes for any single individual to be a part of that network. We see these principles applied in such successful businesses, such as eBay, Amazon and the Japanese cellular phone company, DoCoMo.

If eEntrepreneurs are in a network of this type, or in a personal network, it is vital that they recognise this. If they are in a network, they must take advantage of the positive feedback that exists. If they do not, they may incur a large opportunity cost. If competitors take advantage of the positive effects, while the entrepreneurs do not, they might not survive.

A good example of pure network effects is instant messaging. The more people that are in a particular instant message network, the better it is for all the members. They can have extended buddy lists and contacts. The fight between AOL, the leader, and MSN to have compatible instant messaging software can be understood as an attempt by Microsoft to extend a network to its customers and make MSN more valuable.

6. **Cooperation and compatibility:** For example, Netscape and Linux distribute software source code for free.

Let us explore this strategy in detail.

Many times, it is in the nature of entrepreneurs to try to steer their firms' strategy in an adversarial win-lose fashion. However, in the digital economy, this is frequently not the way to go. The entrepreneurial team needs to determine which other firms may be part of their network, actual or potential. Then they need to cooperate with these firms to build the size and strength of the network. Often this means making their products and technology compatible with each other. This is known as the cooperation and compatibility strategy.

The goal of this strategy is to have the network's standards become the industry standard. This will create a winner take all situations, and if it becomes the industry standard, the entrepreneur wins.

Note: This discussion on key strategic options available to eEntrepreneurs references the following:
- eBay
- Amazon
- DoCoMo

**Reflection: Maximise Value or Maximise Protection?**

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production and distribution costs, they must be willing to pass these savings on to the consumer. This is exactly what the music industry is refusing to do.

4. eBusiness Drivers

Apart from strategic options, eBusinesses can also create value through drivers or value creators. Amit and Zott (2001) wrote an article based on a series of case studies, and the four drivers that emerge from these studies are efficiency, novelty, complementarities and lock-in. Let us review each driver in the presentation below.

**eBusiness Drivers**

Let us now review each of these drivers.

**Efficiency**

These drivers or value creators reduce the costs of searching, transacting, monitoring and decision making. These can be defined as the ratio of inputs to outputs.

**Lock in**

This strategy keeps the customer loyal to the venture by raising their switching costs.

**Complementarities**

These drivers or value creators relate to the complementarities of partners or technologies and may include the network effects of complementarity of customers and vendors.

**Novelty**

These drivers or value creators add something new or unusual.

**Reflection: Value Creation in eBusiness**

- Some entrepreneurs create value in eBusiness through efficiencies. This involves reducing the costs of searching, transacting, monitoring and decision-making. These costs are real to the consumer, and the consumer will pay to have these reduced or eliminated. Since each consumer might have, in theory, a different set of costs, a version of the product or eBusiness website can be created for each.
- Bundling the features and benefits of the eBusinesses products and services creates novelty. Each product or service can have an element of difference or novelty to it, but even if it does not, the bundle can be novel or unique in some way. Since every customer in theory will want a different bundle, this type of customisation is a value driver.
- The value driver, complementarity, is a function of the bundles, but can go beyond this. It may refer to complementarities of partners and technologies and include the network effects of complementarity of customers and vendors.
- Finally, Amit and Zott include the concept of lock-in. This is similar in nature to the previous descriptions that include brand loyalty, loyalty programs and dominant technology.
5. Reflection

To better understand the information rules, strategies and value drivers, let us look at a specific case and attempt the following reflection exercise.

**Reflection: Value Drivers in e-Business 2.0**

Read the following article on Web 2.0.

*Value Drivers in e-Business 2.0: How Web 2.0 is changing the landscape of e-business*

Answer the following questions:

1. Are the drivers presented by Amit and Zott still valid?
2. Can you find an example of a Web 2.0 company using one of the new drivers?
3. What could a Web 3.0 be? What kind of business could you built around it?

6. Self-Assessment

Now, try the self-assessment questions to test your understanding of the topic. Click the following link to open the Self-Assessment in a new window.

*Self-Assessment*

Q1. Which eBusiness strategy do you apply if you sell site licenses for computer software?
   1. Versioning
   2. Value pricing strategy
   3. Intellectual property strategy
   4. Lock-in strategy
   5. Network strategy
   6. Cooperation and compatibility strategy

Q2. Which two of the following are the options available for adopting a versioning strategy?
   1. Sell fresh and up-to-the-minute information to customers who need it in a hurry.
   2. Bundle the features and benefits of the eBusinesses products and services.
   3. Display some data with enhanced graphics and charge extra for this as compared to a text only version.
   4. Raise switching costs by ensuring brand loyalty.

7. Summary

This topic covered the following points:

- The eEntrepreneur should be aware that the core of the business is frequently information, and that the information rules strategies apply to the business.
  - Value pricing strategies extract the highest margins by matching the price to the value the customer has for the product.
  - Versioning strategies produce differentiated products that offer different features and benefits. The venture segments the market based on these differentiated products.
  - Intellectual property strategy maximises the value of the property, and not the protection for the property.
  - Lock-in strategy produces switching costs for the buyer and brand loyalty.
  - Networking strategy recognises that the more people in a positive feedback network, the more value the network has to each member.
• Cooperation and compatibility strategies help build the network and win the industry standard over the non-cooperative, non-compatible competitors.

• eBusinesses can also create value through the following drivers:
  o Efficiency
  o Novelty
  o Complementarities
  o Lock-in