EDGE Program funded by MEXT

Keio University Global Innovator Acceleration Program 2015

Preliminary Assignment for Day 6: Business Synthesis

Graduate School of System Design and Management
EDGE Program Team

Business Model

What is Business Model?

- “A business model describes the rationale of how an organization creates, delivers, and captures value.”
  - Alex Osterwalder et al “Business Model Generation”

Business Model Patterns

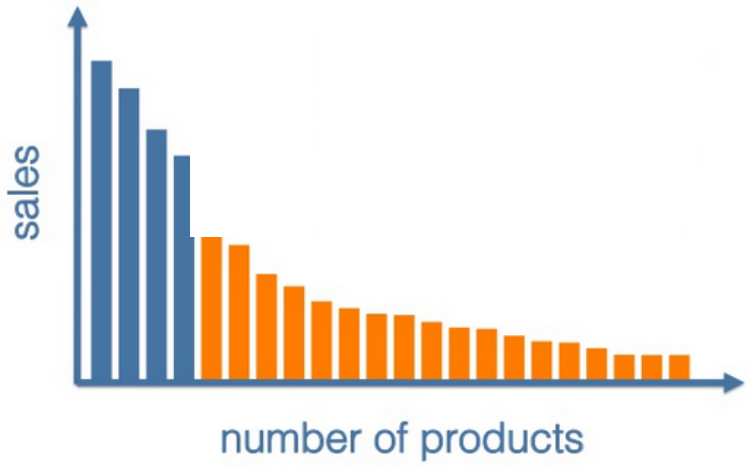
- There are major business model patterns.
  - multi-sided platforms
  - the long tail
  - free / bait & hook
  - no frills
- Knowing existing business model patterns helps you.
  - a source of inspiration for your own work with business models

Multi-sided platforms

- Offers different solutions to different platforms
  - VISA Card: Card users and Stores
  - Google: Searchers and Advertisers
  - Recruit: Job hunters and Recruiters
- Can creates customer value to one group only if the other also presents.

The long tail

- Enjoy huge amount of profit from **large number of niche products** (instead of traditional 80/20 rule)
- Internet made it possible
  - virtually no limitation of showcase space



Bait & Hook (餌と釣り針)

- Offers a basic product or service at a very low price (the bait), and then taking profit from refills or associated products or services (the hook).
- Bait (photocopy machine) & hook (toner cartridge)
- Bait (T-shaped shaver) & hook (razor blade)

XEROX®

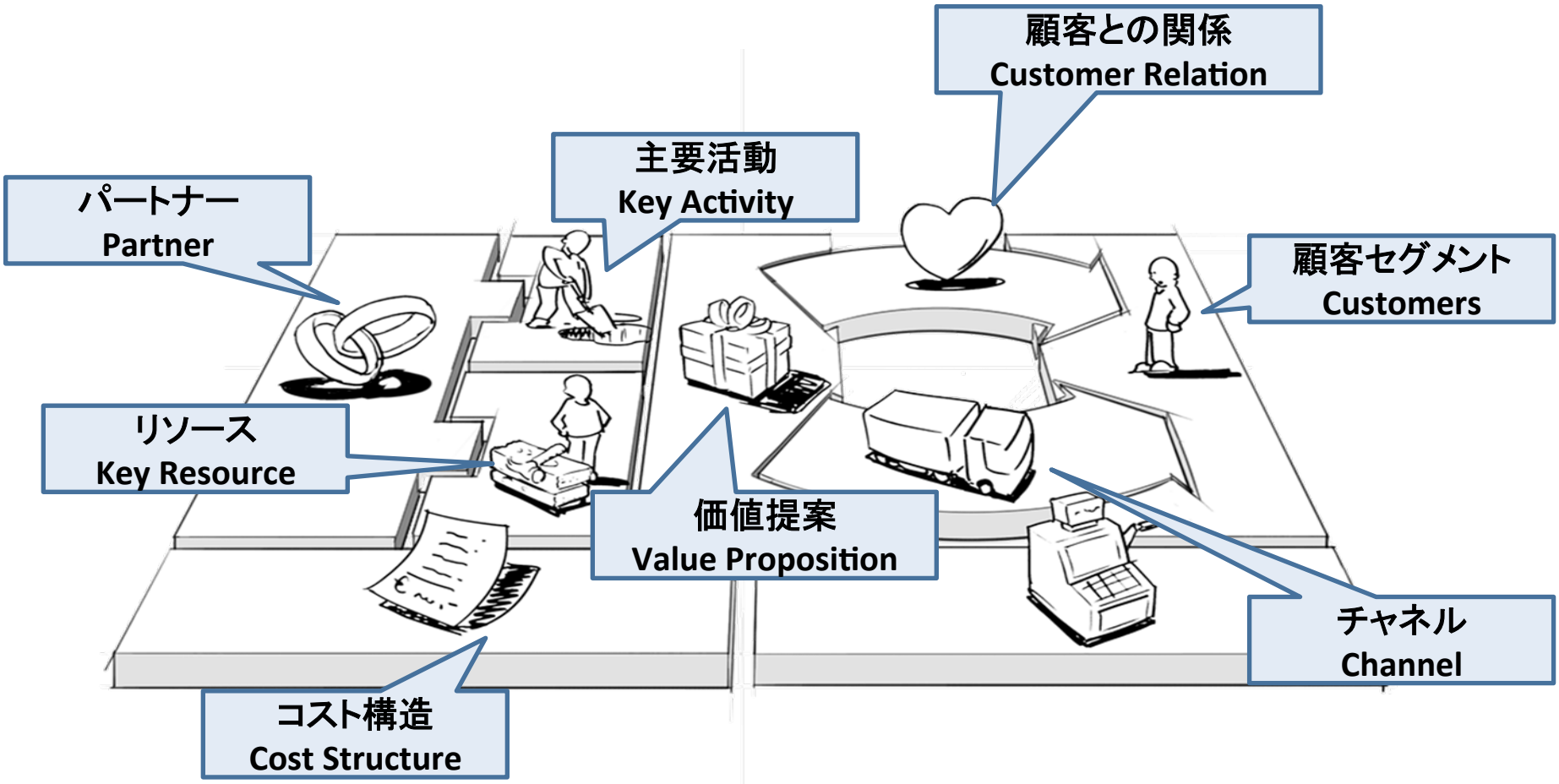
Freemium

- A derivative of “bait & hook”
- Free + premium
- Give away a core product for free and then generate revenue by selling premium products

No frills

- Remove non-essential feature to reduce costs
- Operational excellence is needed to make it possible
  - 15 minutes turn of SWA
  - 10 minutes cut of QB house

Business Model Canvas



www.businessmodelgeneration.com

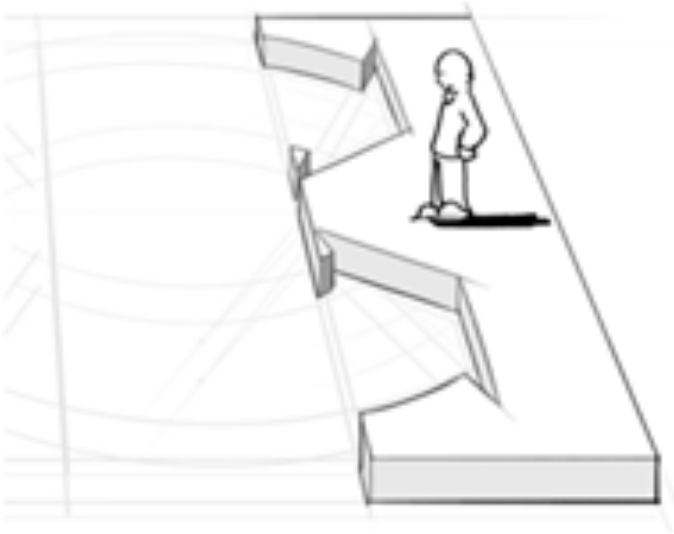
Business Model Canvas

- Business Model Canvas is a communication tool for describing, visualizing, assessing, and improving business models.

- It doesn't create any business model by itself, it's a communication tool
  - easy to collaborate
  - easy to look

Customer Segments (CS)

- The Customer Segments defines the different groups of people or organizations an enterprise aims to reach and serve



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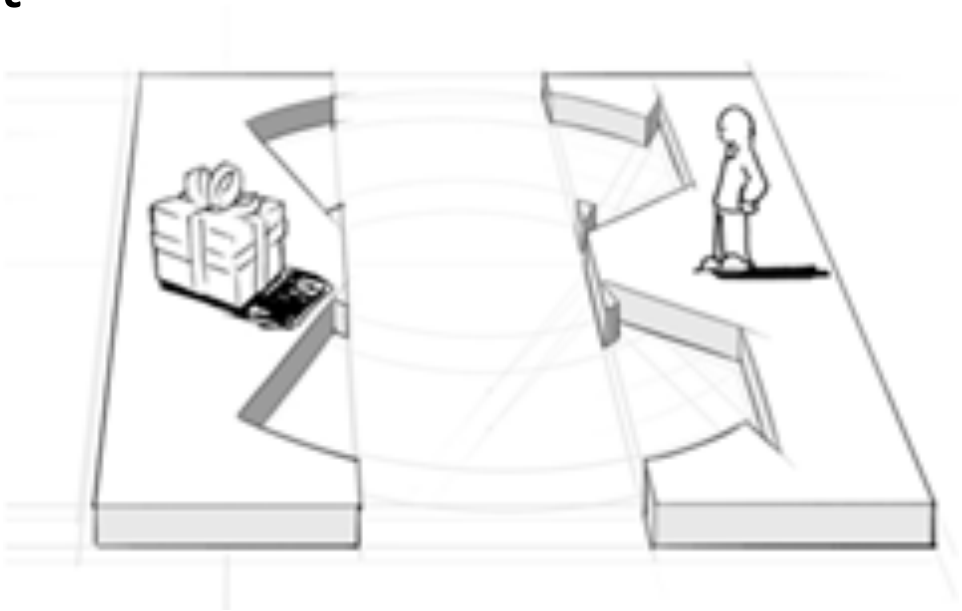
Value Propositions (VP)

- The Value Propositions describes the bundle of products and services that create value for a specific customer segment



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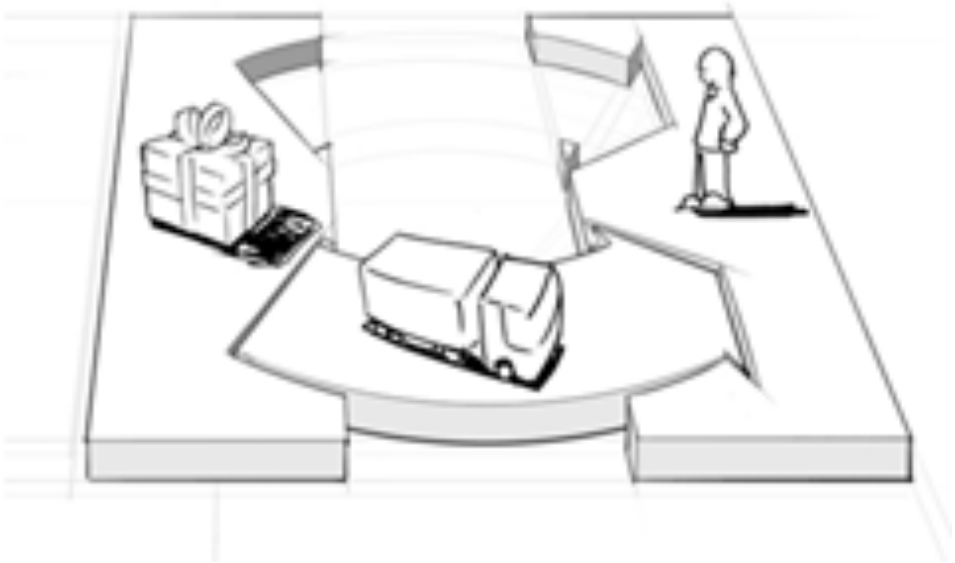
Channels (CH)

- The Channels describes how a company communicates with and reaches its Customer Segments to deliver a Value Propositions



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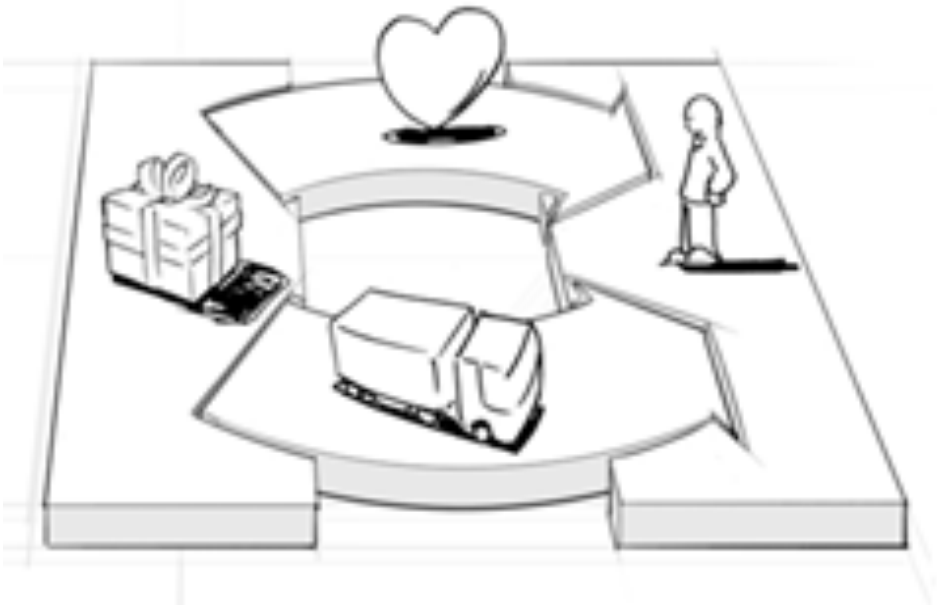
Customer Relationships (CR)

- The Customer Relationships describes the types of relationships a company establishes with specific Customer Segments



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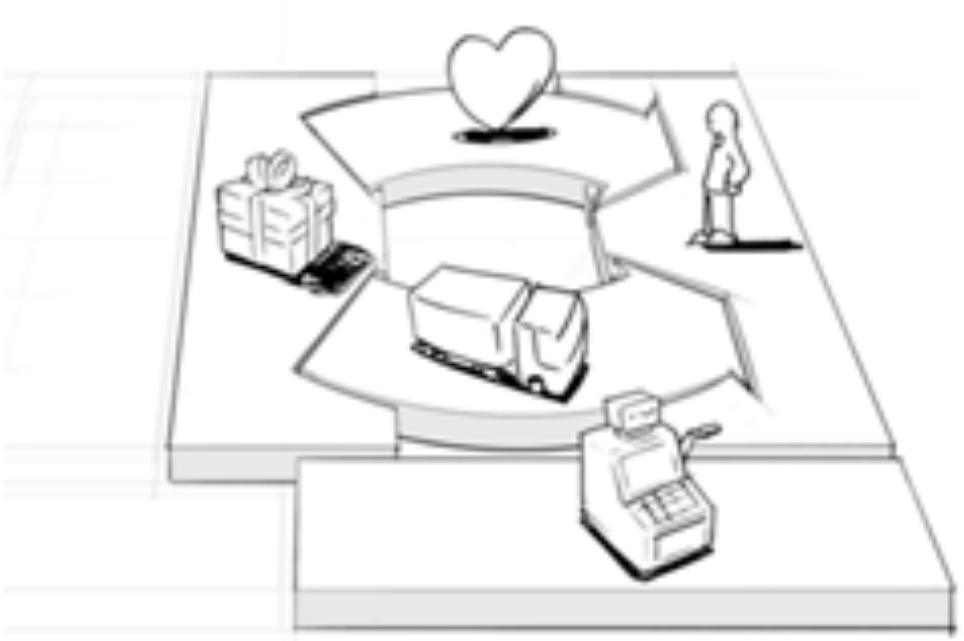
Revenue Streams (R$)

- The Revenue Streams represents the cash a company generates from each Customer Segment



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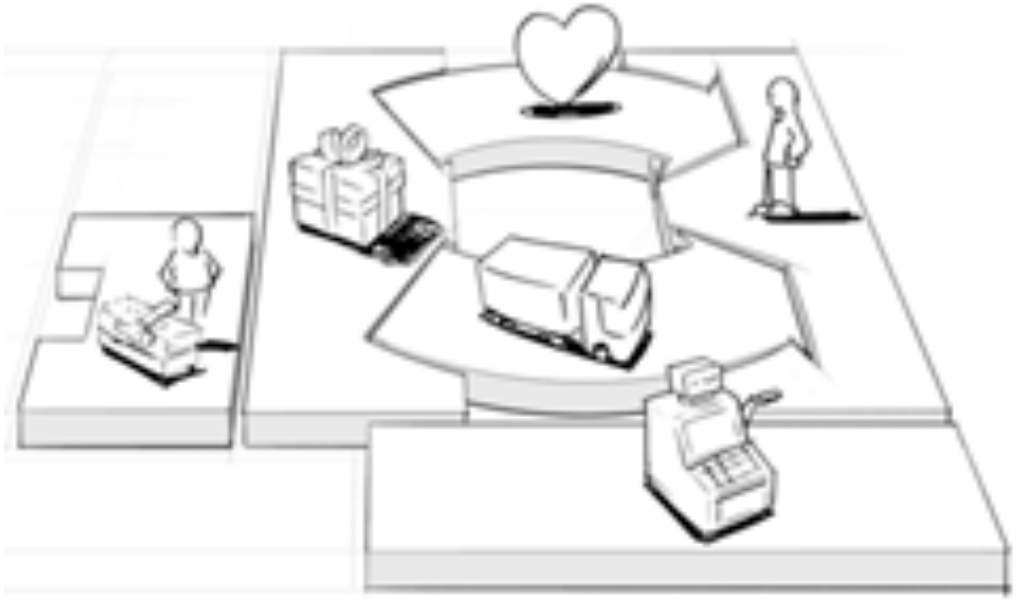
Key Resources (KR)

- The Key Resources describes the most important assets required to make a business model work



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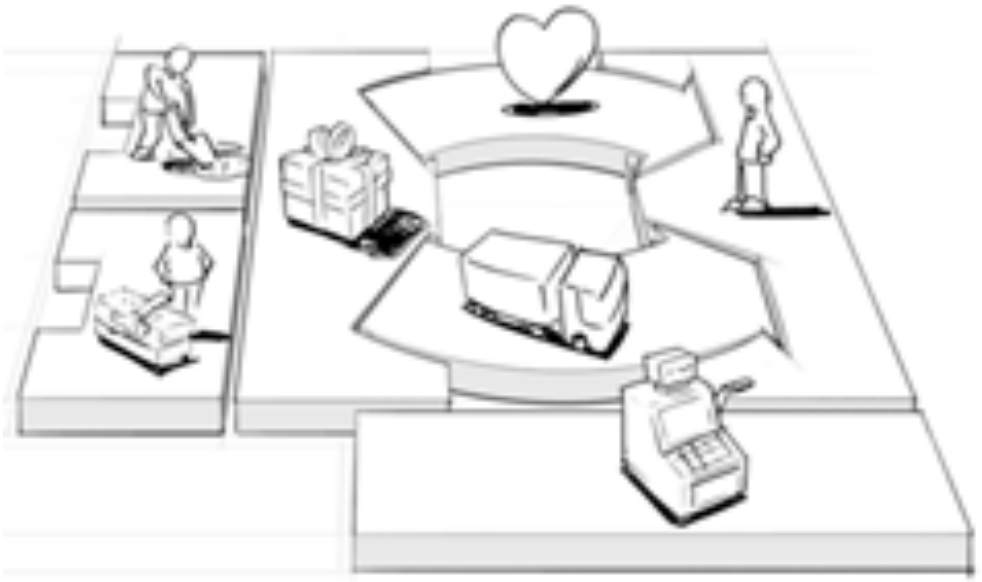
Key Activities (KA)

- The Key Activities describes the most important things a company must do to make its business model work



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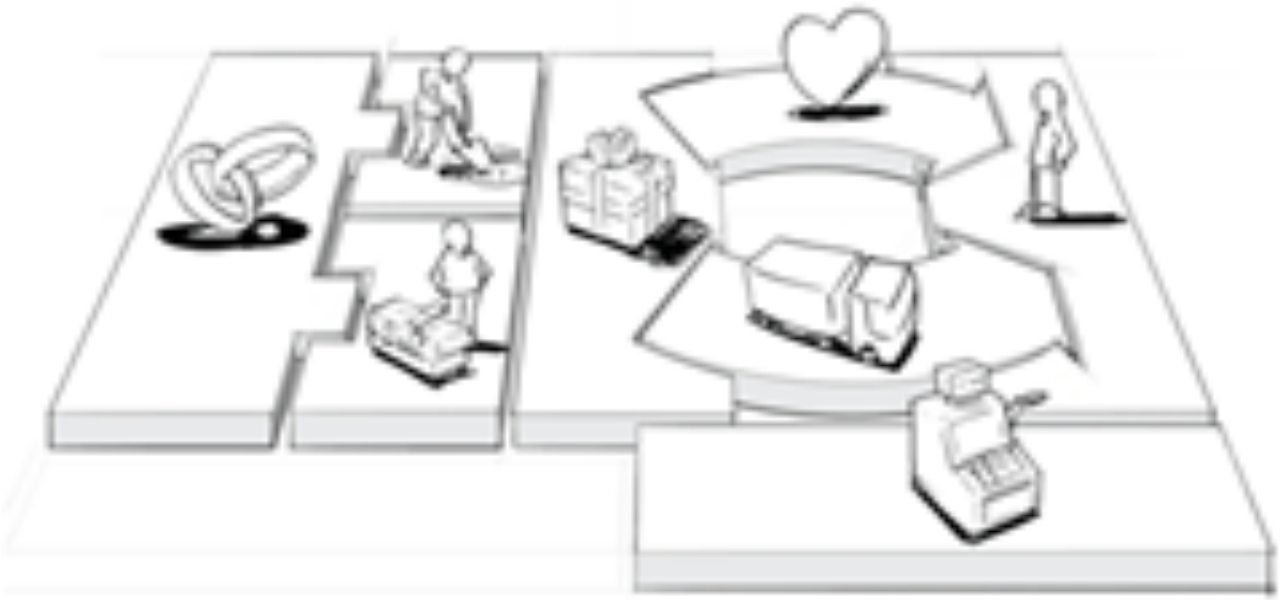
Key Partnerships (KP)

- The Key Partnerships describes the network of suppliers and partners that make the business model work



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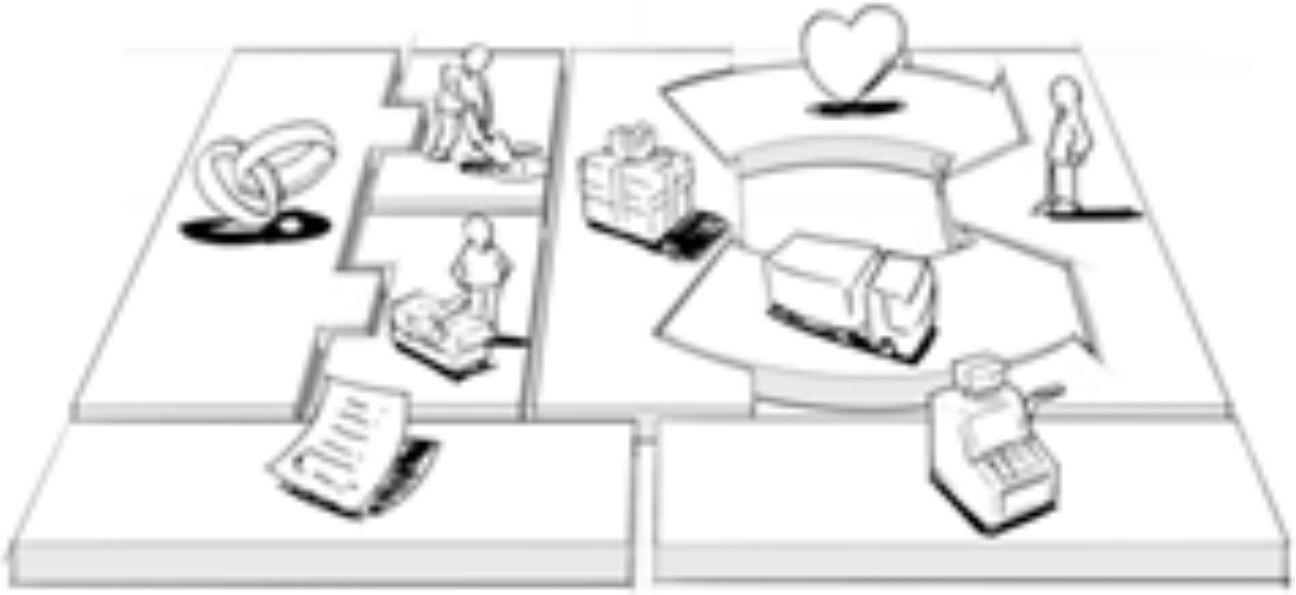
Cost Structures (C$)

- The Cost Structures describes all costs incurred to operate a business model



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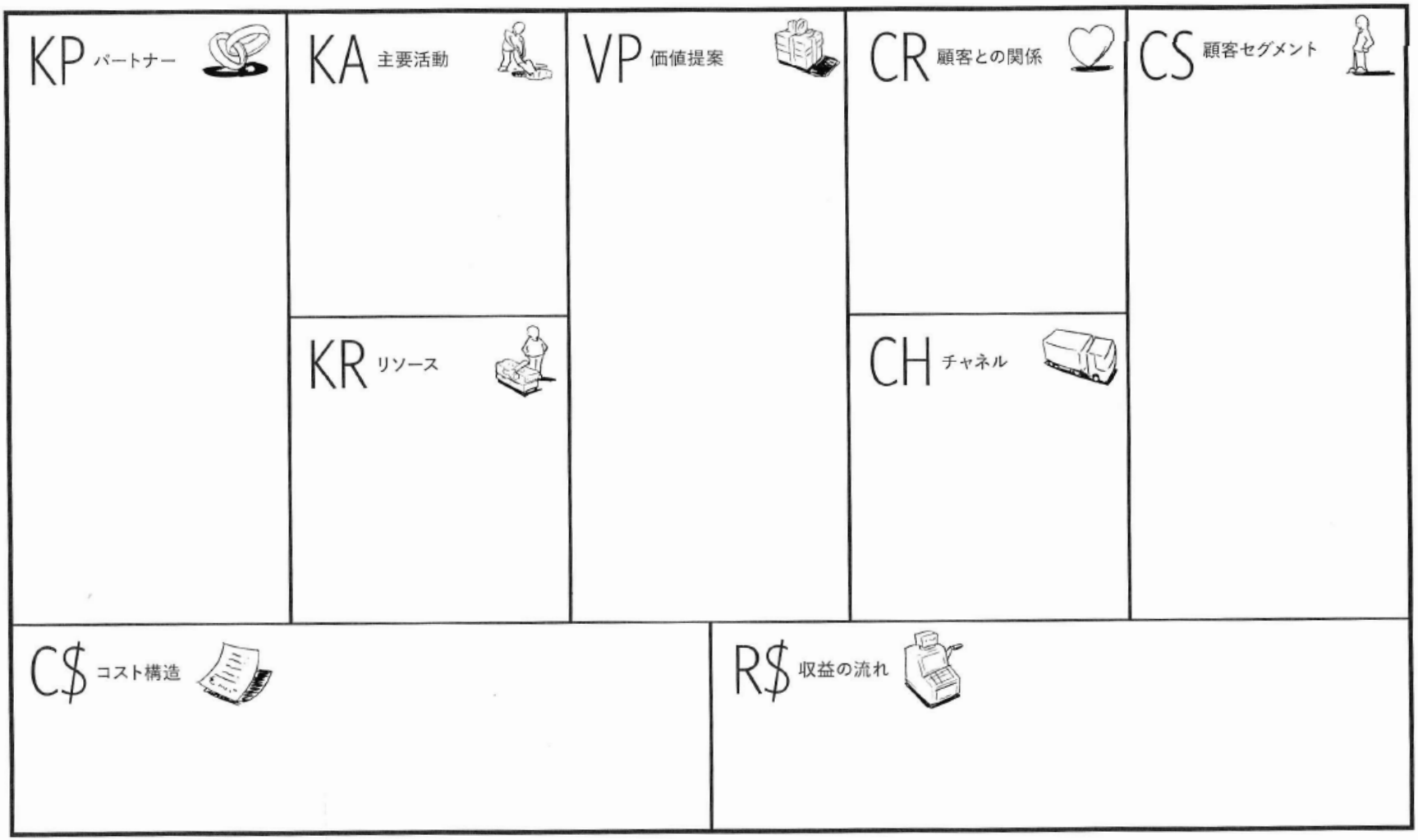
Business Model Canvas



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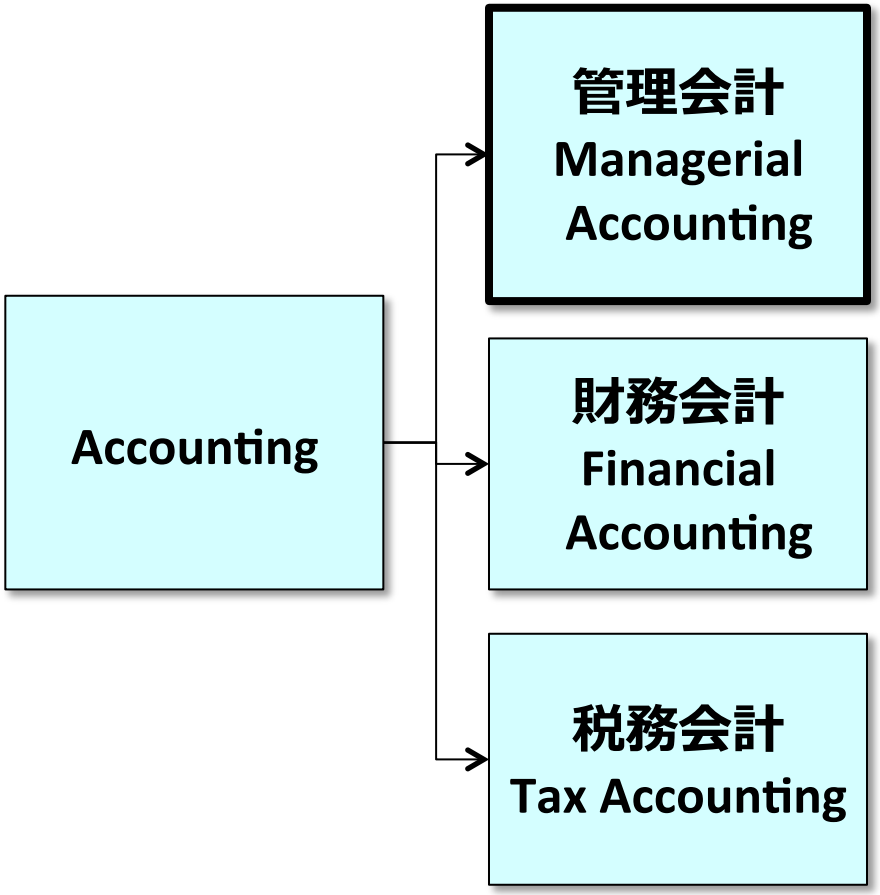
Managerial Accounting

Accounting and Finance

- Entrepreneurs need to be familiar with accounting and finance for;
  - making right decisions
  - doing communications with stakeholders

Managerial Accounting



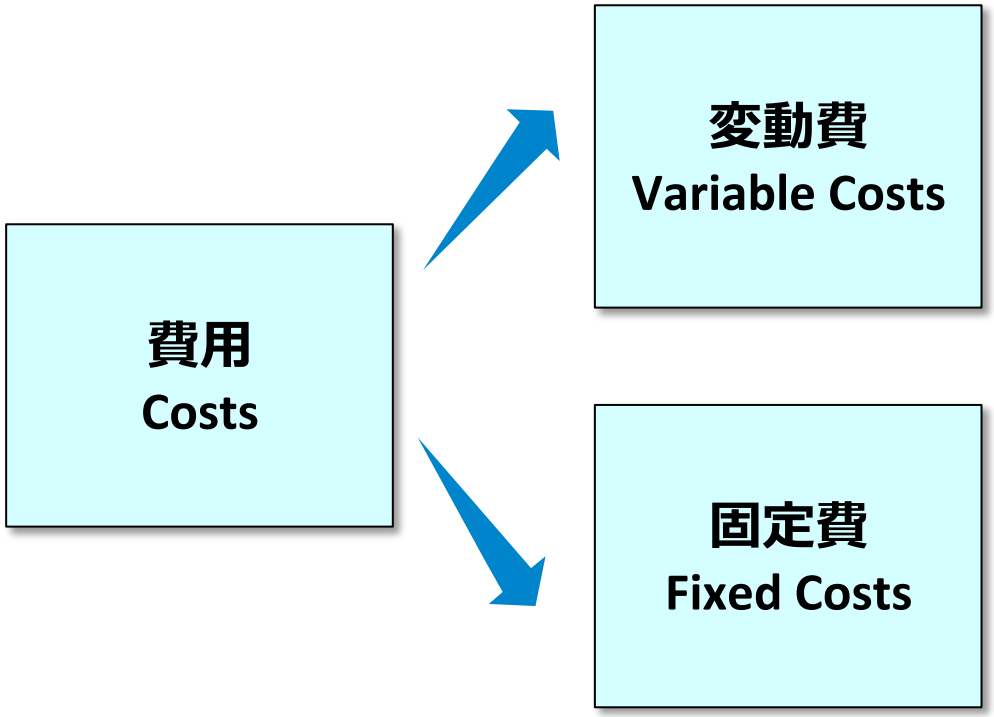
- **Accounting for decision making inside companies**
- **Don't need to follow regulations**

- Accounting for reporting to stakeholders outside companies
- Have to follow regulations: company law and financial instruments and exchange act

- Accounting for calculating taxable income
- Have to follow regulations: corporate tax act

Cost behavior: variable costs and fixed costs

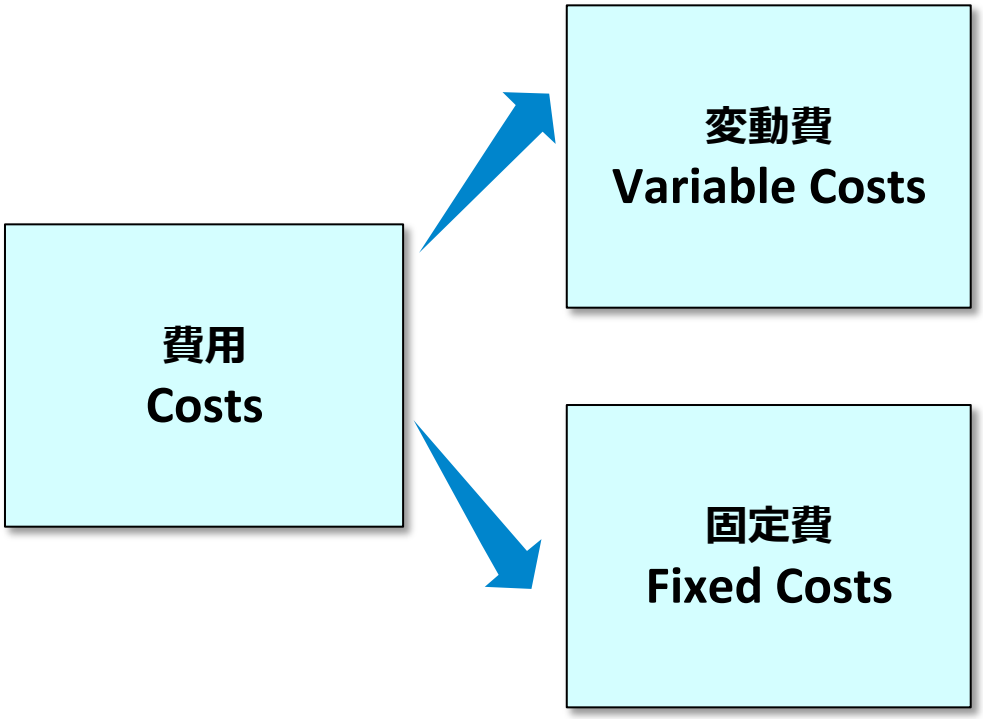
- Costs could be split into variable costs and fixed costs based on cost behavior



- Costs vary depending on a company's sales or production

- Periodic costs that remain unchanged irrespective of a company's sales or production.

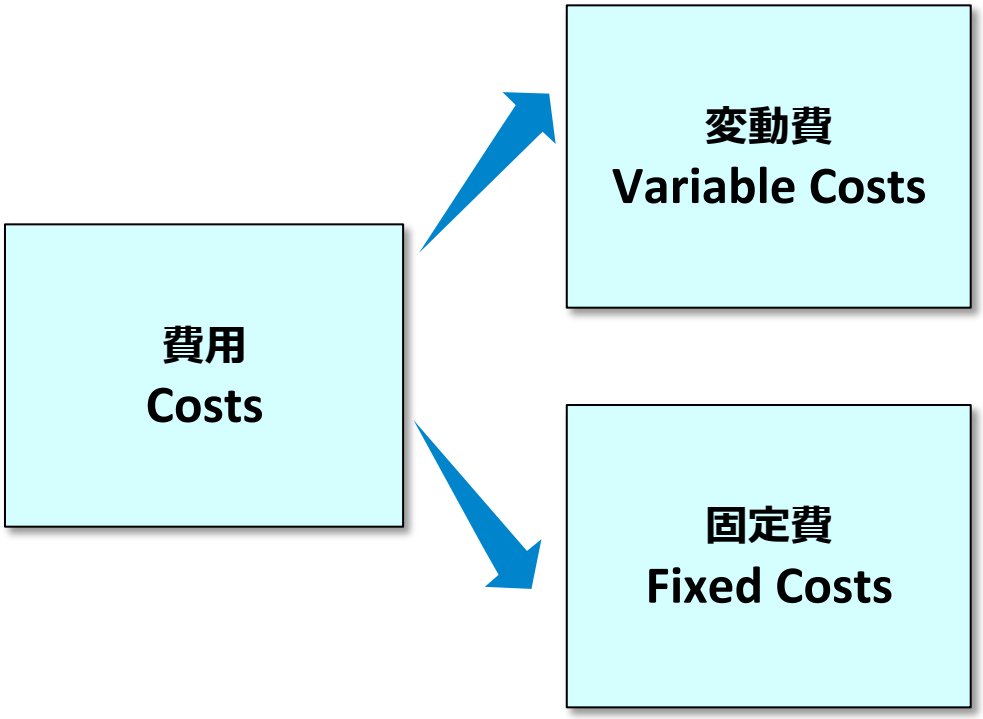
Example: supermarkets



- Cost of Goods Sold
- Plastic bags/brown bags

- Rent expense
- Personnel expense for cashers and staff
- Cost for lighting, power, and water

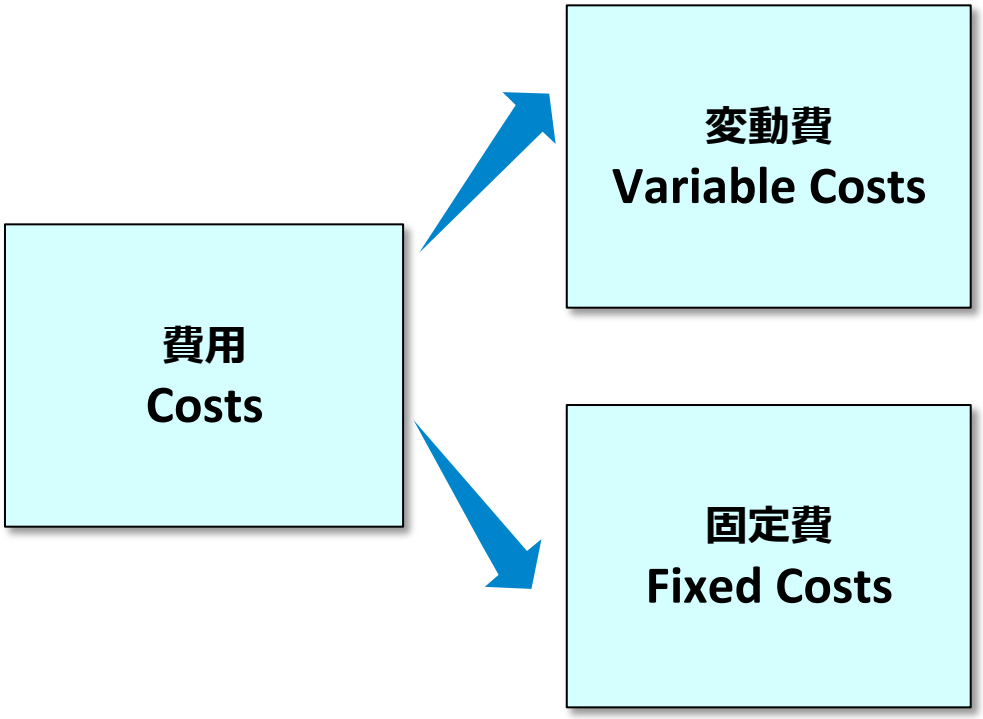
Example: steel-manufacturing company



- Raw materials
- Gas, oil, electricity and water expense for production
- Processing cost
- Subcontract cost for manufacturing

- Office rent expense
- Depreciation cost
- Personnel expense for non-manufacturing staff

Example: Consulting Firm



- Photo copy performance charge

- Rent expense
- Personnel expense for consultants and other staff

Marginal profit

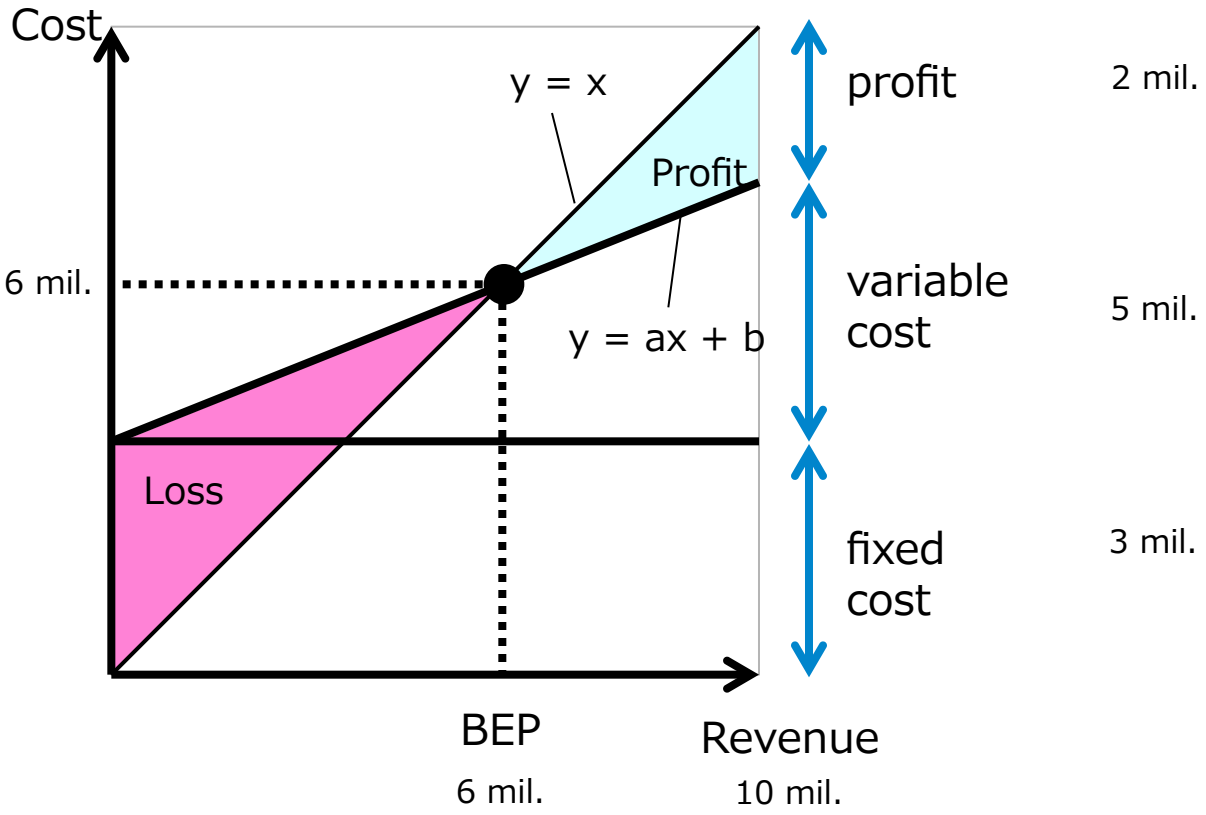
- After dividing costs into variable and fixed cost, you can calculate marginal profit.

限界利益 （貢献利益） **Marginal Profit**	=	売上高 **Revenue**	−	変動費 **Variable Cost**

Marginal profit changes depending on revenue/production increase or decrease

Break-Even Point

損益分岐点
Break-Even Point = The point at which revenue equal to total costs (zero profit)



x : Revenue
y : Cost
a: % variable cost
b: Fixed cost

Break-Even Point

- You can calculate break even point by using the following formula.

$$\text{Break-even Point} = \frac{\text{Fixed cost}}{\text{1 - variable cost ratio}} = \frac{\text{Fixed cost}}{\text{Marginal profit ratio}}$$

BEP Revenue – variable cost – fixed cost = 0

↓

Marginal profit = fixed cost

↓

BEP Revenue x marginal profit ratio = fixed cost

↓

BEP revenue = fixed cost / marginal profit ratio

Exercise

BEP calculation

Q:

Calculate break-even points of the following two companies. (round the number)

Company A		Company B	
• Revenue	100	• Revenue	100
• Cost	80	• Cost	80
– Variable cost	30	– Variable cost	50
– Fixed cost	50	– Fixed cost	30
• Profit	20	• Profit	20

ANSWER

BEP calculation

Company A

BEP revenue =
approx. **71**

Marginal profit ratio
= marginal profit/revenue
= (100-30)/100
= 70%

BEP revenue
= fixed cost / marginal profit ratio
= 50 / 70%
≒ **71**

Company B

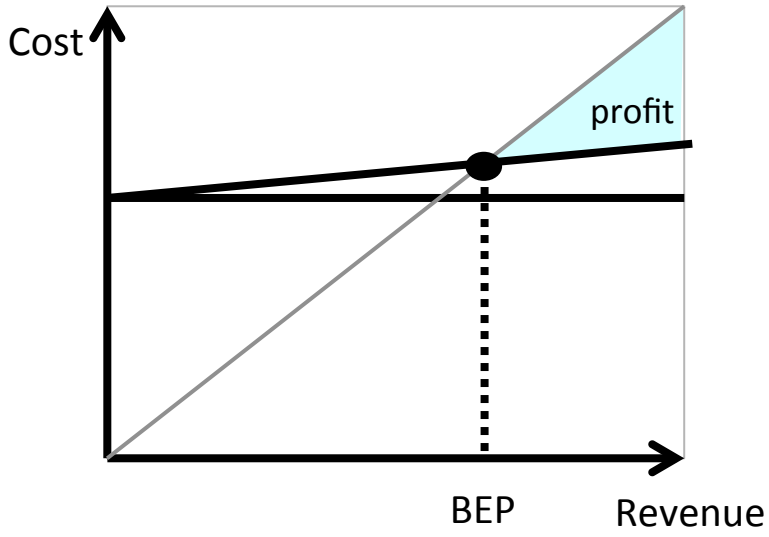
BEP revenue =
60

Marginal profit ratio
= marginal profit/revenue
= (100-50)/100
= 50%

BEP revenue
= fixed cost / marginal profit ratio
= 30 / 50%
= **60**

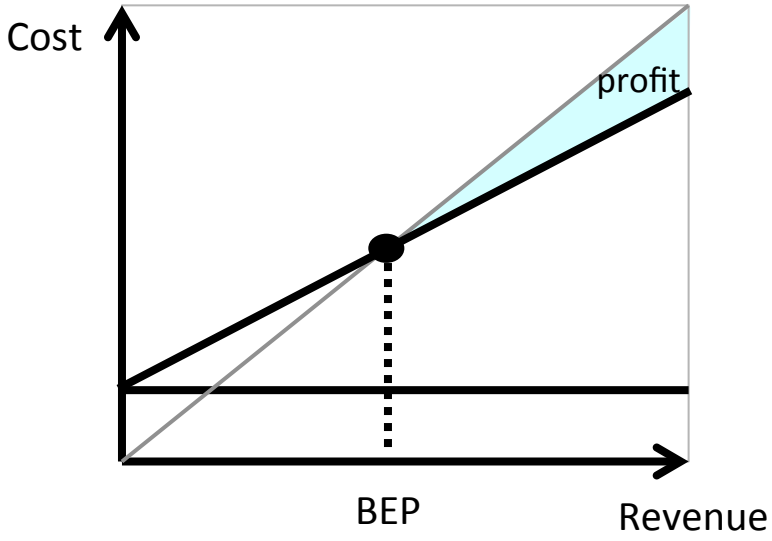
Cost Structure

High fixed cost/Low variable cost



- Higher BEP
- Once BEP is exceeded, you can enjoy higher profit

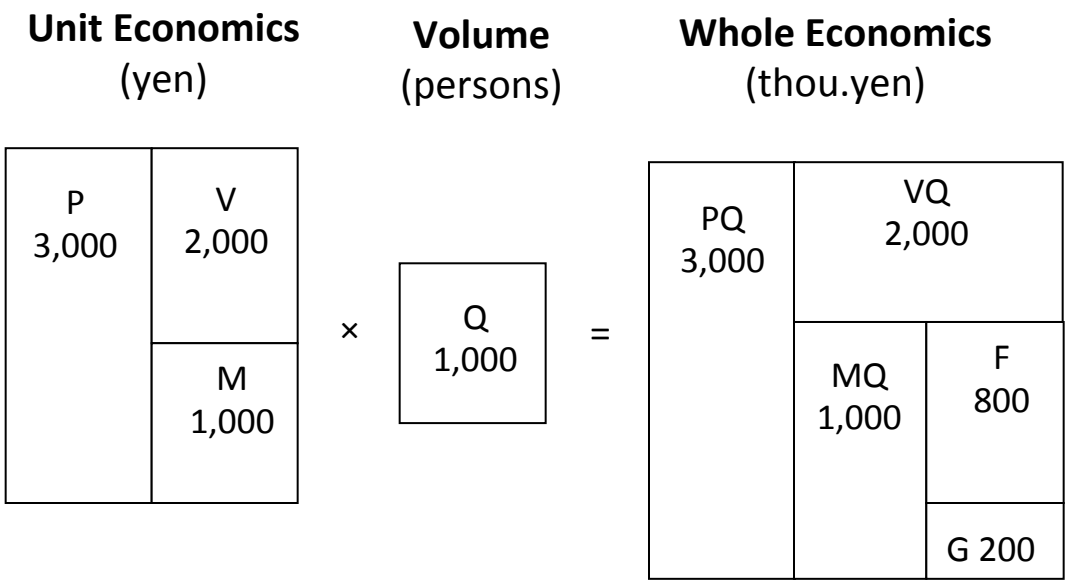
Low fixed cost/High variable cost



- Lower BEP
- After BEP is exceeded, you can enjoy only skinny profit

MQ(Margin-Quantity) Accounting

An Italian Restaurant Case Study



- **P: Price**
  - Revenue per customer
- **V: Variable cost**
  - Cost of food materials and etc
- **M: Marginal profit**
  - Price minus variable cost
- **Q: Quantity**
  - Number of customers
- **F: Fixed cost**
  - Personnel cost, rent cost, water, gas and electricity cost
- **G: Gain**
  - final profit

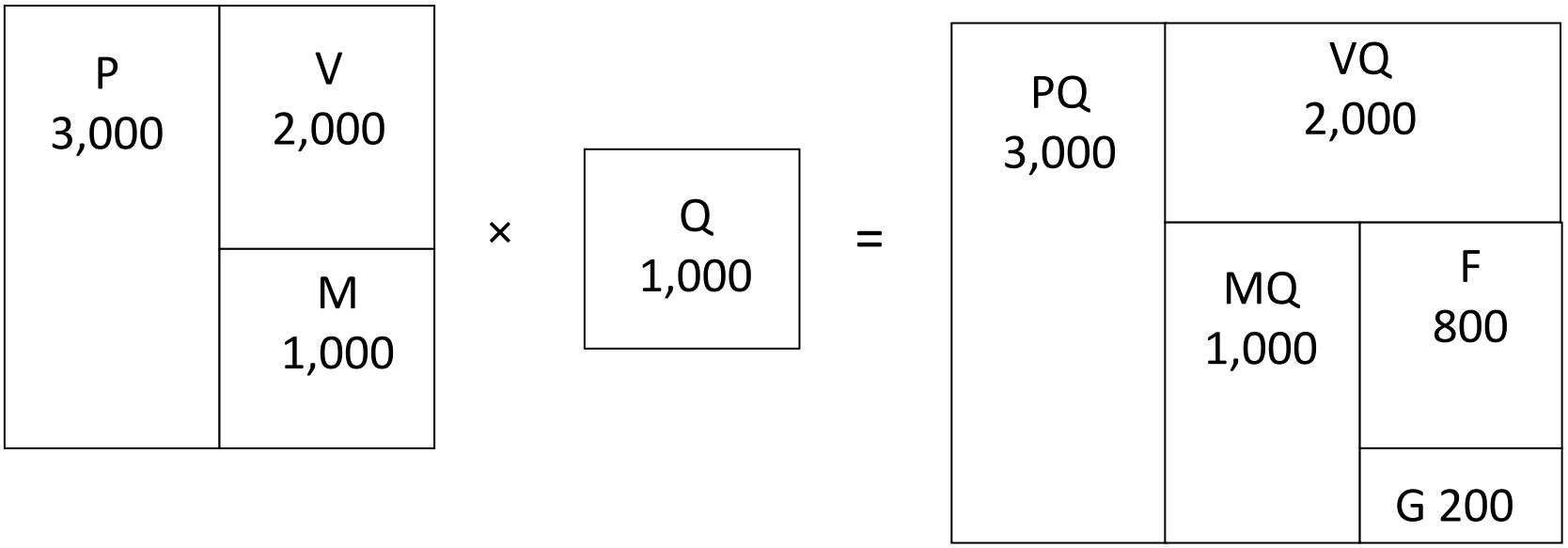
MQ accounting is TM of Nishiken

Exercise

Quantity down

- Volume is decreased by 10% because of a brand new restaurant's open
- How will the following numbers be changed?

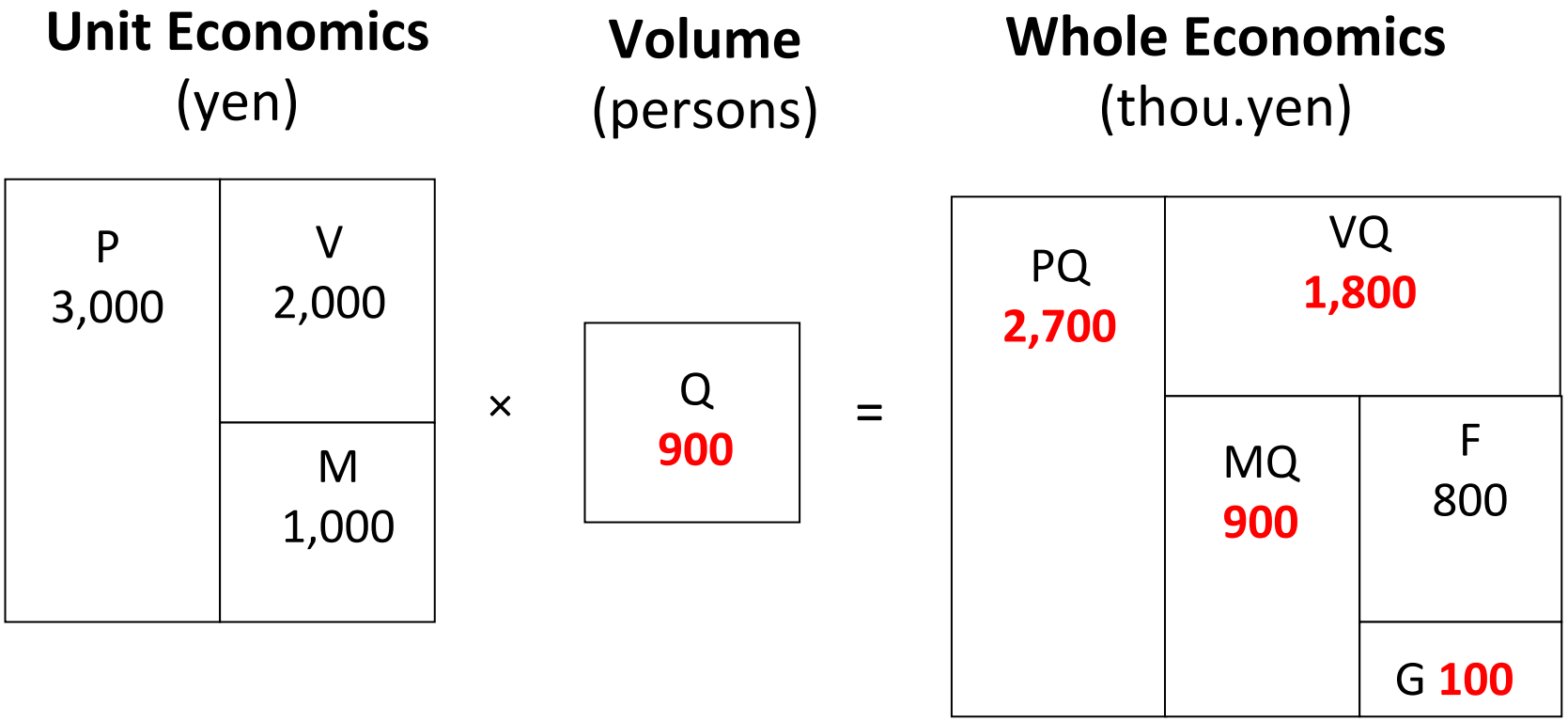
Unit Economics (yen) | **Volume** (persons) | **Whole Economics** (thou.yen)



Answer

Quantity down

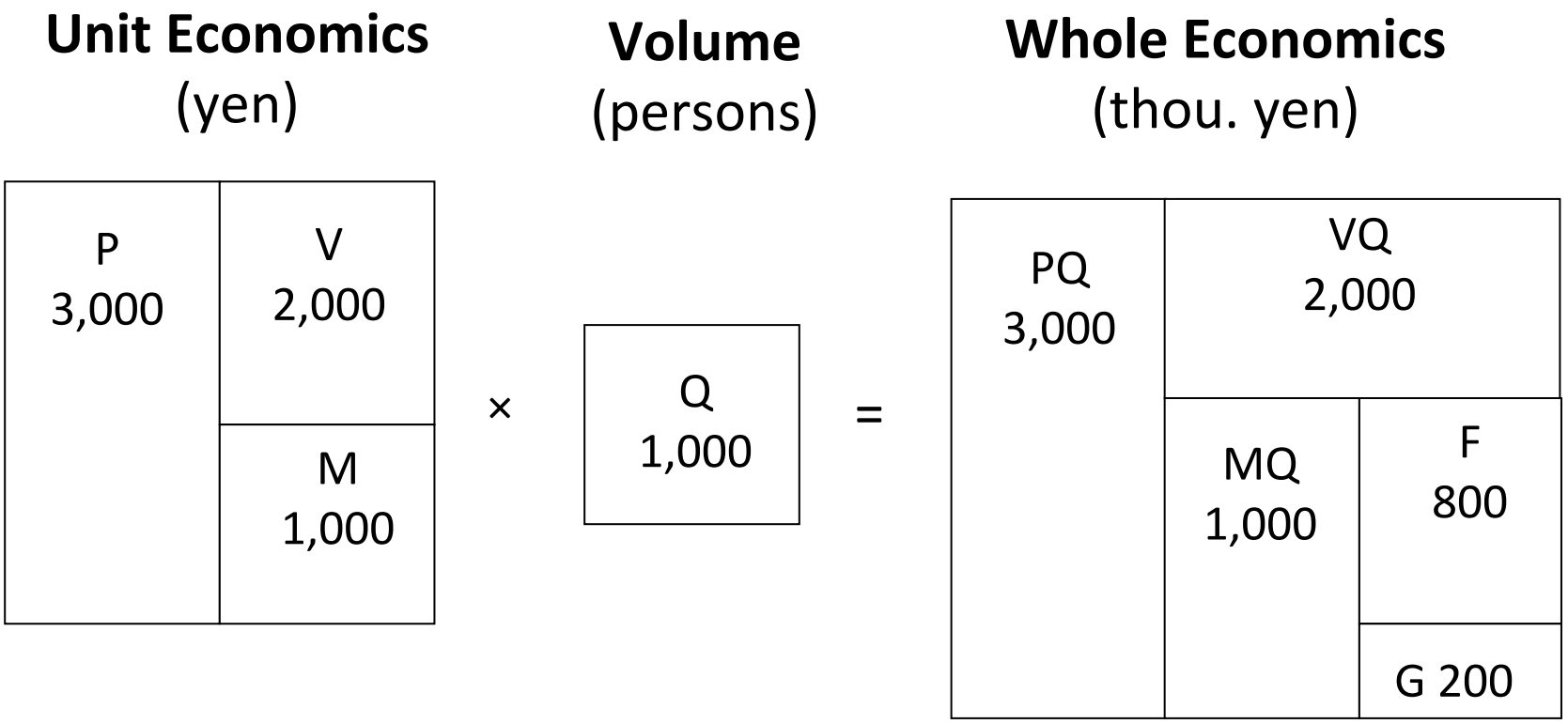
- Quantity is decreased by 10%
- Gain is remained at +100 thou. yen (50% decrease)



Exercise

Price down

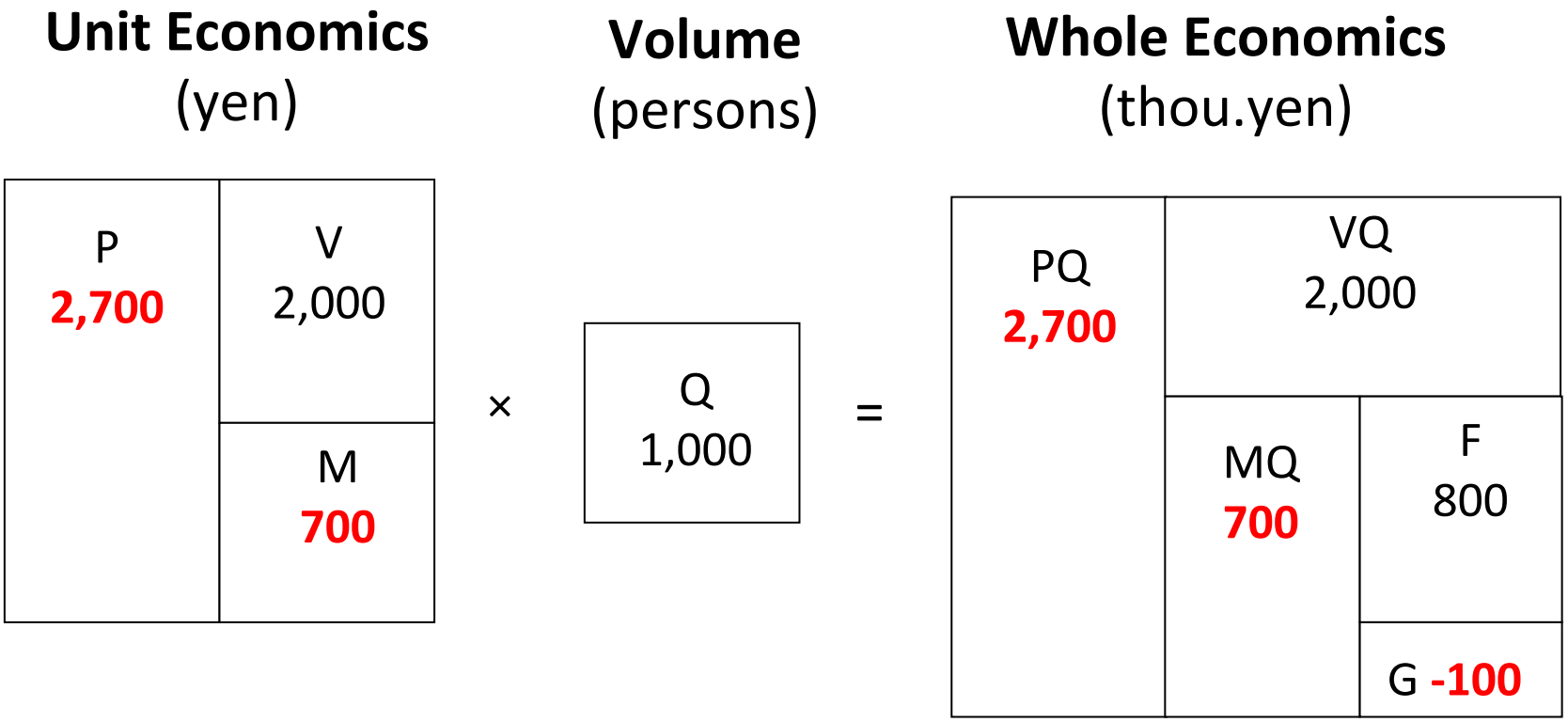
- You don't want to lose your customers by 10%. Then, you cut down P by 10% instead. Assume Q is not changed.
- How will the following numbers be changed?



Answer

Price down

- By cutting down P by 10%, final profit G goes to negative (-100 thou. yen).



Exercise

Quantity Up

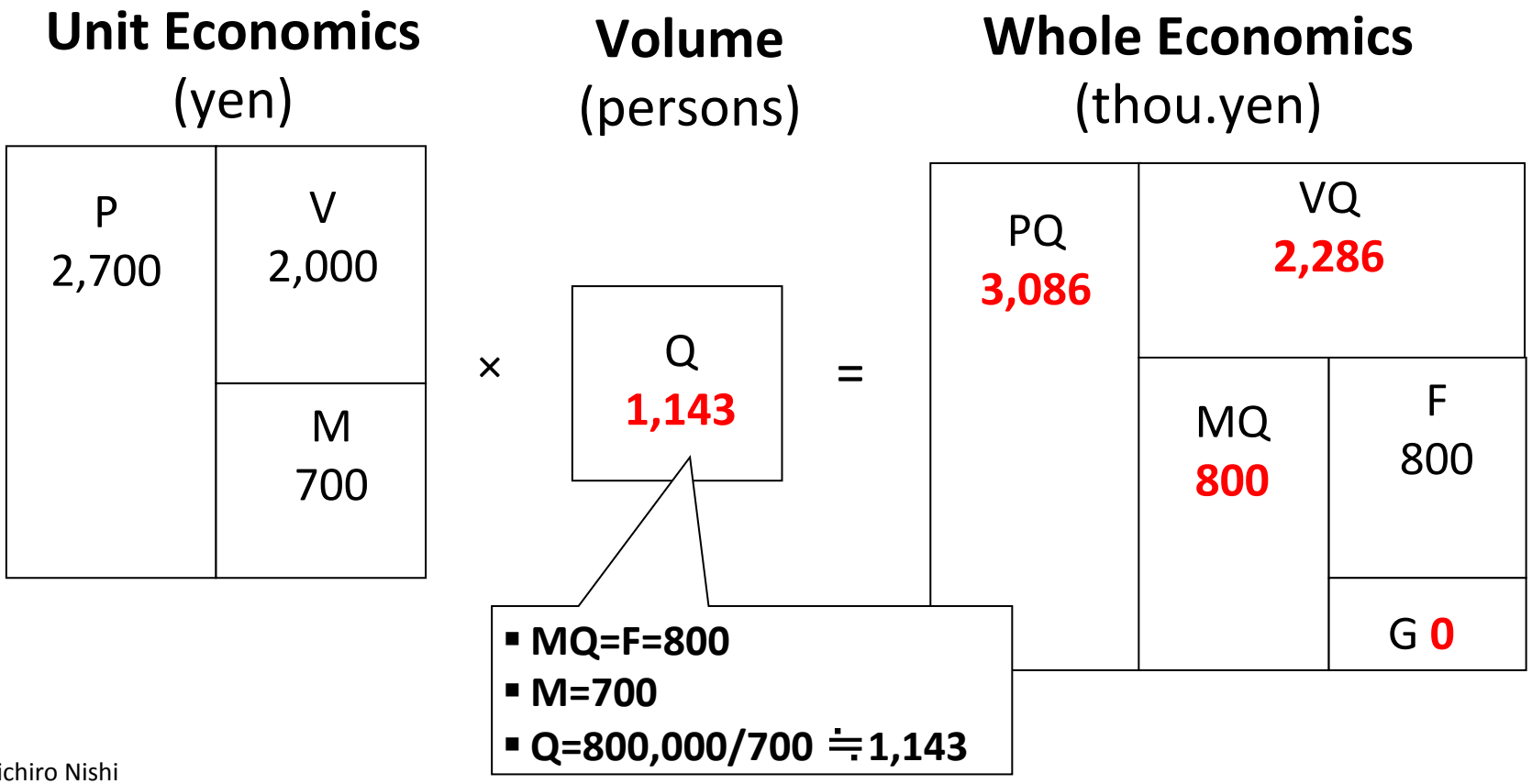
- In order to go back to break-even point (zero profit) from this situation below, how many Q is needed?
- Calculate Q at the point in which G=0 (i.e. **MQ=F**)

Unit Economics (yen)			**Volume** (persons)		**Whole Economics** (thou. yen)		
P **2,700**	V 2,000				PQ **2,700**	VQ 2,000	
	M **700**		×	Q 1,000	=	MQ **700**	F 800
							G **-100**

Answer

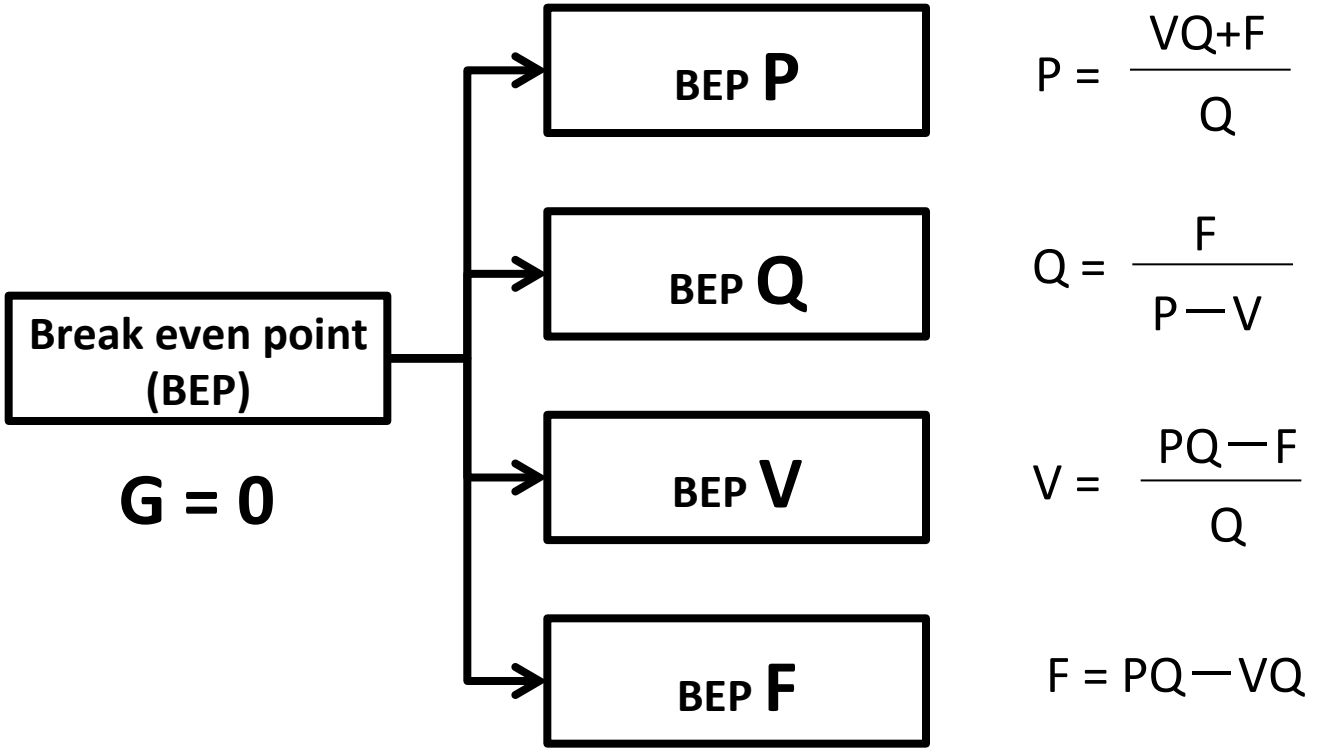
Quantity Up

- In order to reach break-even point, you need to increase Q to 1,143 (by 14.3%).
- Q=1,143 is the break-even point Q



4 Break-Even Points

- You can calculate four kinds of break-even points (BEP P, Q, V and F)



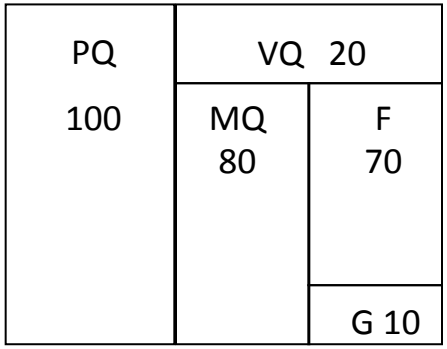
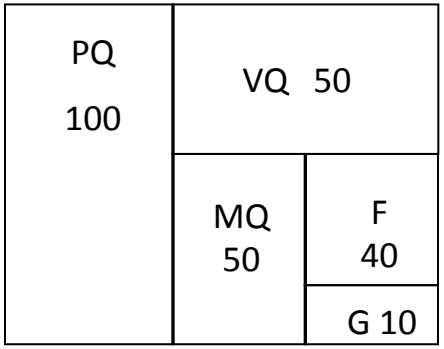
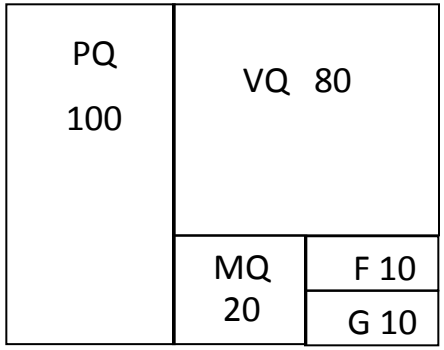
Sensitivity of Levers

- In the Italian restaurant case, the most sensitive lever is P.

Rank	Levers	Status Quo	BEP	Sensitivity
1	**P**	**@3,000yen**	**@2,800yen**	**↓ 6.7%**
2	V	@2,000yen	@2200yen	↑ 10%
3	Q	1,000	800	↓ 20%
4	F	800,000yen	100,000yen	↑ 25%

Difference by cost structure

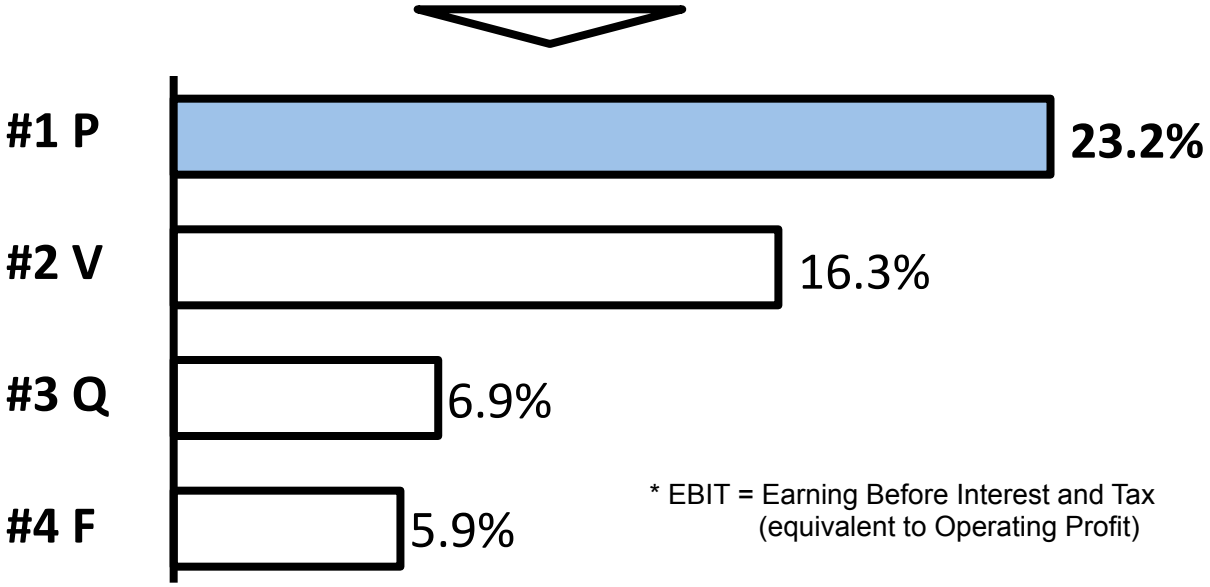
- Sensitivity of levers is different depending on cost structure
- **P is the most sensitive lever in each case**

	Type A: (higher fixed cost)	**Type B:** (balanced)	**Type C:** (lower fixed cost)
Cost structure example			
Variable cost %	20%	50%	80%
Sensitivity	**#1 P 10%** #2 Q 13% #3 F 14% #4 V 50%	**#1 P 10%** #2 V 20% Q 20% #4 F 25%	**#1 P 10%** #2 V 13% #3 Q 50% #4 F 100%

Research in Japanese companies

- McKinsey research shows that **P is the most sensitive lever** in an average Japanese company (the research based on all the TSE 1st section listed companies)

Q: "By improving four levers: P, V, Q & F only **by 1%**, **how much EBIT* would be improved**?"



"McKinsey Pricing"

* EBIT = Earning Before Interest and Tax (equivalent to Operating Profit)

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