

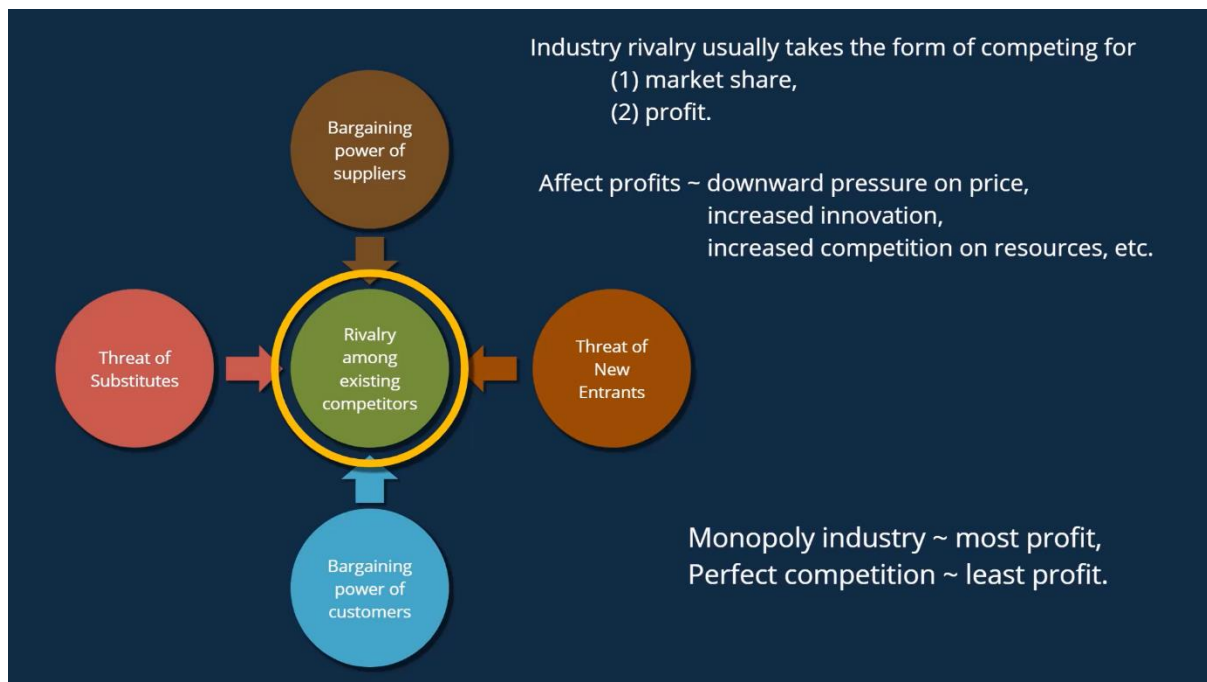
# M5L3. Porter's Horizontal Forces

## Slide #1

The slide cover is split into two main sections. The left section is a dark grey rectangle containing the Texas A&M University Engineering logo at the top, followed by the title 'Porter's Horizontal Forces' in white, the name 'Dr. Xiaomin Yang', and course information 'TCMT 612 | Technical Management Decision Making' and 'MASTERS OF ENGINEERING TECHNICAL MANAGEMENT' at the bottom. The right section is a light grey image showing a person from behind, looking at a large digital screen. The screen displays a complex network diagram of interconnected nodes and lines, along with several hexagonal icons containing bar charts, line graphs, and network symbols.

In this topic, we will discuss Porter's Horizontal Forces: industry rivalry, threat of new entrants, and threat of substitutes.

## Slide #2



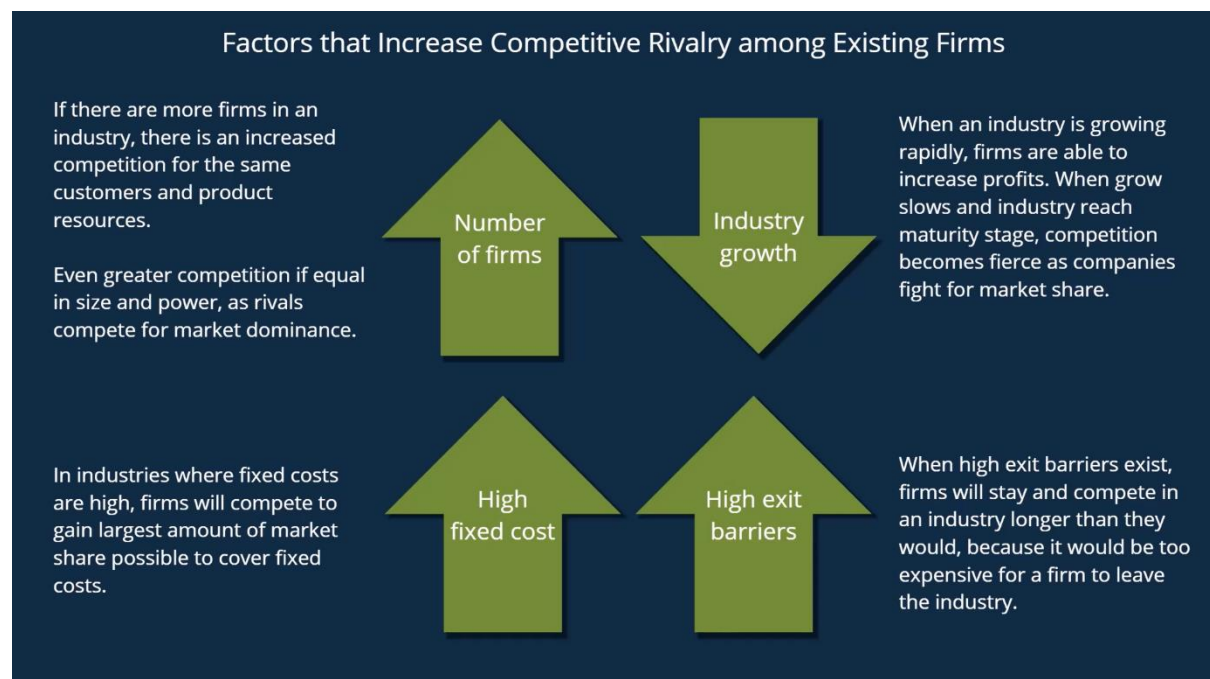
Industry rivalry or rivalry among existing firms is one of Porter's five forces used to determine the intensity of competition in the industry.

Industry rivalry usually takes the form of competing for market share and a profit.

Rivalry among industry players can affect industry's profits through downward pressure on price, increased innovation, increased competition on resources, and so on.

In economics, a monopoly industry structure earns the most profit, while the perfect competition industry structure earns the least.

### Slide #3



Factors that increase competitive rivalry among existing firms include, first, the number of firms in an industry. If there are more firms within an industry, there is an increased competition for the same customers and product resources. There is even greater competition if industry players are equal in size and power as rivals compete for market dominance.

The second is the industry growth. When an industry is growing rapidly, firms are able to increase profits. However, when the growth slows and the industries reach the maturity stage, competition becomes fierce as companies fight for the market share.

The third factor is high fixed cost. In industries where the fixed costs are high, firms will compete to gain the largest amount of market share possible to cover the fixed cost.

The fourth factor is high exit barriers. When high exit barriers exist, firms will stay and compete in an industry longer than they would because it would be too expensive for a firm to leave the industry.

## Slide #4

Internal Rivalry ~ Competing for Positioning ~ Various Tactics



One company's competitive moves ~ noticeable impact on the competition. Other companies will retaliate to counter this effect.

Companies are mutually dependent, so the pattern of action and reaction may harm all companies in the industry.

Industry where internal rivalry is strong, those companies always mimic each other's strategic directions.

Impact on profitability of the industry.

The internal rivalry takes a form of competing for positioning using various tactics.

For example, price competition, advertising battles, and product introductions.

This rivalry tends to increase in intensity when companies either feel competitive pressure or see an opportunity to improve their position.

In most industries, one company's competitive moves will have a noticeable impact on the competition.

Other companies will then retaliate to counter this effect.

Companies are mutually dependent, so the pattern of action and reaction may harm all companies in the industry.

In that kind of industry, where the internal rivalry is strong, those companies always mimic each other's strategic directions.

The internal rivalry among existing firms in the industry has a profound impact on the overall profitability of the industry.

## Slide #5



Profitable industries that yield high returns will attract new firms to enter.

The new entrance eventually will decrease the profitability for other firms in the industry.

Unless the entry of new firms can be made more difficult by barriers, abnormal profitability will fall towards zero, which is the minimum level of profitability required to keep an industry in business.

There are seven major sources of barriers to prevent new entrants to enter an industry.

## Slide #6

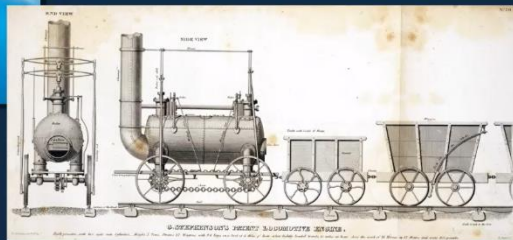
### Source of Barriers #1 - Experience, Innovation, & Patents



Need to invest in new technologies and patent licenses can act as a barrier for new entrants.



Innovation creates a barrier by forcing entrants to spend heavily to develop new products with differentiating features and functions.



Firstly, experience, innovation, and patents.

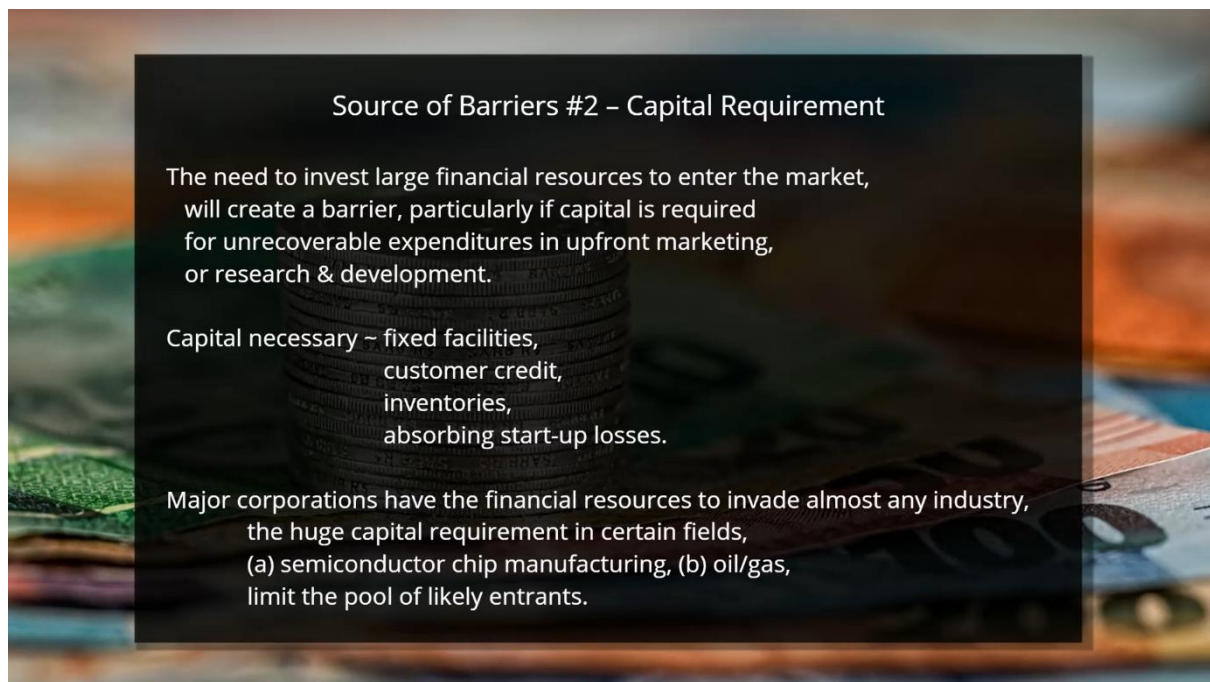
The need to invest in new technologies and the patent licenses can act as a barrier for new entrants.

Innovation creates a barrier by forcing entrants to spend heavily to develop new products with differentiating features and functions.

It is perhaps the most important entry barrier in health care industry.



## Slide #7



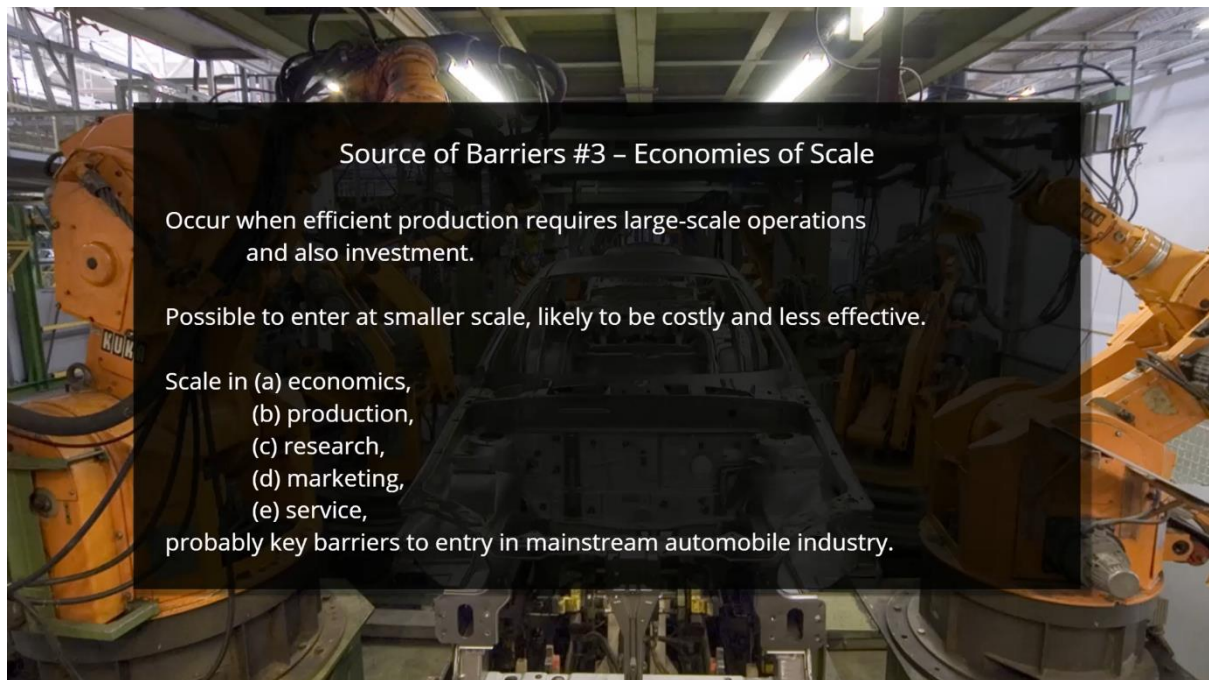
Second, is capital requirement.

The need to invest large financial resources in order to enter the market will create a barrier, particularly if capital is required for unrecoverable expenditures in upfront marketing or research and development.

Capital is necessary not only for fixed facilities. but also for customer credit, inventories, and absorbing startup losses.

While major corporations have the financial resources to invade almost any industry, the huge capital requirement in certain fields, such as semiconductor chip manufacturing, and oil and gas, limit the pool of likely entrants.

## Slide #8



### Source of Barriers #3 – Economies of Scale

Occur when efficient production requires large-scale operations and also investment.

Possible to enter at smaller scale, likely to be costly and less effective.

Scale in (a) economics,  
(b) production,  
(c) research,  
(d) marketing,  
(e) service,  
probably key barriers to entry in mainstream automobile industry.

The third is economies of scale.

Economies of scale occur when efficient production requires large scale operations and investments.

It might be possible for a company to enter at a smaller scale, but this is likely to be costly and less effective.

Scale in economics, production, research, marketing, and service are probably the key barriers to entry in the mainstream automobile industry.



## Slide #9



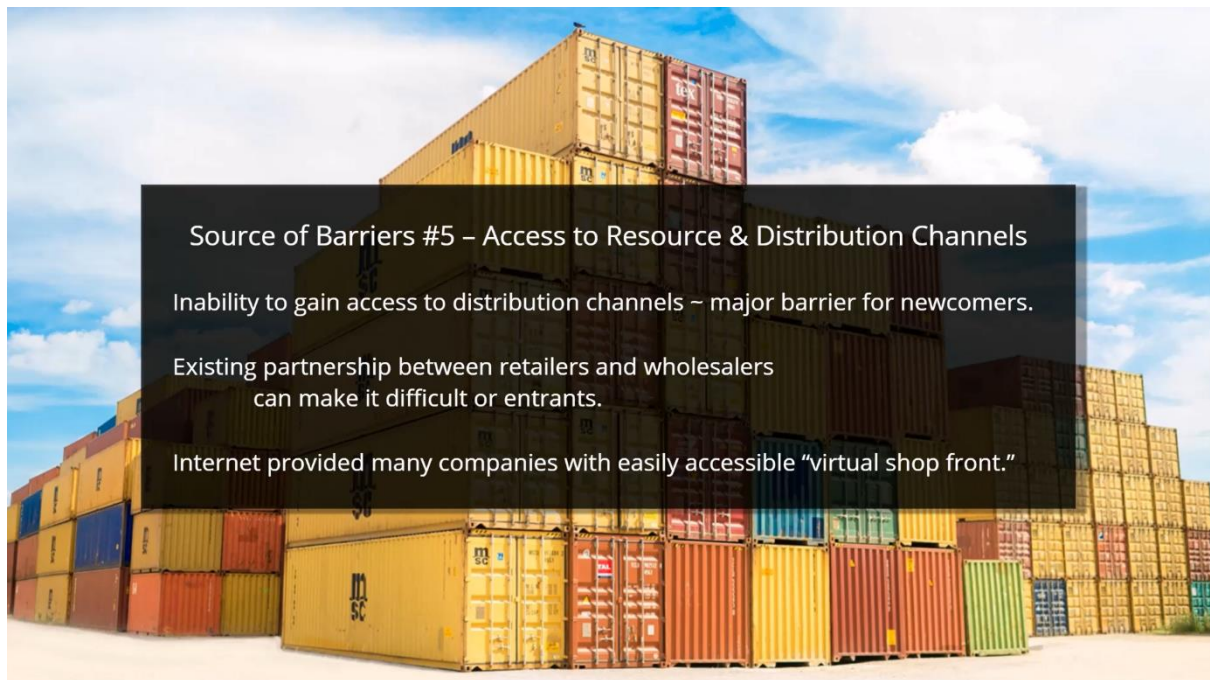
Product differentiation and brand equity.

Creating a brand identity that differentiates a product or service from the competition and encourages loyalty can help create a barrier for others.

Being first in the industry and product differences are among the factors fostering brand identification.

Brands that enter the market early are often perceived to have an advantage.

## Slide #10



### Source of Barriers #5 – Access to Resource & Distribution Channels

Inability to gain access to distribution channels – major barrier for newcomers.

Existing partnership between retailers and wholesalers  
can make it difficult for entrants.

Internet provided many companies with easily accessible “virtual shop front.”

Access to resources and the distribution channels.

An inability to gain access to distribution channels can be a major barrier for newcomers.

Existing partnership between retailers and wholesalers can make it difficult for entrants.

The internet, however, has provided many companies with an easily accessible virtual shop front.

## Slide #11



### Source of Barriers #6 – Governmental Policy

Regulations by government can act as strong barrier.

Clean Air Act, U.S. EPA's strict regulations make it very difficult to add new refinery capacity in the U.S.

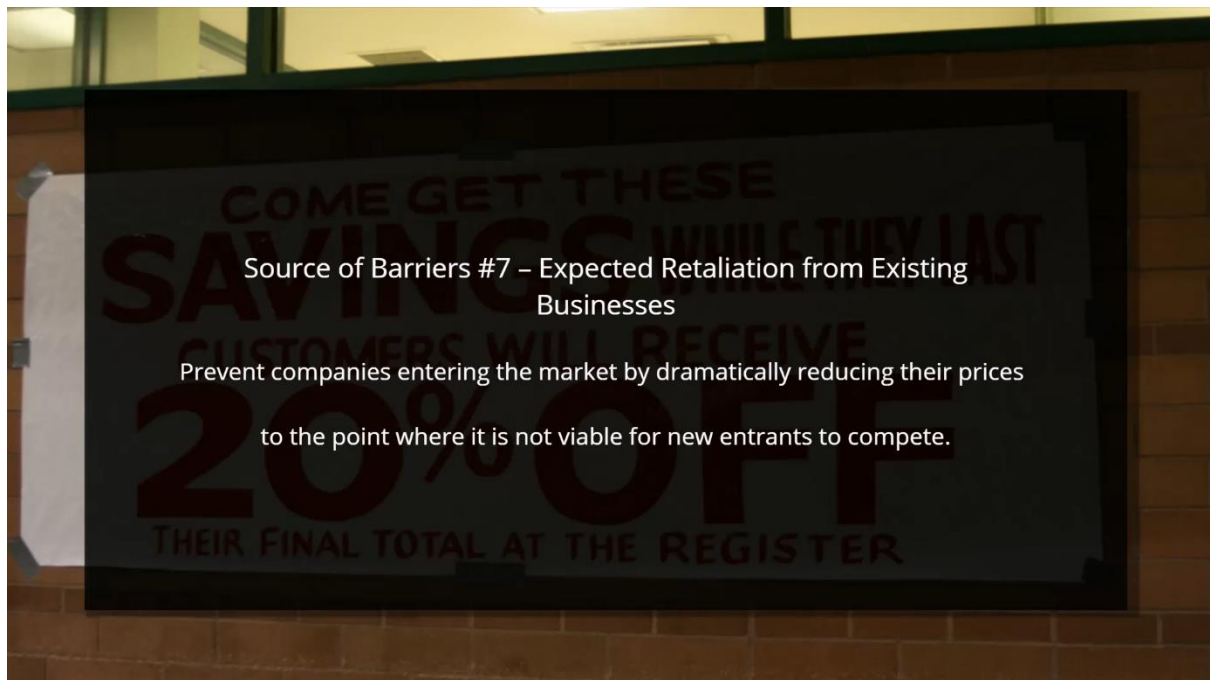
Another source of the barrier for newcomers is governmental policy.

For example, the refining industry in the U.S.

The regulations by government can act as a strong barrier.

The Clean Air Act and the U.S. EPA's strict regulations make it very difficult to add new refinery capacities in the U.S.

## Slide #12



Source of Barriers #7 – Expected Retaliation from Existing Businesses

Prevent companies entering the market by dramatically reducing their prices to the point where it is not viable for new entrants to compete.

The last but not least factor is the expected retaliation from existing businesses.

Businesses may try to prevent the companies from entering the market by dramatically reducing their prices to the point where it is not viable for new entrants to compete.

### Slide #13



The barriers to entry will protect the industry as a whole.

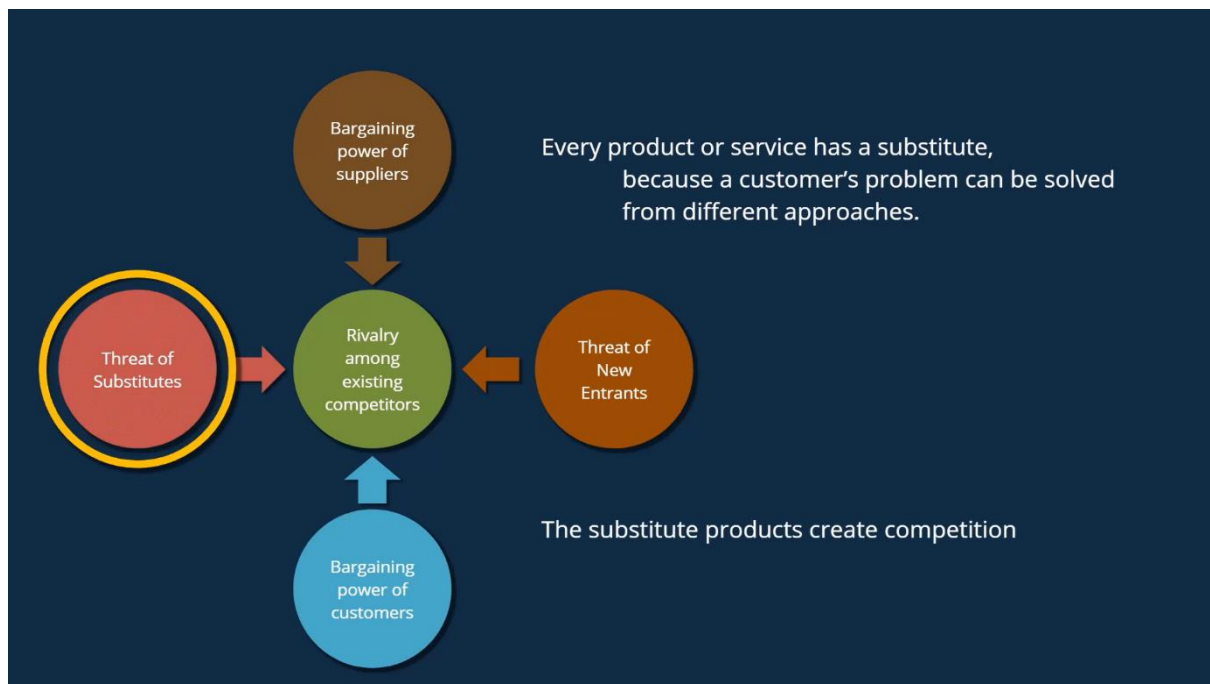
It will protect every existing company in the industry.

So it is not uncommon that existing companies in that industry take the same type of protective actions to prevent other companies to enter the industry.

They are not coordinated, but from strategy perspective, all the players in the industry understand the importance of creating barriers for new entrants.







## Slide #14



Every product or service has a substitute because a customer's problem can be solved from different approaches.

The substitute products create competition and reduce profitability of an industry.

## Slide #15

	Obvious Substitutes	Less-obvious Substitutes
Sugar		
High-fructose corn syrup		
		Building insulation materials
		Heating fuels

Some of the substitute products are obvious.

For example, sugar producers confronted with a large scale commercialization of a high fructose corn syrup, a sugar substitute.

Many of the substitute products are less obvious, but still have significant impact on the profitability of an industry.

For example, in the 1980s, the producer of building insulation materials enjoyed unprecedented demand as a result of high energy costs.

The wide use of insulation materials in buildings lowered the demand on heating fuels and therefore tempered the energy industry's ability to raise prices.

### **Slide #16**



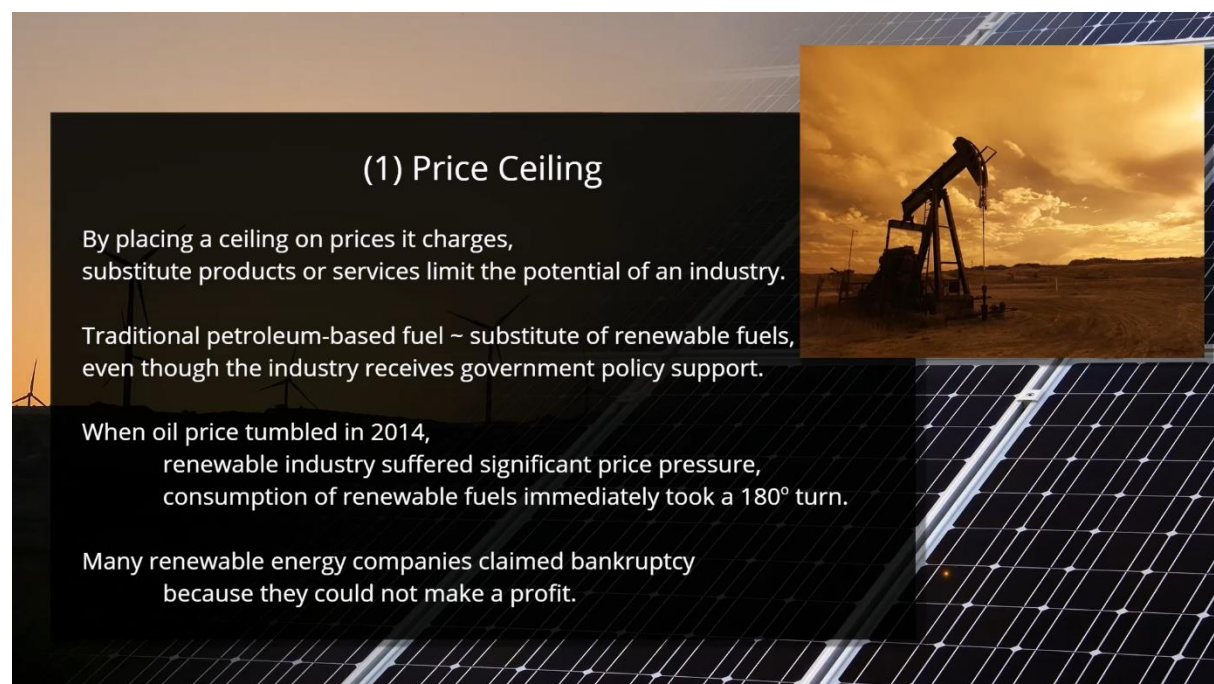
Several factors determine whether or not there is a threat of substitute products in the industry.

First, if the substitute product is cheaper than the industry's product, thereby placing a ceiling on the price of the industry's product, then the threat of the substitute product is very strong.

Second, if the customer's switching costs are low, meaning there is little if anything stopping the customers from purchasing the substitute instead of the industry's product, then the threat of substitute product is also high.

Third, if customers exhibit biased preferences of the functions, attributes, or performances of the substitute product, the threat of the substitute product is high.

### **Slide #17**



**(1) Price Ceiling**

By placing a ceiling on prices it charges, substitute products or services limit the potential of an industry.

Traditional petroleum-based fuel ~ substitute of renewable fuels, even though the industry receives government policy support.

When oil price tumbled in 2014, renewable industry suffered significant price pressure, consumption of renewable fuels immediately took a 180° turn.

Many renewable energy companies claimed bankruptcy because they could not make a profit.

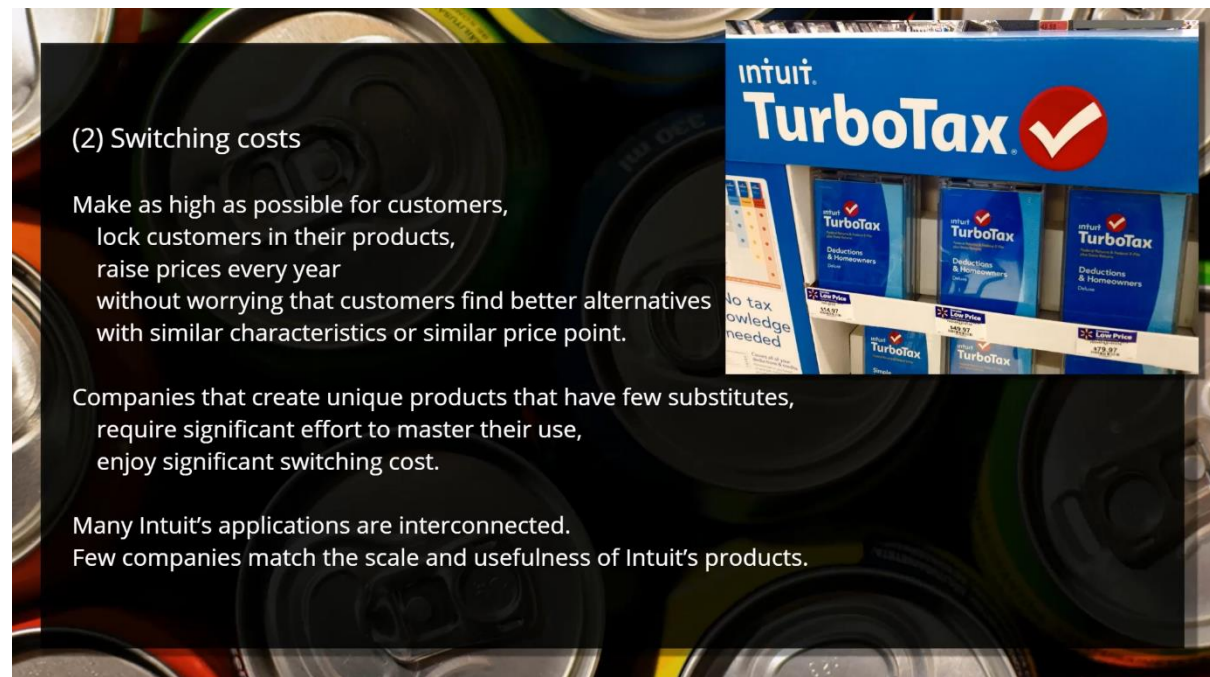
Substitute products and services limit the potential of an industry by placing a ceiling on prices.

In the renewable energy field, traditional petroleum-based fuel is a powerful substitute of renewable fuels, even though the industry receives government policy support.

When oil prices tumbled in 2014, the renewable industry suffered a significant price pressure, and the consumption of renewable fuels immediately took a 180-degree turn.

Many renewable companies claimed bankruptcy because they could not make a profit.

### **Slide #18**



(2) Switching costs

Make as high as possible for customers, lock customers in their products, raise prices every year without worrying that customers find better alternatives with similar characteristics or similar price point.

Companies that create unique products that have few substitutes, require significant effort to master their use, enjoy significant switching cost.

Many Intuit's applications are interconnected.  
Few companies match the scale and usefulness of Intuit's products.

Making switching costs as high as possible for their customers allows companies to lock customers in their products and raise prices every year without worrying that their customers will find better alternatives with similar characteristics or price points.

Companies that create unique products that have few substitutes and require a significant effort to master their use enjoy significant switching costs.

Consider Intuit, which offers its customers various bookkeeping software solutions and accounting solutions.

Because learning to use Intuit's applications takes significant time, effort, and training cost, few users are willing to switch away from Intuit.

Also, many of Intuit's applications are interconnected, which provides additional functionalities and benefits to users, and few companies match the scale and usefulness of Intuit's products.

So the switching cost will be very high for the customers of Intuit to switch to a substitute product.

### **Slide #19**

#### (3) Quality, Function, & Performance

Substitute products that deserve most attention strategically are those that offer better quality, function, and performance.  
Threat of superior substitute is very strong and sometimes fatal.



Substitute products that deserve the most attention strategically are those that offer better quality, function, and performance.

The threat of superior substitute products is very strong and sometimes fatal to the industry.

In recent years, many industries experienced this type of fatal threat from substitute products to the market norms.

For instance, Uber or other online ride share services are rapidly taking the market share from the traditional taxi services.

Smartphones not only drove traditional cell phone makers such as Nokia out of the competition, but also boosted the mobile computing and service market and pushed the market size into a much higher level.